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# Introduction

This file gives CE declarations and performances for basis glass products of AGC Glass Europe :

- Float
- Patterned glass
- Wired glas
- Polished wired glass
- Coatings
- Heat treated glass

For laminated glass and insulating glass unit, some glass compositions are indicated but it is not possible to list all glass structures. The CE declarations and performances of these products are available on www.YourGlass.com in one of the dynamic tools of My Glass Toolbox:

- Advanced product finder
- Glass Configurator

General informations concerning CE-Marking and links to these tools are available at www.YourGlass.com/CE.

**Remark**

Some products listed in this file are out of range, not standard in catalogue and/or only dedicated to a specific market.

For the availability, please consult www.YourGlass.com.

# Artlite

| | | |
|---|---|---|
| AGC | **CE Marking of Heat strengthened glass - EN 1863-2:2004**<br>**Declaration of performances**<br>**Artlite / Artlite Digital Heat strengthened** | CE |

We

**AGC Glass Europe**
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Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **ARTLITE / ARTLITE DIGITAL Heat strengthened**, intended to be used in buildings and construction works, following **EN 1863-2:2004**

| | **Artlite/Artlite Digital Heat strengthened** characteristics in : | **AVCP Systems** | **4 mm** | **5 mm** | **6 mm** | **8 mm** | **10 mm** |
|---|---|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 | A1 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD | NPD | NPD | NPD | NPD |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | 100 K | 100 K | 100 K | 100 K | 100 K |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 30 (-2;-4) | 30 (-1;-2) | 31 (-2;-3) | 32 (-1;-2) | 34 (-2;-3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | NPD<br>NPD | NPD<br>NPD | NPD<br>NPD | NPD<br>NPD | NPD<br>NPD |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | NPD | NPD | NPD | NPD | NPD |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | NPD<br>NPD | NPD<br>NPD | NPD<br>NPD | NPD<br>NPD | NPD<br>NPD |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

| | | |
|---|---|---|
| AGC | **CE Marking of Thermally toughened glass - EN 12150-2:2004:2004**<br>**CE Marking of Heat soaked Thermally toughened glass - EN 14179-2:2005**<br>**Declaration of performances**<br>**Artlite / Artlite Digital Thermally toughened or Heat soaked thermally toughened** | CE |

We

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Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **ARTLITE/ARTLITE DIGITAL Thermally toughened or Heat soaked thermally toughened**, intended to be used in buildings and construction works, following **EN 12150-2:2004:2004 / EN 14179-2:2005**

| | **Artlite/Artlite Digital Thermally toughened or Heat soaked thermally toughened** characteristics in : | **AVCP Systems** | **4 mm** | **5 mm** | **6 mm** | **8 mm** | **10 mm** |
|---|---|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 | A1 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD | NPD | NPD | NPD | NPD |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | 200 K | 200 K | 200 K | 200 K | 200 K |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 30 (-2;-4) | 30 (-1;-2) | 31 (-2;-3) | 32 (-1;-2) | 34 (-2;-3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | NPD<br>NPD | NPD<br>NPD | NPD<br>NPD | NPD<br>NPD | NPD<br>NPD |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | NPD | NPD | NPD | NPD | NPD |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | NPD<br>NPD | NPD<br>NPD | NPD<br>NPD | NPD<br>NPD | NPD<br>NPD |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS | PASS |

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14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

| | | |
|---|---|---|
| AGC | **CE Marking of Thermally toughened glass - EN 12150-2:2004:2004**<br>**CE Marking of Heat soaked Thermally toughened glass - EN 14179-2:2005**<br>**Declaration of performances**<br>**Artlite / Artlite Digital Thermally toughened or Heat soaked thermally toughened** | CE |

We

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Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **ARTLITE/ARTLITE DIGITAL Thermally toughened or Heat soaked thermally toughened**, intended to be used in buildings and construction works, following **EN 12150-2:2004:2004 / EN 14179-2:2005**

| | **Artlite/Artlite Digital Thermally toughened or Heat soaked thermally toughened** characteristics in : | **AVCP Systems** | **12 mm** | **15 mm** | **19 mm** |
|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD | NPD | NPD |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | 200 K | 200 K | 200 K |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 35 (-2;-3) | NPD | NPD |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | NPD<br>NPD | NPD<br>NPD | NPD<br>NPD |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | NPD | NPD | NPD |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | NPD<br>NPD | NPD<br>NPD | NPD<br>NPD |
| 14. | Durability | 3 | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

# Blackpearl

| | | |
|---|---|---|
| AGC | **CE Marking of Coated glass - EN 1096-4:2004**<br>**Declaration of performances**<br>**Blackpearl (annealed)** | CE |

We

**AGC Glass Europe**
**Building Division**
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Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **BLACKPEARL**, intended to be used in buildings and construction works, following **EN 1096-4:2004**

| | **Blackpearl** characteristics in : | **AVCP Systems** | **8 mm** |
|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 |
| 3. | External fire performances | 3, 4 | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | NPD |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 32 (-1;-2) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | 5,7<br>0,89 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 2/32/5 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 2/26/4<br>24 |
| 14. | Durability | 3 | PASS |

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14th of June 2013

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Primary Sales & Strategic, Marketing Director, Building

| | | |
|---|---|---|
| AGC | **CE Marking of Heat strengthened glass - EN 1863-2:2004**<br>**Declaration of performances**<br>**Blackpearl Heat strengthened** | CE |

We

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Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **BLACKPEARL Heat strengthened,** intended to be used in buildings and construction works, following **EN 1863-2:2004**

| | **Blackpearl Heat strengthened** characteristics in : | **AVCP Systems** | **8 mm** |
|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 |
| 3. | External fire performances | 3, 4 | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | 100 K |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 32 (-1;-2) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | 5,7<br>0,89 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 2/32/5 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 2/26/4<br>24 |
| 14. | Durability | 3 | PASS |

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14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

| | | |
|---|---|---|
| AGC | **CE Marking of Thermally toughened glass - EN 12150-2:2004**<br>**CE Marking of Heat soaked Thermally toughened glass - EN 14179-2:2005**<br>**Declaration of performances**<br>**Blackpearl Thermally toughened or Heat soaked thermally toughened** | CE |

We

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Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **BLACKPEARL Thermally toughened or Heat soaked thermally toughened**, intended to be used in buildings and construction works, following **EN 12150-2:2004 / EN 14179-2:2005**

| | **Blackpearl Thermally toughened or Heat soaked thermally toughened** characteristics in : | **AVCP Systems** | **8 mm** |
|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 |
| 3. | External fire performances | 3, 4 | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | 1C2 |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | 200 K |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 32 (-1;-2) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | 5,7<br>0,89 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 2/32/5 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 2/26/4<br>24 |
| 14. | Durability | 3 | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

# Colorbel

| | | |
|---|---|---|
| AGC | **CE Marking of Heat strengthened glass - EN 1863-2:2004**<br>**Declaration of performances**<br>**Colorbel Heat strengthened** | CE |

We

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Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **COLORBEL Heat strengthened**, intended to be used in buildings and construction works, following **EN 1863-2:2004**

| | **Colorbel Heat strengthened** characteristics in : | **AVCP Systems** | **4 mm** | **5 mm** | **6 mm** | **8 mm** | **10 mm** |
|---|---|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 | A1 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD | NPD | NPD | NPD | NPD |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | 100 K | 100 K | 100 K | 100 K | 100 K |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 30 (-2;-4) | 30 (-1;-2) | 31 (-2;-3) | 32 (-1;-2) | 34 (-2;-3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | NPD<br>NPD | NPD<br>NPD | NPD<br>NPD | NPD<br>NPD | NPD<br>NPD |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | NPD | NPD | NPD | NPD | NPD |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | NPD<br>NPD | NPD<br>NPD | NPD<br>NPD | NPD<br>NPD | NPD<br>NPD |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

**CE Marking of Thermally toughened glass - EN 12150-2:2004**
**CE Marking of Heat soaked Thermally toughened glass - EN 14179-2:2005**
**Declaration of performances**
**Colorbel Thermally toughened or Heat soaked thermally toughened**

CE

We

**AGC Glass Europe**
**Building Division**
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Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **COLORBEL Thermally toughened or Heat soaked thermally toughened**, intended to be used in buildings and construction works, following **EN 12150-2:2004 / 14179-2:2005**

| | **Colorbel Thermally toughened or Heat soaked thermally toughened** characteristics in : | **AVCP Systems** | **4 mm** | **5 mm** | **6 mm** | **8 mm** | **10 mm** |
|---|---|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 | A1 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD | NPD | NPD | NPD | NPD |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | 200 K | 200 K | 200 K | 200 K | 200 K |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 30 (-2;-4) | 30 (-1;-2) | 31 (-2;-3) | 32 (-1;-2) | 34 (-2;-3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | NPD<br>NPD | NPD<br>NPD | NPD<br>NPD | NPD<br>NPD | NPD<br>NPD |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | NPD | NPD | NPD | NPD | NPD |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | NPD<br>NPD | NPD<br>NPD | NPD<br>NPD | NPD<br>NPD | NPD<br>NPD |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

| | | |
|---|---|---|
| AGC | **CE Marking of Thermally toughened glass - EN 12150-2:2004**<br>**CE Marking of Heat soaked Thermally toughened glass - EN 14179-2:2005**<br>**Declaration of performances**<br>**Colorbel Thermally toughened or Heat soaked thermally toughened** | CE |

We

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| | **Colorbel Thermally toughened or Heat soaked thermally toughened** characteristics in : | **AVCP Systems** | **12 mm** | **15 mm** | **19 mm** |
|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD | NPD | NPD |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | 200 K | 200 K | 200 K |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 35 (-2;-3) | NPD | NPD |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | NPD<br>NPD | NPD<br>NPD | NPD<br>NPD |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | NPD | NPD | NPD |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | NPD<br>NPD | NPD<br>NPD | NPD<br>NPD |
| 14. | Durability | 3 | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

# Concepta

| | | |
|---|---|---|
| AGC | **CE Marking of Laminated glass – EN 14449:2005**<br>**Declaration of performances**<br>**Concepta** | CE |

We

**AGC Glass Europe**
**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **Concepta**, intended to be used in buildings and construction works, following **EN 14449:2005**

| | **Concepta** characteristics: | **AVCP Systems** | **33.2** | **44.2** | **55.2** | **66.2** | **88.2** | **10 10.2** |
|---|---|---|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | NPD | NPD | NPD | NPD | NPD | NPD |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD | NPD | NPD | NPD | NPD | NPD |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | NPD | NPD | NPD | NPD | NPD | NPD |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | NPD | NPD | NPD | NPD | NPD | NPD |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | NPD<br>NPD | NPD<br>NPD | NPD<br>NPD | NPD<br>NPD | NPD<br>NPD | NPD<br>NPD |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | NPD | NPD | NPD | NPD | NPD | NPD |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | NPD<br>NPD | NPD<br>NPD | NPD<br>NPD | NPD<br>NPD | NPD<br>NPD | NPD<br>NPD |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

# GH Phon

| | | |
|---|---|---|
| AGC | **CE Marking of Laminated glass – EN 14449:2005**<br>**Declaration of performances**<br>**GH Phon** | CE |

We

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Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **GH Phon**, intended to be used in buildings and construction works, following **EN 14449:2005**

| | **GH Phon** characteristics in : | **AVCP Systems** | **4-1-4** | **4-1,5-4** | **4-1-5** | **4-1,5-5** | **4-1-6** | **4-1,5-6** |
|---|---|---|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | NPD | NPD | NPD | NPD | NPD | NPD |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD | NPD | NPD | NPD | NPD | NPD |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | NPD | NPD | NPD | NPD | NPD | NPD |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | NPD | 37 (-1;-2) | NPD | NPD | NPD | NPD |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | 5,5<br>0,89 | 5,5<br>0,89 | 5,5<br>0,89 | 5,5<br>0,89 | 5,5<br>0,89 | 5,4<br>0,89 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 88 / 8 / 8 | 88 / 8 / 8 | 87 / 8 / 8 | 87 / 8 / 8 | 87 / 8 / 8 | 87 / 8 / 8 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 76 / 7 / 7<br>NPD | 75 / 7 / 7<br>NPD | 74 / 7 / 7<br>NPD | 74 / 7 / 7<br>NPD | 73 / 7 / 7<br>NPD | 72 / 7 / 7<br>NPD |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

| | | |
|---|---|---|
| AGC | **CE Marking of Laminated glass – EN 14449:2005**<br>**Declaration of performances**<br>**GH Phon** | CE |

We

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Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **GH Phon**, intended to be used in buildings and construction works, following **EN 14449:2005**

| | **GH Phon** characteristics in : | **AVCP Systems** | **5-1-5** | **5-1,5-5** | **6-1-6** | **6-1,5-6** | **8-1-6** | **8-1,5-6** |
|---|---|---|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | NPD | NPD | NPD | NPD | NPD | NPD |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD | NPD | NPD | NPD | NPD | NPD |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | NPD | NPD | NPD | NPD | NPD | NPD |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | NPD | 38 (0;-2) | NPD | 38 (0;-3) | NPD | NPD |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | 5,5<br>0,89 | 5,4<br>0,89 | 5,4<br>0,89 | 5,4<br>0,89 | 5,4<br>0,89 | 5,3<br>0,89 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 87 / 8 / 8 | 87 / 8 / 8 | 86 / 8 / 8 | 86 / 8 / 8 | 85 / 8 / 8 | 85 / 8 / 8 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 73 / 7 / 7<br>NPD | 72 / 7 / 7<br>NPD | 70 / 7 / 7<br>NPD | 69 / 7 / 7<br>NPD | 68 / 7 / 7<br>NPD | 67 / 6 / 6<br>NPD |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

| | | |
|---|---|---|
| AGC | **CE Marking of Laminated glass – EN 14449:2005**<br>**Declaration of performances**<br>**GH Phon** | CE |

We

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Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **GH Phon**, intended to be used in buildings and construction works, following **EN 14449:2005**

| | **GH Phon** characteristics in : | **AVCP Systems** | **8-1-8** | **8-1,5-8** | **8-1-10** | **8-1,5-10** | **10-1-10** | **10-1,5-10** |
|---|---|---|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | NPD | NPD | NPD | NPD | NPD | NPD |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD | NPD | NPD | NPD | NPD | NPD |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | NPD | NPD | NPD | NPD | NPD | NPD |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | NPD | NPD | NPD | NPD | NPD | NPD |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | 5,3<br>0,89 | 5,2<br>0,89 | 5,2<br>0,89 | 5,2<br>0,89 | 5,2<br>0,89 | 5,2<br>0,89 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 84 / 8 / 8 | 84 / 8 / 8 | 83 / 8 / 8 | 83 / 8 / 8 | 82 / 7 / 7 | 82 / 7 / 7 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 65 / 6 / 6<br>NPD | 65 / 6 / 6<br>NPD | 63 / 6 / 6<br>NPD | 63 / 6 / 6<br>NPD | 61 / 6 / 6<br>NPD | 60 / 6 / 6<br>NPD |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

# Imagin

| AGC | **CE Marking of Wired patterned glass - EN 572-9:2004**<br>**Declaration of performances**<br>**Imagin clear (annealed)** | CE |
|---|---|---|

We

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**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
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Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **IMAGIN CLEAR**, intended to be used in buildings and construction works, following **EN 572-9:2004**

| | **Imagin clear** characteristics in : | **AVCP Systems** | **2 mm** | **3 mm** | **4 mm** | **5 mm** | **6 mm** | **8 mm** |
|---|---|---|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 | A1 | A1 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD | NPD | NPD | NPD | NPD | NPD |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | NPD | NPD | NPD | NPD | NPD | NPD |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | NPD | 29 (-2;-5) | 30 (-2;-4) | 30 (-1;-2) | 31 (-2;-3) | 32 (-1;-2) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | 5,8<br>0,89 | 5,8<br>0,89 | 5,8<br>0,89 | 5,8<br>0,89 | 5,7<br>0,89 | 5,7<br>0,89 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 91 / 8 / 8 | 90 / 8 / 8 | 90 / 8 / 8 | 89 / 8 / 8 | 89 / 8 / 8 | 87 / 8 / 8 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 88 / 8 / 8<br>89 | 86 / 8 / 8<br>87 | 84 / 8 / 8<br>86 | 82 / 7 / 7<br>85 | 80 / 7 / 7<br>83 | 77 / 7 / 7<br>81 |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

| | | |
|---|---|---|
| AGC | **CE Marking of Wired patterned glass - EN 572-9:2004**<br>**Declaration of performances**<br>**Imagin clear (annealed)** | CE |

We

**AGC Glass Europe**
**Building Division**
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Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **IMAGIN CLEAR**, intended to be used in buildings and construction works, following **EN 572-9:2004**

| | **Imagin clear** characteristics in : | **AVCP Systems** | **10 mm** | **13,5 mm** | **15 mm** | **19mm** |
|---|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD | NPD | NPD | NPD |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | NPD | NPD | NPD | NPD |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 34 (-2;-3) | NPD | NPD | NPD |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | 5,6<br>0,89 | 5,5<br>0,89 | 5,5<br>0,89 | 5,4<br>0,89 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 87 / 8 / 8 | 85 / 8 / 8 | 84 / 8 / 8 | 82 / 7 / 7 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 74 / 7 / 7<br>79 | 70 / 7 / 7<br>NPD | 67 / 6 / 6<br>NPD | 63 / 6 / 6<br>NPD |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

| | | |
|---|---|---|
| AGC | **CE Marking of Heat strengthened glass - EN 1863-2:2004**<br>**Declaration of performances**<br>**Imagin clear Heat strengthened** | CE |

We

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Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **IMAGIN CLEAR Heat strengthened**, intended to be used in buildings and construction works, following **EN 1863-2:2004**

| | **Imagin clear Heat strengthened** characteristics in : | **AVCP Systems** | **4 mm** | **5 mm** | **6 mm** | **8 mm** | **10 mm** |
|---|---|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 | A1 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD | NPD | NPD | NPD | NPD |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | 100 K | 100 K | 100 K | 100 K | 100 K |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 30 (-2;-4) | 30 (-1;-2) | 31 (-2;-3) | 32 (-1;-2) | 34 (-2;-3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | 5,8<br>0,89 | 5,8<br>0,89 | 5,7<br>0,89 | 5,7<br>0,89 | 5,6<br>0,89 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 90 / 8 / 8 | 89 / 8 / 8 | 89 / 8 / 8 | 87 / 8 / 8 | 87 / 8 / 8 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 84 / 8 / 8<br>86 | 82 / 7 / 7<br>85 | 80 / 7 / 7<br>83 | 77 / 7 / 7<br>81 | 74 / 7 / 7<br>79 |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

| | | |
|---|---|---|
| AGC | **CE Marking of Thermally toughened glass - EN 12150-2:2004**<br>**CE Marking of Heat soaked Thermally toughened glass - EN 14179-2:2005**<br>**Declaration of performances**<br>**Imagin clear Thermally toughened or Heat soaked thermally toughened** | CE |

We

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Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **IMAGIN CLEAR Thermally toughened or Heat soaked thermally toughened**, intended to be used in buildings and construction works, following **EN 12150-2:2004 / 14179-2:2005**

| | **Imagin clear Thermally toughened or Heat soaked thermally toughened** characteristics in : | **AVCP Systems** | **4 mm** | **5 mm** | **6 mm** | **8 mm** | **10 mm** |
|---|---|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 | A1 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD | NPD | NPD | NPD | NPD |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | 200 K | 200 K | 200 K | 200 K | 200 K |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 30 (-2;-4) | 30 (-1;-2) | 31 (-2;-3) | 32 (-1;-2) | 34 (-2;-3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | 5,8<br>0,89 | 5,8<br>0,89 | 5,7<br>0,89 | 5,7<br>0,89 | 5,6<br>0,89 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 90 / 8 / 8 | 89 / 8 / 8 | 89 / 8 / 8 | 87 / 8 / 8 | 87 / 8 / 8 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 84 / 8 / 8<br>86 | 82 / 7 / 7<br>85 | 80 / 7 / 7<br>83 | 77 / 7 / 7<br>81 | 74 / 7 / 7<br>79 |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

| | | |
|---|---|---|
| AGC | **CE Marking of Thermally toughened glass - EN 12150-2:2004**<br>**CE Marking of Heat soaked Thermally toughened glass - EN 14179-2:2005**<br>**Declaration of performances**<br>**Imagin clear Thermally toughened or Heat soaked thermally toughened** | CE |

We

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**Building Division**
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Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **IMAGIN CLEAR Thermally toughened or Heat soaked thermally toughened**, intended to be used in buildings and construction works, following **EN 12150-2:2004 / 14179-2:2005**

| | **Imagin clear Thermally toughened or Heat soaked thermally toughened** characteristics in : | **AVCP Systems** | **13,5 mm** | **15 mm** | **19mm** |
|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD | NPD | NPD |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | 200 K | 200 K | 200 K |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | NPD | NPD | NPD |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | 5,5<br>0,89 | 5,5<br>0,89 | 5,4<br>0,89 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 85 / 8 / 8 | 84 / 8 / 8 | 82 / 7 / 7 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 70 / 7 / 7<br>NPD | 67 / 6 / 6<br>NPD | 63 / 6 / 6<br>NPD |
| 14. | Durability | 3 | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

**CE Marking of Patterned glass – EN 572-9:2004**
**Declaration of performances**
**Imagin extra clear (annealed)**

CE

We

**AGC Glass Europe**
**Division Raw Glass Products**
Chaussée de La Hulpe 166 - B 1170 Brussels
Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **IMAGIN EXTRA CLEAR**, intended to be used in buildings and construction works, following **EN 572-9:2004**

| | **Imagin extra clear** characteristics in : | **AVCP Systems** | **2 mm** | **3 mm** | **4 mm** | **5 mm** | **6 mm** | **8 mm** | **10 mm** |
|---|---|---|---|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 | A1 | A1 | A1 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD | NPD | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD | NPD | NPD | NPD | NPD | NPD | NPD |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | NPD | NPD | NPD | NPD | NPD | NPD | NPD |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | NPD | 29 (-2;-5) | 30 (-2;-4) | 30 (-1;-2) | 31 (-2;-3) | 32 (-1;-2) | 34 (-2;-3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | 5,8<br>0,89 | 5,8<br>0,89 | 5,8<br>0,89 | 5,8<br>0,89 | 5,7<br>0,89 | 5,7<br>0,89 | 5,6<br>0,89 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 92/8/8 | 92/8/8 | 92/8/8 | 91/8/8 | 91/8/8 | 91/8/8 | 91/8/8 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 91/8/8<br>NPD | 91/8/8<br>NPD | 91/8/8<br>NPD | 91/8/8<br>NPD | 90/8/8<br>NPD | 90/8/8<br>NPD | 90/8/8<br>NPD |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

**CE Marking of Heat strengthened glass - EN 1863-2:2004**
**Declaration of performances**
**Imagin extra clear Heat strengthened**

CE

We

**AGC Glass Europe**
**Division Raw Glass Products**
Chaussée de La Hulpe 166 - B 1170 Brussels
Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **IMAGIN EXTRA CLEAR Heat strengthened**, intended to be used in buildings and construction works, following **EN 572-9:2004**

| | **Imagin extra clear Heat strengthened** characteristics in : | **AVCP Systems** | **4 mm** | **5 mm** | **6 mm** | **8 mm** |
|---|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD | NPD | NPD | NPD |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | 100 K | 100 K | 100 K | 100 K |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 30 (-2;-4) | 30 (-1;-2) | 31 (-2;-3) | 32 (-1;-2) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | 5,8<br>0,89 | 5,8<br>0,89 | 5,7<br>0,89 | 5,7<br>0,89 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 92/8/8 | 91/8/8 | 91/8/8 | 91/8/8 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 91/8/8<br>NPD | 91/8/8<br>NPD | 90/8/8<br>NPD | 90/8/8<br>NPD |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

| | | |
|---|---|---|
| AGC | **CE Marking of Thermally toughened glass - EN 12150-2:2004**<br>**CE Marking of Heat soaked Thermally toughened glass - EN 14179-2:2005**<br>**Declaration of performances**<br>**Imagin extra clear Thermally toughened or Heat soaked thermally toughened** | CE |

We

**AGC Glass Europe**
**Division Raw Glass Products**
Chaussée de La Hulpe 166 - B 1170 Brussels
Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **IMAGIN EXTRA CLEAR Thermally toughened or Heat soaked thermally toughened**, intended to be used in buildings and construction works, following **EN 12150-2:2004 / 14179-2:2005**

| | **Imagin extra clear Thermally toughened or Heat soaked thermally toughened** characteristics in : | **AVCP Systems** | **4 mm** | **5 mm** | **6 mm** | **8 mm** | **10 mm** |
|---|---|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 | A1 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD | NPD | NPD | NPD | NPD |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | NPD | NPD | NPD | NPD | NPD |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 30 (-2;-4) | 30 (-1;-2) | 31 (-2;-3) | 32 (-1;-2) | 34 (-2;-3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | 5,8<br>0,89 | 5,8<br>0,89 | 5,7<br>0,89 | 5,7<br>0,89 | 5,6<br>0,89 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 92/8/8 | 91/8/8 | 91/8/8 | 91/8/8 | 91/8/8 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 91/8/8<br>NPD | 91/8/8<br>NPD | 90/8/8<br>NPD | 90/8/8<br>NPD | 90/8/8<br>NPD |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

| | | |
|---|---|---|
| AGC | **CE Marking of Wired patterned glass - EN 572-9:2004**<br>**Declaration of performances**<br>**Imagin bronze (annealed)** | CE |

We

**AGC Glass Europe**
**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **IMAGIN BRONZE**, intended to be used in buildings and construction works, following **EN 572-9:2004**

| | **Imagin bronze** characteristics in : | **AVCP Systems** | **4 mm** | **5 mm** | **6 mm** | **8 mm** |
|---|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD | NPD | NPD | NPD |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | NPD | NPD | NPD | NPD |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 30 (-2;-4) | 30 (-1;-2) | 31 (-2;-3) | 32 (-1;-2) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | 5,8<br>0,89 | 5,8<br>0,89 | 5,7<br>0,89 | 5,7<br>0,89 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 59 / 6 / 6 | 52 / 6 / 6 | 46 / 5 / 5 | 37 / 5 / 5 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 60 / 6 / 6<br>68 | 54 / 6 / 6<br>64 | 49 / 5 / 5<br>60 | 40 / 5 / 5<br>53 |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

| | | |
|---|---|---|
| AGC | **CE Marking of Heat strengthened glass - EN 1863-2:2004**<br>**Declaration of performances**<br>**Imagin bronze Heat strengthened** | CE |

We

**AGC Glass Europe**
**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **IMAGIN BRONZE Heat strengthened**, intended to be used in buildings and construction works, following **EN 1863-2:2004**

| | **Imagin bronze Heat strengthened** characteristics in : | **AVCP Systems** | **4 mm** | **5 mm** | **6 mm** | **8 mm** |
|---|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD | NPD | NPD | NPD |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | 100 K | 100 K | 100 K | 100 K |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 30 (-2;-4) | 30 (-1;-2) | 31 (-2;-3) | 32 (-1;-2) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | 5,8<br>0,89 | 5,8<br>0,89 | 5,7<br>0,89 | 5,7<br>0,89 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 59 / 6 / 6 | 52 / 6 / 6 | 46 / 5 / 5 | 37 / 5 / 5 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 60 / 6 / 6<br>68 | 54 / 6 / 6<br>64 | 49 / 5 / 5<br>60 | 40 / 5 / 5<br>53 |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

| | | |
|---|---|---|
| AGC | **CE Marking of Thermally toughened - EN 12150-2:2004**<br>**CE Marking of Heat soaked Thermally toughened or - EN 14179-2:2005**<br>**Declaration of performances**<br>**Imagin bronze Thermally toughened or Heat soaked thermally toughened** | CE |

We

**AGC Glass Europe**
**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **IMAGIN BRONZE Thermally toughened or Heat soaked thermally toughened**, intended to be used in buildings and construction works, following **EN 12150-2:2004 / 14179-2:2005**

| | **Imagin bronze Thermally toughened or Heat soaked thermally toughened** characteristics in : | **AVCP Systems** | **4 mm** | **5 mm** | **6 mm** | **8 mm** |
|---|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD | NPD | NPD | NPD |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | 200 K | 200 K | 200 K | 200 K |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 30 (-2;-4) | 30 (-1;-2) | 31 (-2;-3) | 32 (-1;-2) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | 5,8<br>0,89 | 5,8<br>0,89 | 5,7<br>0,89 | 5,7<br>0,89 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 59 / 6 / 6 | 52 / 6 / 6 | 46 / 5 / 5 | 37 / 5 / 5 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 60 / 6 / 6<br>68 | 54 / 6 / 6<br>64 | 49 / 5 / 5<br>60 | 40 / 5 / 5<br>53 |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

| | | |
|---|---|---|
| AGC | **CE Marking of Wired patterned glass - EN 572-9:2004**<br>**Declaration of performances**<br>**Imagin yellow (annealed)** | CE |

We

**AGC Glass Europe**
**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **IMAGIN YELLOW**, intended to be used in buildings and construction works, following **EN 572-9:2004**

| | **Imagin yellow** characteristics in : | **AVCP Systems** | **4 mm** | **5 mm** |
|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD | NPD |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | NPD | NPD |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 30 (-2;-4) | 30 (-1;-2) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | 5,8<br>0,89 | 5,8<br>0,89 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 73 / 7 / 7 | 69 / 7 / 7 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 61 / 6 / 6<br>69 | 55 / 6 / 6<br>65 |
| 14. | Durability | 3 | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

| | | |
|---|---|---|
| AGC | **CE Marking of Heat strengthened glass - EN 1863-2:2004**<br>**Declaration of performances**<br>**Imagin yellow Heat strengthened** | CE |

We

**AGC Glass Europe**
**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **IMAGIN YELLOW Heat strengthened**, intended to be used in buildings and construction works, following **EN 1863-2:2004**

| | **Imagin yellow Heat strengthened** characteristics in : | **AVCP Systems** | **4 mm** | **5 mm** |
|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD | NPD |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | 100 K | 100 K |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 30 (-2;-4) | 30 (-1;-2) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | 5,8<br>0,89 | 5,8<br>0,89 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 73 / 7 / 7 | 69 / 7 / 7 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 61 / 6 / 6<br>69 | 55 / 6 / 6<br>65 |
| 14. | Durability | 3 | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

| | | |
|---|---|---|
| AGC | **CE Marking of Thermally toughened glass - EN 12150-2:2004**<br>**CE Marking of Heat soaked Thermally toughened glass - EN 14179-2:2005**<br>**Declaration of performances**<br>**Imagin yellow Thermally toughened or Heat soaked thermally toughened** | CE |

We

**AGC Glass Europe**
**Building Division**
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Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **IMAGIN YELLOW Thermally toughened or Heat soaked thermally toughened**, intended to be used in buildings and construction works, following **EN 12150-2:2004 / 14179-2:2005**

| | **Imagin yellow Thermally toughened or Heat soaked thermally toughened** characteristics in : | **AVCP Systems** | **4 mm** | **5 mm** |
|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD | NPD |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | 200 K | 200 K |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 30 (-2;-4) | 30 (-1;-2) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | 5,8<br>0,89 | 5,8<br>0,89 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 73 / 7 / 7 | 69 / 7 / 7 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 61 / 6 / 6<br>69 | 55 / 6 / 6<br>65 |
| 14. | Durability | 3 | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

# Imagin wired

| | | |
|---|---|---|
| AGC | **CE Marking of Wired patterned glass - EN 572-9:2004**<br>**Declaration of performances**<br>**Imagin wired clear (annealed)** | CE |

We

**AGC Glass Europe**
**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **IMAGIN WIRED CLEAR**, intended to be used in buildings and construction works, following **EN 572-9:2004**

| | **Imagin wired clear** characteristics in : | **AVCP Systems** | **6 mm** | **7 mm** | **9 mm** |
|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD | NPD | NPD |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | NPD | NPD | NPD |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | NPD | NPD | NPD |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | 5,7<br>0,89 | 5,7<br>0,89 | 5,6<br>0,89 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 89 / 8 / 8 | 88 / 8 / 8 | 87 / 8 / 8 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 80 / 7 / 7<br>83 | 79 / 7 / 7<br>NPD | 76 / 7 / 7<br>NPD |
| 14. | Durability | 3 | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

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|---|---|---|
| AGC | **CE Marking of Wired patterned glass - EN 572-9:2004**<br>**Declaration of performances**<br>**Imagin wired O and wired S (annealed)** | CE |

We

**AGC Glass Europe**
**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **IMAGIN WIRED O AND WIRED S**, intended to be used in buildings and construction works, following **EN 572-9:2004**

| | **Imagin wired clear** characteristics in : | **AVCP Systems** | **Wired O 6 mm** | **Wired S 6 mm** | **Wired S 7 mm** |
|---|---|---|---|---|---|
| | **Certificate Number:** | | 1394/89/106/EEC/01B/2006 | 1394-CPD-01/2012 | 1394-CPD-01/2012 |
| | **Notified Body:** | | 1394 | 1394 | 1394 |
| 1. | Resistance to fire (EN 13501-2) | 1 | E45 | E 30 | E 30 |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD | NPD | NPD |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | NPD | NPD | NPD |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | NPD | NPD | NPD |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | 5,7<br>0,89 | 5,7<br>0,89 | 5,7<br>0,89 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 89 / 8 / 8 | 89 / 8 / 8 | 88 / 8 / 8 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 80 / 7 / 7<br>83 | 80 / 7 / 7<br>83 | 79 / 7 / 7<br>NPD |
| 14. | Durability | 3 | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

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|---|---|---|
| AGC | **CE Marking of Wired patterned glass - EN 572-9:2004**<br>**Declaration of performances**<br>**Imagin wired bronze (annealed)** | CE |

We

**AGC Glass Europe**
**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **IMAGIN WIRED BRONZE**, intended to be used in buildings and construction works, following **EN 572-9:2004**

| | **Imagin wired bronze** characteristics in : | **AVCP Systems** | **6 mm** |
|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 |
| 3. | External fire performances | 3, 4 | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | NPD |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | NPD |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | 5,7<br>0,89 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 46 / 5 / 5 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 49 / 5 / 5<br>60 |
| 14. | Durability | 3 | PASS |

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E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

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|---|---|---|
| AGC | **CE Marking of Wired patterned glass - EN 572-9:2004**<br>**Declaration of performances**<br>**Imagin wired yellow (annealed)** | CE |

We

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Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **IMAGIN WIRED YELLOW**, intended to be used in buildings and construction works, following **EN 572-9:2004**

| | **Imagin wired yellow** characteristics in : | **AVCP Systems** | **6 mm** |
|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 |
| 3. | External fire performances | 3, 4 | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | NPD |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | NPD |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | 5,7<br>0,89 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 65 / 6 / 6 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 51 / 6 / 6<br>61 |
| 14. | Durability | 3 | PASS |

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# ipasol

| AGC | **CE Marking of Coated glass - EN 1096-4:2004**<br>**Declaration of performances**<br>**ipasol bright neutral (annealed)** | CE |
|---|---|---|

We

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**Division Raw Glass Products**
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Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **ipasol bright neutral,** intended to be used in buildings and construction works, following **EN 1096-4:2004**

| | **ipasol bright neutral** characteristics in : | **AVCP Systems** | **4 mm** | **6 mm** | **8 mm** | **10 mm** | **12 mm** |
|---|---|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 | A1 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD | NPD | NPD | NPD | NPD |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | NPD | NPD | NPD | NPD | NPD |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 30 (-2;-4) | 31 (-2;-3) | 32 (-1;-2) | 34 (-2;-3) | 35 (-2;-3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | NPD<br>0,89 | NPD<br>0,89 | NPD<br>0,89 | NPD<br>0,89 | NPD<br>0,89 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 64 / 34 / 33 | 63 / 35 / 33 | 62 / 34 / 32 | 61 / 34 / 31 | 61 / 34 / 31 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 66 / 27 / 25<br>NPD | 63 / 27 / 23<br>NPD | 60 / 27 / 22<br>NPD | 57 / 26 / 21<br>NPD | 55 / 26 / 20<br>NPD |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS | PASS |

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14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

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|---|---|---|
| AGC | **CE Marking of Coated glass - EN 1096-4:2004**<br>**Declaration of performances**<br>**ipasol bright white (annealed)** | CE |

We

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**Division Raw Glass Products**
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Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **ipasol bright white,** intended to be used in buildings and construction works, following **EN 1096-4:2004**

| | **ipasol bright white** characteristics in : | **AVCP Systems** | **4 mm** | **6 mm** | **8 mm** | **10 mm** | **12 mm** |
|---|---|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 | A1 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD | NPD | NPD | NPD | NPD |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | NPD | NPD | NPD | NPD | NPD |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 30 (-2;-4) | 31 (-2;-3) | 32 (-1;-2) | 34 (-2;-3) | 35 (-2;-3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | NPD<br>0,89 | NPD<br>0,89 | NPD<br>0,89 | NPD<br>0,89 | NPD<br>0,89 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 65 / 35 / 34 | 65 / 35 / 34 | 64 / 35 / 34 | 64 / 35 / 34 | 64 / 35 / 34 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 70 / 27 / 27<br>NPD | 70 / 27 / 26<br>NPD | 69 / 27 / 26<br>NPD | 68 / 27 / 26<br>NPD | 68 / 27 / 25<br>NPD |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
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|---|---|---|
| AGC | **CE Marking of Coated glass - EN 1096-4:2004**<br>**Declaration of performances**<br>**ipasol neutral 50/27 (annealed)** | CE |

We

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**Division Raw Glass Products**
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Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **ipasol neutral 50/27,** intended to be used in buildings and construction works, following **EN 1096-4:2004**

| | **ipasol neutral 50/27** characteristics in : | **AVCP Systems** | **6 mm** | **8 mm** | **10 mm** | **12 mm** |
|---|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD | NPD | NPD | NPD |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | NPD | NPD | NPD | NPD |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 31 (-2;-3) | 32 (-1;-2) | 34 (-2;-3) | 35 (-2;-3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | NPD<br>0,02 | NPD<br>0,02 | NPD<br>0,02 | NPD<br>0,02 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 55 / 4 / 6 | 55 / 4 / 6 | 54 / 4 / 6 | 54 / 4 / 6 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 27 / 40 / 26<br>NPD | 27 / 40 / 24<br>NPD | 27 / 40 / 23<br>NPD | 26 / 40 / 21<br>NPD |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

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|---|---|---|
| AGC | **CE Marking of Coated glass - EN 1096-4:2004**<br>**Declaration of performances**<br>**ipasol neutral 60/33 (annealed)** | CE |

We

**AGC Glass Europe**
**Division Raw Glass Products**
Chaussée de La Hulpe 166 - B 1170 Brussels
Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **ipasol neutral 60/33,** intended to be used in buildings and construction works, following **EN 1096-4:2004**

| | **ipasol neutral 60/33** characteristics in : | **AVCP Systems** | **6 mm** | **8 mm** | **10 mm** | **12 mm** |
|---|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD | NPD | NPD | NPD |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | NPD | NPD | NPD | NPD |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 31 (-2;-3) | 32 (-1;-2) | 34 (-2;-3) | 35 (-2;-3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | NPD<br>0,01 | NPD<br>0,01 | NPD<br>0,01 | NPD<br>0,01 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 66 / 6 / 7 | 66 / 6 / 7 | 65 / 6 / 7 | 64 / 6 / 7 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 34 / 39 / 28<br>NPD | 33 / 39 / 25<br>NPD | 32 / 39 / 23<br>NPD | 32 / 39 / 21<br>NPD |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

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| AGC | **CE Marking of Coated glass - EN 1096-4:2004**<br>**Declaration of performances**<br>**ipasol neutral 69/37 (annealed)** | CE |

We

**AGC Glass Europe**
**Division Raw Glass Products**
Chaussée de La Hulpe 166 - B 1170 Brussels
Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **ipasol neutral 69/37,** intended to be used in buildings and construction works, following **EN 1096-4:2004**

| | **ipasol neutral 69/37** characteristics in : | **AVCP Systems** | **6 mm** | **8 mm** | **10 mm** | **12 mm** |
|---|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD | NPD | NPD | NPD |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | NPD | NPD | NPD | NPD |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 31 (-2;-3) | 32 (-1;-2) | 34 (-2;-3) | 35 (-2;-3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | NPD<br>0,01 | NPD<br>0,01 | NPD<br>0,01 | NPD<br>0,01 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 76 / 6 / 7 | 75 / 6 / 7 | 75 / 6 / 7 | 74 / 6 / 7 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 38 / 43 / 31<br>NPD | 37 / 43 / 28<br>NPD | 37 / 43 / 26<br>NPD | 36 / 43 / 24<br>NPD |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

| | | |
|---|---|---|
| AGC | **CE Marking of Coated glass - EN 1096-4:2004**<br>**Declaration of performances**<br>**ipasol neutral 70/39 (annealed)** | CE |

We

**AGC Glass Europe**
**Division Raw Glass Products**
Chaussée de La Hulpe 166 - B 1170 Brussels
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Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **ipasol neutral 70/39,** intended to be used in buildings and construction works, following **EN 1096-4:2004**

| | **ipasol neutral 70/39** characteristics in : | **AVCP Systems** | **6 mm** | **8 mm** | **10 mm** | **12 mm** |
|---|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD | NPD | NPD | NPD |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | NPD | NPD | NPD | NPD |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 31 (-2;-3) | 32 (-1;-2) | 34 (-2;-3) | 35 (-2;-3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | NPD<br>0,01 | NPD<br>0,01 | NPD<br>0,01 | NPD<br>0,01 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 77 / 5 / 7 | 76 / 5 / 7 | 76 / 5 / 7 | 75 / 5 / 7 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 40 / 41 / 28<br>NPD | 39 / 41 / 25<br>NPD | 38 / 41 / 23<br>NPD | 38 / 41 / 21<br>NPD |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

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|---|---|---|
| AGC | **CE Marking of Coated glass - EN 1096-4:2004**<br>**Declaration of performances**<br>**ipasol neutral 73/42 (annealed)** | CE |

We

**AGC Glass Europe**
**Division Raw Glass Products**
Chaussée de La Hulpe 166 - B 1170 Brussels
Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **ipasol neutral 73/42,** intended to be used in buildings and construction works, following **EN 1096-4:2004**

| | **ipasol neutral 73/42** characteristics in : | **AVCP Systems** | **6 mm** | **8 mm** | **10 mm** | **12 mm** |
|---|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD | NPD | NPD | NPD |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | NPD | NPD | NPD | NPD |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 31 (-2;-3) | 32 (-1;-2) | 34 (-2;-3) | 35 (-2;-3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | NPD<br>0,03 | NPD<br>0,03 | NPD<br>0,03 | NPD<br>0,03 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 81 / 4 / 5 | 80 / 4 / 5 | 79 / 4 / 5 | 78 / 4 / 5 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 44 / 36 / 25<br>NPD | 43 / 36 / 22<br>NPD | 42 / 36 / 20<br>NPD | 41 / 36 / 18<br>NPD |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS |

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14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

**CE Marking of Coated glass - EN 1096-4:2004**
**Declaration of performances**
**ipasol platin 25/17 (annealed)**

CE

We

**AGC Glass Europe**
**Division Raw Glass Products**
Chaussée de La Hulpe 166 - B 1170 Brussels
Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **ipasol platin 25/17,** intended to be used in buildings and construction works, following **EN 1096-4:2004**

| | **ipasol platin 25/17** characteristics in : | **AVCP Systems** | **6 mm** | **8 mm** | **10 mm** | **12 mm** |
|---|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD | NPD | NPD | NPD |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | NPD | NPD | NPD | NPD |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 31 (-2;-3) | 32 (-1;-2) | 34 (-2;-3) | 35 (-2;-3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | NPD<br>0,02 | NPD<br>0,02 | NPD<br>0,02 | NPD<br>0,02 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 27 / 30 / 63 | 27 / 30 / 63 | 26 / 30 / 62 | 26 / 30 / 61 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 17 / 52 / 64<br>NPD | 17 / 52 / 62<br>NPD | 17 / 52 / 59<br>NPD | 17 / 52 / 57<br>NPD |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

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|---|---|---|
| AGC | **CE Marking of Coated glass - EN 1096-4:2004**<br>**Declaration of performances**<br>**ipasol platin 47/29 (annealed)** | CE |

We

**AGC Glass Europe**
**Division Raw Glass Products**
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Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **ipasol platin 47/29,** intended to be used in buildings and construction works, following **EN 1096-4:2004**

| | **ipasol platin 47/29** characteristics in : | **AVCP Systems** | **6 mm** | **8 mm** | **10 mm** | **12 mm** |
|---|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD | NPD | NPD | NPD |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | NPD | NPD | NPD | NPD |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 31 (-2;-3) | 32 (-1;-2) | 34 (-2;-3) | 35 (-2;-3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | NPD<br>0,03 | NPD<br>0,03 | NPD<br>0,03 | NPD<br>0,03 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 51 / 26 / 38 | 50 / 26 / 37 | 50 / 26 / 37 | 49 / 26 / 36 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 30 / 50 / 42<br>NPD | 29 / 50 / 39<br>NPD | 28 / 50 / 36<br>NPD | 28 / 50 / 34<br>NPD |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

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| AGC | **CE Marking of Coated glass - EN 1096-4:2004**<br>**Declaration of performances**<br>**ipasol shine 40/22 (annealed)** | CE |

We

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Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **ipasol shine 40/22,** intended to be used in buildings and construction works, following **EN 1096-4:2004**

| | **ipasol shine 40/22** characteristics in : | **AVCP Systems** | **6 mm** | **8 mm** | **10 mm** | **12 mm** |
|---|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD | NPD | NPD | NPD |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | NPD | NPD | NPD | NPD |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 31 (-2;-3) | 32 (-1;-2) | 34 (-2;-3) | 35 (-2;-3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | NPD<br>0,03 | NPD<br>0,03 | NPD<br>0,03 | NPD<br>0,03 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 44 / 5 / 15 | 44 / 5 / 15 | 44 / 5 / 14 | 43 / 5 / 14 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 21 / 44 / 27<br>NPD | 21 / 44 / 25<br>NPD | 21 / 44 / 24<br>NPD | 20 / 44 / 22<br>NPD |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS |

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14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

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| AGC | **CE Marking of Coated glass - EN 1096-4:2004**<br>**Declaration of performances**<br>**ipasol sky 30/17 (annealed)** | CE |

We

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Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **ipasol sky 30/17,** intended to be used in buildings and construction works, following **EN 1096-4:2004**

| | **ipasol sky 30/17** characteristics in : | **AVCP Systems** | **6 mm** | **8 mm** | **10 mm** | **12 mm** |
|---|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD | NPD | NPD | NPD |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | NPD | NPD | NPD | NPD |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 31 (-2;-3) | 32 (-1;-2) | 34 (-2;-3) | 35 (-2;-3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | NPD<br>0,03 | NPD<br>0,03 | NPD<br>0,03 | NPD<br>0,03 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 33 / 4 / 17 | 33 / 4 / 17 | 32 / 4 / 17 | 32 / 4 / 16 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 15 / 45 / 23<br>NPD | 15 / 45 / 21<br>NPD | 15 / 45 / 19<br>NPD | 15 / 45 / 18<br>NPD |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

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|---|---|---|
| AGC | **CE Marking of Coated glass - EN 1096-4:2004**<br>**Declaration of performances**<br>**ipasol ultraselect 62/29 (annealed)** | CE |

We

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Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **ipasol ultraselect 62/29,** intended to be used in buildings and construction works, following **EN 1096-4:2004**

| | **ipasol ultraselect 62/29** characteristics in : | **AVCP Systems** | **6 mm** | **8 mm** | **10 mm** | **12 mm** |
|---|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD | NPD | NPD | NPD |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | NPD | NPD | NPD | NPD |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 31 (-2;-3) | 32 (-1;-2) | 34 (-2;-3) | 35 (-2;-3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | NPD<br>0,01 | NPD<br>0,01 | NPD<br>0,01 | NPD<br>0,01 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 68 / 3 / 6 | 68 / 3 / 6 | 68 / 3 / 6 | 67 / 3 / 6 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 30 / 46 / 38<br>NPD | 30 / 46 / 36<br>NPD | 30 / 46 / 34<br>NPD | 30 / 46 / 32<br>NPD |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS |

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14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

# iplus

| AGC | **CE Marking of Coated glass - EN 1096-4:2004**<br>**Declaration of performances**<br>**iplus 1.0 (annealed)** | CE |
|---|---|---|

We

**AGC Glass Europe**
**Building Division**
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Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **iplus 1.0**, intended to be used in buildings and construction works, following **EN 1096-4:2004**

| | **iplus 1.0** characteristics in : | **AVCP Sytems** | **4 mm** | **5 mm** | **6 mm** | **8 mm** | **10 mm** |
|---|---|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 | A1 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD | NPD | NPD | NPD | NPD |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | NPD | NPD | NPD | NPD | NPD |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 30 (-2;-4) | 30 (-1;-2) | 31 (-2;-3) | 32 (-1;-2) | 34 (-2;-3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | NPD<br>0,01 | NPD<br>0,01 | NPD<br>0,01 | NPD<br>0,01 | NPD<br>0,01 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 81 / 12 / 14 | 81 / 12 / 14 | 80 / 12 / 14 | 80 / 12 / 14 | 79 / 12 / 13 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 52 / 39 / 33<br>NPD | 51 / 39 / 32<br>NPD | 50 / 39 / 30<br>NPD | 49 / 39 / 28<br>NPD | 48 / 39 / 26<br>NPD |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

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|---|---|---|
| AGC | **CE Marking of Coated glass - EN 1096-4:2004**<br>**Declaration of performances**<br>**iplus Alpha N (annealed)** | CE |

We

**AGC Glass Europe**
**Building Division**
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Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **iplus Alpha N**, intended to be used in buildings and construction works, following **EN 1096-4:2004**

| | **iplus Alpha N** characteristics in : | **AVCP Systems** | **4 mm** | **6 mm** |
|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD | NPD |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | NPD | NPD |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 30 (-2;-4) | 31 (-2;-3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | NPD<br>0,06 | NPD<br>0,06 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 89 / 5 / 5 | 89 / 5 / 5 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 72 / 19 / 17<br>NPD | 71 / 19 / 16<br>NPD |
| 14. | Durability | 3 | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

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| AGC | **CE Marking of Heat strengthened glass - EN 1863-2:2004**<br>**Declaration of performances**<br>**iplus Alpha N Heat strengthened** | CE |

We

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**Building Division**
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Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **iplus Alpha N Heat strengthened**, intended to be used in buildings and construction works, following **EN 1863-2:2004**

| | **iplus Alpha N Heat strengthened** characteristics in : | **AVCP Systems** | **4 mm** | **6 mm** |
|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD | NPD |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | 100 K | 100 K |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 30 (-2;-4) | 31 (-2;-3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | NPD<br>NPD | NPD<br>NPD |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 89 / 5 / 5 | 89 / 5 / 5 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 72 / 19 / 17<br>NPD | 71 / 19 / 16<br>NPD |
| 14. | Durability | 3 | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

**CE Marking of Thermally toughened glass - EN 12150-2:2004**
**CE Marking of Heat soaked Thermally toughened glass - EN 14179-2:2005**
**Declaration of performances**
**iplus Alpha N Thermally toughened or Heat soaked thermally toughened**

CE

We

**AGC Glass Europe**
**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **iplus Alpha N Thermally toughened or Heat soaked thermally toughened**, intended to be used in buildings and construction works, following **EN 12150-2:2004 / 14179-2:2005**

| | **iplus Alpha N Thermally toughened or Heat soaked thermally toughened** characteristics in : | **AVCP Systems** | **4 mm** | **6 mm** |
|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | 1C3 | 1C2 |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | 200 K | 200 K |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 30 (-2;-4) | 31 (-2;-3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | NPD<br>NPD | NPD<br>NPD |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 89 / 5 / 5 | 89 / 5 / 5 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 72 / 19 / 17<br>NPD | 71 / 19 / 16<br>NPD |
| 14. | Durability | 3 | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

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|---|---|---|
| AGC | **CE Marking of Coated glass - EN 1096-4:2004**<br>**Declaration of performances**<br>**iplus E (annealed)** | CE |

We

**AGC Glass Europe**
**Building Division**
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Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **iplus E**, intended to be used in buildings and construction works, following **EN 1096-4:2004**

| | **iplus E** characteristics in : | **AVCP Systems** | **4 mm** | **5 mm** | **6 mm** | **8 mm** | **10 mm** |
|---|---|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 | A1 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD | NPD | NPD | NPD | NPD |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | NPD | NPD | NPD | NPD | NPD |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 30 (-2;-4) | 30 (-1;-2) | 31 (-2;-3) | 32 (-1;-2) | 34 (-2;-3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | NPD<br>0,03 | NPD<br>0,03 | NPD<br>0,03 | NPD<br>0,03 | NPD<br>0,03 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 89 / 5 / 6 | 88 / 5 / 6 | 88 / 5 / 5 | 87 / 5 / 5 | 86 / 5 / 5 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 62 / 27 / 22<br>NPD | 61 / 27 / 21<br>NPD | 60 / 27 / 20<br>NPD | 58 / 27 / 18<br>NPD | 56 / 27 / 16<br>NPD |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

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| AGC | **CE Marking of Coated glass - EN 1096-4:2004**<br>**Declaration of performances**<br>**iplus ET (annealed)** | CE |

We

**AGC Glass Europe**
**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
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Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **iplus ET**, intended to be used in buildings and construction works, following **EN 1096-4:2004**

| | **iplus ET** characteristics in : | **AVCP Systems** | **4 mm** | **5 mm** | **6 mm** | **8 mm** | **10 mm** |
|---|---|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 | A1 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD | NPD | NPD | NPD | NPD |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | NPD | NPD | NPD | NPD | NPD |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 30 (-2;-4) | 30 (-1;-2) | 31 (-2;-3) | 32 (-1;-2) | 34 (-2;-3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | NPD<br>NPD | NPD<br>NPD | NPD<br>NPD | NPD<br>NPD | NPD<br>NPD |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | NPD | NPD | NPD | NPD | NPD |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | NPD<br>NPD | NPD<br>NPD | NPD<br>NPD | NPD<br>NPD | NPD<br>NPD |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

| | | |
|---|---|---|
| AGC | **CE Marking of Heat strengthened glass - EN 1863-2:2004**<br>**Declaration of performances**<br>**iplus ET Heat strengthened** | CE |

We

**AGC Glass Europe**
**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **iplus ET Heat strengthened**, intended to be used in buildings and construction works, following **EN 1863-2:2004**

| | **iplus ET Heat strengthened** characteristics in : | **AVCP Systems** | **4 mm** | **5 mm** | **6 mm** | **8 mm** | **10 mm** |
|---|---|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 | A1 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD | NPD | NPD | NPD | NPD |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | 100 K | 100 K | 100 K | 100 K | 100 K |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 30 (-2;-4) | 30 (-1;-2) | 31 (-2;-3) | 32 (-1;-2) | 34 (-2;-3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | NPD<br>0,03 | NPD<br>0,03 | NPD<br>0,03 | NPD<br>0,03 | NPD<br>0,03 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 86 / 7 / 8 | 86 / 7 / 8 | 85 / 7 / 8 | 84 / 7 / 8 | 83 / 7 / 8 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 59 / 30 / 25<br>NPD | 58 / 30 / 24<br>NPD | 57 / 30 / 23<br>NPD | 56 / 30 / 21<br>NPD | 54 / 30 / 19<br>NPD |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

**CE Marking of Thermally toughened glass - EN 12150-2:2004**
**CE Marking of Heat soaked Thermally toughened glass - EN 14179-2:2005**
**Declaration of performances**
**iplus ET Thermally toughened or Heat soaked thermally toughened**

CE

We

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Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **iplus ET Thermally toughened or Heat soaked thermally toughened**, intended to be used in buildings and construction works, following **EN 12150-2:2004 / 14179-2:2005**

| | **iplus ET Thermally toughened or Heat soaked thermally toughened** characteristics in : | **AVCP Systems** | **4 mm** | **5 mm** | **6 mm** | **8 mm** | **10 mm** |
|---|---|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 | A1 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | 1C3 | 1C3 | 1C2 | 1C2 | 1C1 |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | 200 K | NPD | 200 K | 200 K | 200 K |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 30 (-2;-4) | 30 (-1;-2) | 31 (-2;-3) | 32 (-1;-2) | 34 (-2;-3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | NPD<br>0,03 | NPD<br>0,03 | NPD<br>0,03 | NPD<br>0,03 | NPD<br>0,03 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 86 / 7 / 8 | 86 / 7 / 8 | 85 / 7 / 8 | 84 / 7 / 8 | 83 / 7 / 8 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 59 / 30 / 25<br>NPD | 58 / 30 / 24<br>NPD | 57 / 30 / 23<br>NPD | 56 / 30 / 21<br>NPD | 54 / 30 / 19<br>NPD |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

| | | |
|---|---|---|
| AGC | **CE Marking of Coated glass - EN 1096-4:2004**<br>**Declaration of performances**<br>**iplus LS (annealed)** | CE |

We

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Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **iplus LS**, intended to be used in buildings and construction works, following **EN 1096-4:2004**

| | **iplus LS** characteristics in : | **AVCP Systems** | **4 mm** | **5 mm** | **6 mm** | **8 mm** | **10 mm** |
|---|---|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 | A1 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD | NPD | NPD | NPD | NPD |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | NPD | NPD | NPD | NPD | NPD |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 30 (-2;-4) | 30 (-1;-2) | 31 (-2;-3) | 32 (-1;-2) | 34 (-2;-3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | NPD<br>0,08 | NPD<br>0,08 | NPD<br>0,08 | NPD<br>0,08 | NPD<br>0,08 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 90 / 6 / 6 | 90 / 6 / 6 | 89 / 6 / 6 | 89 / 6 / 6 | 88 / 6 / 6 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 73 / 18 / 16<br>NPD | 73 / 18 / 16<br>NPD | 72 / 18 / 15<br>NPD | 71 / 18 / 15<br>NPD | 69 / 17 / 14<br>NPD |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

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|---|---|---|
| AGC | **CE Marking of Coated glass - EN 1096-4:2004**<br>**Declaration of performances**<br>**iplus LST (annealed)** | CE |

We

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Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **iplus LST**, intended to be used in buildings and construction works, following **EN 1096-4:2004**

| | **iplus LST** characteristics in : | **AVCP Systems** | **4 mm** | **6 mm** | **8 mm** | **10 mm** |
|---|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD | NPD | NPD | NPD |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | NPD | NPD | NPD | NPD |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 30 (-2;-4) | 31 (-2;-3) | 32 (-1;-2) | 34 (-2;-3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | NPD<br>NPD | NPD<br>NPD | NPD<br>NPD | NPD<br>NPD |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | NPD | NPD | NPD | NPD |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | NPD<br>NPD | NPD<br>NPD | NPD<br>NPD | NPD<br>NPD |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

| | | |
|---|---|---|
| AGC | **CE Marking of Heat strengthened glass - EN 1863-2:2004**<br>**Declaration of performances**<br>**iplus LST Heat strengthened** | CE |

We

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Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **iplus LST Heat strengthened**, intended to be used in buildings and construction works, following **EN 1863-2:2004**

| | **iplus LST Heat strengthened** characteristics in : | **AVCP Systems** | **4 mm** | **6 mm** | **8 mm** | **10 mm** |
|---|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD | NPD | NPD | NPD |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | 100 K | 100 K | 100 K | 100 K |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 30 (-2;-4) | 31 (-2;-3) | 32 (-1;-2) | 34 (-2;-3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | NPD<br>0,08 | NPD<br>0,08 | NPD<br>0,08 | NPD<br>0,08 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 90 / 6 / 6 | 89 / 6 / 6 | 89 / 6 / 6 | 88 / 6 / 6 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 73 / 18 / 16<br>NPD | 72 / 18 / 15<br>NPD | 71 / 18 / 15<br>NPD | 69 / 17 / 14<br>NPD |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

| | | |
|---|---|---|
| AGC | **CE Marking of Thermally toughened glass - EN 12150-2:2004**<br>**CE Marking of Heat soaked Thermally toughened glass - EN 14179-2:2005**<br>**Declaration of performances**<br>**iplus LST Thermally toughened or Heat soaked thermally toughened** | CE |

We

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**Building Division**
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Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **iplus LST Thermally toughened or Heat soaked thermally toughened**, intended to be used in buildings and construction works, following **EN 12150-2:2004 / 14179-2:2005**

| | **iplus LST Thermally toughened or Heat soaked thermally toughened** characteristics in : | **AVCP Systems** | **4 mm** | **6 mm** | **8 mm** | **10 mm** |
|---|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | 1C3 | 1C2 | 1C2 | 1C1 |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | 200 K | 200 K | 200 K | 200 K |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 30 (-2;-4) | 31 (-2;-3) | 32 (-1;-2) | 34 (-2;-3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | NPD<br>0,08 | NPD<br>0,08 | NPD<br>0,08 | NPD<br>0,08 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 90 / 6 / 6 | 89 / 6 / 6 | 89 / 6 / 6 | 88 / 6 / 6 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 73 / 18 / 16<br>NPD | 72 / 18 / 15<br>NPD | 71 / 18 / 15<br>NPD | 69 / 17 / 14<br>NPD |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

# Lacobel T

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|---|---|---|
| AGC | **CE Marking of Heat strengthened glass - EN 1863-2:2004**<br>**Declaration of performances**<br>**Lacobel T Heat strengthened** | CE |

We

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Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **LACOBEL T Heat strengthened**, intended to be used in buildings and construction works, following **EN 1863-2:2004**

| | **Lacobel T Heat strengthened** characteristics in : | **AVCP Systems** | **4 mm** | **6 mm** | **8 mm** | **10 mm** |
|---|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD | NPD | NPD | NPD |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | 100 K | 100 K | 100 K | 100 K |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 30 (-2;-4) | 31 (-2;-3) | 32 (-1;-2) | 34 (-2;-3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | NPD<br>NPD | NPD<br>NPD | NPD<br>NPD | NPD<br>NPD |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | NPD | NPD | NPD | NPD |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | NPD<br>NPD | NPD<br>NPD | NPD<br>NPD | NPD<br>NPD |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

| | | |
|---|---|---|
| AGC | **CE Marking of Thermally toughened glass - EN 12150-2:2004**<br>**CE Marking of Heat soaked Thermally toughened glass - EN 14179-2:2005**<br>**Declaration of performances**<br>**Lacobel T Thermally toughened or Heat soaked thermally toughened** | CE |

We

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Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **LACOBEL T Thermally toughened or Heat soaked thermally toughened**, intended to be used in buildings and construction works, following **EN 12150-2:2004 / 14179-2:2005**

| | **Lacobel T Thermally toughened or Heat soaked thermally toughened** characteristics in : | **AVCP Systems** | **4 mm** | **6 mm** | **8 mm** | **10 mm** |
|---|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD | NPD | NPD | NPD |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | 200 K | 200 K | 200 K | 200 K |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 30 (-2;-4) | 31 (-2;-3) | 32 (-1;-2) | 34 (-2;-3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | NPD<br>NPD | NPD<br>NPD | NPD<br>NPD | NPD<br>NPD |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | NPD | NPD | NPD | NPD |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | NPD<br>NPD | NPD<br>NPD | NPD<br>NPD | NPD<br>NPD |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

# Mirox 3G

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|---|---|---|
| AGC | **CE Marking of Mirrors from silver-coated float glass for internal use**<br>**EN 1036-2:2008**<br>**Declaration of performances**<br>**Mirox 3G Clear** | CE |

We

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Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **MIROX 3G CLEAR**, intended to be used in buildings and construction works, following **EN 1036-2:2008**

| | **Mirox 3G Clear** characteristics in : | **AVCP Systems** | **2 mm** | **3 mm** | **4 mm** | **5 mm** | **6 mm** | **8 mm** |
|---|---|---|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A2-s1, d0 | A2-s1, d0 | A2-s1, d0 | A2-s1, d0 | A2-s1, d0 | A2-s1, d0 |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD | NPD | NPD | NPD | NPD | NPD |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | NPD | NPD | NPD | NPD | NPD | NPD |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | NPD | NPD | NPD | NPD | NPD | NPD |
| 11. | U-value (EN 673) | 3 | 5,8 | 5,8 | 5,8 | 5,8 | 5,7 | 5,7 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | NPD | NPD | NPD | NPD | NPD | NPD |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | NPD<br>NPD | NPD<br>NPD | NPD<br>NPD | NPD<br>NPD | NPD<br>NPD | NPD<br>NPD |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS | PASS | PASS |

Brussels
10th of September 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

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|---|---|---|
| AGC | **CE Marking of Mirrors from silver-coated float glass for internal use<br>EN 1036-2:2008<br>Declaration of performances<br>Mirox 3G Clearvision** | CE |

We

**AGC Glass Europe**
**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **MIROX 3G CLEARVISION,** intended to be used in buildings and construction works, following **EN 1036-2:2008**

| | **Mirox 3G Clearvision** characteristics in : | **AVCP Systems** | **3 mm** | **4 mm** | **5 mm** | **6 mm** | **8 mm** |
|---|---|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A2-s1, d0 | A2-s1, d0 | A2-s1, d0 | A2-s1, d0 | A2-s1, d0 |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD | NPD | NPD | NPD | NPD |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | NPD | NPD | NPD | NPD | NPD |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | NPD | NPD | NPD | NPD | NPD |
| 11. | U-value (EN 673) | 3 | 5,8 | 5,8 | 5,8 | 5,7 | 5,7 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | NPD | NPD | NPD | NPD | NPD |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | NPD<br>NPD | NPD<br>NPD | NPD<br>NPD | NPD<br>NPD | NPD<br>NPD |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS | PASS |

Brussels
10th of September 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

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|---|---|---|
| AGC | **CE Marking of Mirrors from silver-coated float glass for internal use**<br>**EN 1036-2:2008**<br>**Declaration of performances**<br>**Mirox 3G Bronze** | CE |

We

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Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **MIROX 3G BRONZE**, intended to be used in buildings and construction works, following **EN 1036-2:2008**

| | **Mirox 3G Bronze** characteristics in : | **AVCP Systems** | **3 mm** | **4 mm** | **5 mm** | **6 mm** | **8 mm** |
|---|---|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A2-s1, d0 | A2-s1, d0 | A2-s1, d0 | A2-s1, d0 | A2-s1, d0 |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD | NPD | NPD | NPD | NPD |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | NPD | NPD | NPD | NPD | NPD |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | NPD | NPD | NPD | NPD | NPD |
| 11. | U-value (EN 673) | 3 | 5,8 | 5,8 | 5,8 | 5,7 | 5,7 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | NPD | NPD | NPD | NPD | NPD |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | NPD<br>NPD | NPD<br>NPD | NPD<br>NPD | NPD<br>NPD | NPD<br>NPD |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS | PASS |

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10th of September 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

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|---|---|---|
| AGC | **CE Marking of Mirrors from silver-coated float glass for internal use**<br>**EN 1036-2:2008**<br>**Declaration of performances**<br>**Mirox 3G Grey** | CE |

We

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Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **MIROX 3G GREY**, intended to be used in buildings and construction works, following **EN 1036-2:2008**

| | **Mirox 3G Grey** characteristics in : | **AVCP Systems** | **3 mm** | **4 mm** | **5 mm** | **6 mm** | **8 mm** |
|---|---|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A2-s1, d0 | A2-s1, d0 | A2-s1, d0 | A2-s1, d0 | A2-s1, d0 |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD | NPD | NPD | NPD | NPD |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | NPD | NPD | NPD | NPD | NPD |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | NPD | NPD | NPD | NPD | NPD |
| 11. | U-value (EN 673) | 3 | 5,8 | 5,8 | 5,8 | 5,7 | 5,7 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | NPD | NPD | NPD | NPD | NPD |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | NPD<br>NPD | NPD<br>NPD | NPD<br>NPD | NPD<br>NPD | NPD<br>NPD |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS | PASS |

Brussels
10th of September 2013

E. Ceriani
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|---|---|---|
| AGC | **CE Marking of Mirrors from silver-coated float glass for internal use**<br>**EN 1036-2:2008**<br>**Declaration of performances**<br>**Mirox 3G Black Mirox** | CE |

We

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Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **MIROX 3G BLACK MIROX**, intended to be used in buildings and construction works, following **EN 1036-2:2008**

| | **Mirox 3G Black Mirox** characteristics in : | **AVCP Systems** | **4 mm** | **6 mm** | **8 mm** |
|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A2-s1, d0 | A2-s1, d0 | A2-s1, d0 |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD | NPD | NPD |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | NPD | NPD | NPD |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | NPD | NPD | NPD |
| 11. | U-value (EN 673) | 3 | 5,8 | 5,8 | 5,7 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | NPD | NPD | NPD |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | NPD<br>NPD | NPD<br>NPD | NPD<br>NPD |
| 14. | Durability | 3 | PASS | PASS | PASS |

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|---|---|---|
| AGC | **CE Marking of Mirrors from silver-coated float glass for internal use**<br>**EN 1036-2:2008**<br>**Declaration of performances**<br>**Mirox 3G PrivaBlue** | CE |

We

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Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **MIROX 3G PRIVABLUE**, intended to be used in buildings and construction works, following **EN 1036-2:2008**

| | **Mirox 3G PrivaBlue** characteristics in : | **AVCP Systems** | **3 mm** | **4 mm** | **5 mm** | **6 mm** | **8 mm** |
|---|---|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A2-s1, d0 | A2-s1, d0 | A2-s1, d0 | A2-s1, d0 | A2-s1, d0 |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD | NPD | NPD | NPD | NPD |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | NPD | NPD | NPD | NPD | NPD |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | NPD | NPD | NPD | NPD | NPD |
| 11. | U-value (EN 673) | 3 | 5,8 | 5,8 | 5,8 | 5,7 | 5,7 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | NPD | NPD | NPD | NPD | NPD |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | NPD<br>NPD | NPD<br>NPD | NPD<br>NPD | NPD<br>NPD | NPD<br>NPD |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS | PASS |

Brussels
10th of September 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

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|---|---|---|
| AGC | **CE Marking of Mirrors from silver-coated float glass for internal use**<br>**EN 1036-2:2008**<br>**Declaration of performances**<br>**Mirox 3G Green** | CE |

We

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Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **MIROX 3G GREEN**, intended to be used in buildings and construction works, following **EN 1036-2:2008**

| | **Mirox 3G Green** characteristics in : | **AVCP Systems** | **3 mm** | **4 mm** | **5 mm** | **6 mm** | **8 mm** |
|---|---|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A2-s1, d0 | A2-s1, d0 | A2-s1, d0 | A2-s1, d0 | A2-s1, d0 |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD | NPD | NPD | NPD | NPD |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | NPD | NPD | NPD | NPD | NPD |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | NPD | NPD | NPD | NPD | NPD |
| 11. | U-value (EN 673) | 3 | 5,8 | 5,8 | 5,8 | 5,7 | 5,7 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | NPD | NPD | NPD | NPD | NPD |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | NPD<br>NPD | NPD<br>NPD | NPD<br>NPD | NPD<br>NPD | NPD<br>NPD |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS | PASS |

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10th of September 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

# Mirox MNGE

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| AGC | **CE Marking of Mirrors from silver-coated float glass for internal use**<br>**EN 1036-2:2008**<br>**Declaration of performances**<br>**Mirox MNGE Clear** | CE |

We

**AGC Glass Europe**
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Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **MIROX MNGE CLEAR**, intended to be used in buildings and construction works, following **EN 1036-2:2008**

| | **Mirox MNGE Clear** characteristics in : | **AVCP Systems** | **2 mm** | **3 mm** | **4 mm** | **5 mm** | **6 mm** | **8 mm** |
|---|---|---|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A2-s1, d0 | A2-s1, d0 | A2-s1, d0 | A2-s1, d0 | A2-s1, d0 | A2-s1, d0 |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD | NPD | NPD | NPD | NPD | NPD |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | NPD | NPD | NPD | NPD | NPD | NPD |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | NPD | NPD | NPD | NPD | NPD | NPD |
| 11. | U-value (EN 673) | 3 | 5,8 | 5,8 | 5,8 | 5,8 | 5,7 | 5,7 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | NPD | NPD | NPD | NPD | NPD | NPD |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | NPD<br>NPD | NPD<br>NPD | NPD<br>NPD | NPD<br>NPD | NPD<br>NPD | NPD<br>NPD |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS | PASS | PASS |

Brussels
10th of September 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

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|---|---|---|
| AGC | **CE Marking of Mirrors from silver-coated float glass for internal use**<br>**EN 1036-2:2008**<br>**Declaration of performances**<br>**Mirox MNGE Clearvision** | CE |

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Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **MIROX MNGE CLEARVISION,** intended to be used in buildings and construction works, following **EN 1036-2:2008**

| | **Mirox MNGE Clearvision** characteristics in : | **AVCP Systems** | **3 mm** | **4 mm** | **5 mm** | **6 mm** | **8 mm** |
|---|---|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A2-s1, d0 | A2-s1, d0 | A2-s1, d0 | A2-s1, d0 | A2-s1, d0 |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD | NPD | NPD | NPD | NPD |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | NPD | NPD | NPD | NPD | NPD |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | NPD | NPD | NPD | NPD | NPD |
| 11. | U-value (EN 673) | 3 | 5,8 | 5,8 | 5,8 | 5,7 | 5,7 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | NPD | NPD | NPD | NPD | NPD |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | NPD<br>NPD | NPD<br>NPD | NPD<br>NPD | NPD<br>NPD | NPD<br>NPD |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS | PASS |

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| AGC | **CE Marking of Mirrors from silver-coated float glass for internal use**<br>**EN 1036-2:2008**<br>**Declaration of performances**<br>**Mirox MNGE Bronze** | CE |

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Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **MIROX MNGE BRONZE**, intended to be used in buildings and construction works, following **EN 1036-2:2008**

| | **Mirox MNGE Bronze** characteristics in : | **AVCP Systems** | **3 mm** | **4 mm** | **5 mm** | **6 mm** | **8 mm** |
|---|---|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A2-s1, d0 | A2-s1, d0 | A2-s1, d0 | A2-s1, d0 | A2-s1, d0 |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD | NPD | NPD | NPD | NPD |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | NPD | NPD | NPD | NPD | NPD |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | NPD | NPD | NPD | NPD | NPD |
| 11. | U-value (EN 673) | 3 | 5,8 | 5,8 | 5,8 | 5,7 | 5,7 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | NPD | NPD | NPD | NPD | NPD |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | NPD<br>NPD | NPD<br>NPD | NPD<br>NPD | NPD<br>NPD | NPD<br>NPD |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS | PASS |

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10th of September 2013

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Primary Sales & Strategic, Marketing Director, Building

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|---|---|---|
| AGC | **CE Marking of Mirrors from silver-coated float glass for internal use**<br>**EN 1036-2:2008**<br>**Declaration of performances**<br>**Mirox MNGE Grey** | CE |

We

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Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **MIROX MNGE GREY**, intended to be used in buildings and construction works, following **EN 1036-2:2008**

| | **Mirox MNGE Grey** characteristics in : | **AVCP Systems** | **3 mm** | **4 mm** | **5 mm** | **6 mm** | **8 mm** |
|---|---|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A2-s1, d0 | A2-s1, d0 | A2-s1, d0 | A2-s1, d0 | A2-s1, d0 |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD | NPD | NPD | NPD | NPD |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | NPD | NPD | NPD | NPD | NPD |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | NPD | NPD | NPD | NPD | NPD |
| 11. | U-value (EN 673) | 3 | 5,8 | 5,8 | 5,8 | 5,7 | 5,7 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | NPD | NPD | NPD | NPD | NPD |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | NPD<br>NPD | NPD<br>NPD | NPD<br>NPD | NPD<br>NPD | NPD<br>NPD |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS | PASS |

Brussels
10th of September 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

| | | |
|---|---|---|
| AGC | **CE Marking of Mirrors from silver-coated float glass for internal use**<br>**EN 1036-2:2008**<br>**Declaration of performances**<br>**Mirox MNGE Black Mirox** | CE |

We

**AGC Glass Europe**
**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **MIROX MNGE BLACK MIROX**, intended to be used in buildings and construction works, following **EN 1036-2:2008**

| | **Mirox MNGE Black Mirox** characteristics in : | **AVCP Systems** | **4 mm** | **6 mm** | **8 mm** |
|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A2-s1, d0 | A2-s1, d0 | A2-s1, d0 |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD | NPD | NPD |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | NPD | NPD | NPD |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | NPD | NPD | NPD |
| 11. | U-value (EN 673) | 3 | 5,8 | 5,8 | 5,7 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | NPD | NPD | NPD |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | NPD<br>NPD | NPD<br>NPD | NPD<br>NPD |
| 14. | Durability | 3 | PASS | PASS | PASS |

Brussels
10th of September 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

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|---|---|---|
| AGC | **CE Marking of Mirrors from silver-coated float glass for internal use**<br>**EN 1036-2:2008**<br>**Declaration of performances**<br>**Mirox MNGE PrivaBlue** | CE |

We

**AGC Glass Europe**
**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
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Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **MIROX MNGE PRIVABLUE**, intended to be used in buildings and construction works, following **EN 1036-2:2008**

| | **Mirox MNGE PrivaBlue** characteristics in : | **AVCP Systems** | **3 mm** | **4 mm** | **5 mm** | **6 mm** | **8 mm** |
|---|---|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A2-s1, d0 | A2-s1, d0 | A2-s1, d0 | A2-s1, d0 | A2-s1, d0 |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD | NPD | NPD | NPD | NPD |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | NPD | NPD | NPD | NPD | NPD |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | NPD | NPD | NPD | NPD | NPD |
| 11. | U-value (EN 673) | 3 | 5,8 | 5,8 | 5,8 | 5,7 | 5,7 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | NPD | NPD | NPD | NPD | NPD |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | NPD<br>NPD | NPD<br>NPD | NPD<br>NPD | NPD<br>NPD | NPD<br>NPD |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS | PASS |

Brussels
10th of September 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

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|---|---|---|
| AGC | **CE Marking of Mirrors from silver-coated float glass for internal use**<br>**EN 1036-2:2008**<br>**Declaration of performances**<br>**Mirox MNGE Green** | CE |

We

**AGC Glass Europe**
**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **MIROX MNGE GREEN**, intended to be used in buildings and construction works, following **EN 1036-2:2008**

| | **Mirox MNGE Green** characteristics in : | **AVCP Systems** | **3 mm** | **4 mm** | **5 mm** | **6 mm** | **8 mm** |
|---|---|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A2-s1, d0 | A2-s1, d0 | A2-s1, d0 | A2-s1, d0 | A2-s1, d0 |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD | NPD | NPD | NPD | NPD |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | NPD | NPD | NPD | NPD | NPD |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | NPD | NPD | NPD | NPD | NPD |
| 11. | U-value (EN 673) | 3 | 5,8 | 5,8 | 5,8 | 5,7 | 5,7 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | NPD | NPD | NPD | NPD | NPD |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | NPD<br>NPD | NPD<br>NPD | NPD<br>NPD | NPD<br>NPD | NPD<br>NPD |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS | PASS |

Brussels
10th of September 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

# Planibel clear

| | | |
|---|---|---|
| AGC | **CE Marking of Float glass - EN 572-9:2004**<br>**Declaration of performances**<br>**Planibel clear (annealed)** | CE |

We

**AGC Glass Europe**
**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **PLANIBEL CLEAR**, intended to be used in buildings and construction works, following **EN 572-9:2004**

| | **Planibel clear** characteristics in : | **AVCP Systems** | **2 mm** | **3 mm** | **4 mm** | **5 mm** | **6 mm** | **8 mm** |
|---|---|---|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 | A1 | A1 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD | NPD | NPD | NPD | NPD | NPD |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | NPD | NPD | NPD | NPD | NPD | NPD |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | NPD | 29 (-2;-5) | 30 (-2;-4) | 30 (-1;-2) | 31 (-2;-3) | 32 (-1;-2) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | 5,8<br>0,89 | 5,8<br>0,89 | 5,8<br>0,89 | 5,8<br>0,89 | 5,7<br>0,89 | 5,7<br>0,89 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 91 / 8 / 8 | 90 / 8 / 8 | 90 / 8 / 8 | 89 / 8 / 8 | 89 / 8 / 8 | 88 / 8 / 8 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 88 / 8 / 8<br>89 | 86 / 8 / 8<br>88 | 84 / 8 / 8<br>86 | 83 / 7 / 7<br>85 | 81 / 7 / 7<br>84 | 78 / 7 / 7<br>82 |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

| | | |
|---|---|---|
| AGC | **CE Marking of Float glass - EN 572-9:2004**<br>**Declaration of performances**<br>**Planibel clear (annealed)** | CE |

We

**AGC Glass Europe**
**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **PLANIBEL CLEAR**, intended to be used in buildings and construction works, following **EN 572-9:2004**

| | **Planibel clear** characteristics in : | **AVCP Systems** | **10 mm** | **12 mm** |
|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD | NPD |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | NPD | NPD |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 34 (-2;-3) | 35 (-2;-3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | 5,6<br>0,89 | 5,6<br>0,89 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 87 / 8 / 8 | 86 / 8 / 8 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 75 / 7 / 7<br>79 | 72 / 7 / 7<br>77 |
| 14. | Durability | 3 | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

| | | |
|---|---|---|
| AGC | **CE Marking of Heat strengthened glass - EN 1863-2:2004**<br>**Declaration of performances**<br>**Planibel clear Heat strengthened** | CE |

We

**AGC Glass Europe**
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Chaussée de La Hulpe 166 - B 1170 Brussels
Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **PLANIBEL CLEAR Heat strengthened**, intended to be used in buildings and construction works, following **EN 1863-2:2004**

| | **Planibel clear Heat strengthened** characteristics in : | **AVCP Systems** | **4 mm** | **5 mm** | **6 mm** | **8 mm** | **10 mm** |
|---|---|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 | A1 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD | NPD | NPD | NPD | NPD |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | 100 K | 100 K | 100 K | 100 K | 100 K |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 30 (-2;-4) | 30 (-1;-2) | 31 (-2;-3) | 32 (-1;-2) | 34 (-2;-3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | 5,8<br>0,89 | 5,8<br>0,89 | 5,7<br>0,89 | 5,7<br>0,89 | 5,6<br>0,89 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 90 / 8 / 8 | 89 / 8 / 8 | 89 / 8 / 8 | 88 / 8 / 8 | 87 / 8 / 8 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 84 / 8 / 8<br>86 | 83 / 7 / 7<br>85 | 81 / 7 / 7<br>84 | 78 / 7 / 7<br>82 | 75 / 7 / 7<br>79 |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

**CE Marking of Thermally toughened glass - EN 12150-2:2004**
**CE Marking of Heat soaked Thermally toughened glass - EN 14179-2:2005**
**Declaration of performances**
**Planibel clear Thermally toughened or Heat soaked thermally toughened**

CE

We

**AGC Glass Europe**
**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **PLANIBEL CLEAR Thermally toughened or Heat soaked thermally toughened**, intended to be used in buildings and construction works, following **EN 12150-2:2004 / 14179-2:2005**

| | **Planibel clear Thermally toughened or Heat soaked thermally toughened** characteristics in : | **AVCP Systems** | **3 mm** | **4 mm** | **5 mm** | **6 mm** | **8 mm** | **10 mm** | **12 mm** |
|---|---|---|---|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 | A1 | A1 | A1 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD | NPD | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD | 1C3 | 1C3 | 1C2 | 1C2 | 1C1 | 1C1 |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | 200 K | 200 K | 200 K | 200 K | 200 K | 200 K | 200 K |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 29 (-2;-5) | 30 (-2;-4) | 30 (-1;-2) | 31 (-2;-3) | 32 (-1;-2) | 34 (-2;-3) | 35 (-2;-3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | 5,8<br>0,89 | 5,8<br>0,89 | 5,8<br>0,89 | 5,7<br>0,89 | 5,7<br>0,89 | 5,6<br>0,89 | 5,6<br>0,89 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 90 / 8 / 8 | 90 / 8 / 8 | 89 / 8 / 8 | 89 / 8 / 8 | 88 / 8 / 8 | 87 / 8 / 8 | 86 / 8 / 8 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 86 / 8 / 8<br>88 | 84 / 8 / 8<br>86 | 83 / 7 / 7<br>85 | 81 / 7 / 7<br>84 | 78 / 7 / 7<br>82 | 75 / 7 / 7<br>79 | 72 / 7 / 7<br>77 |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

| | | |
|---|---|---|
| AGC | **CE Marking of Float glass - EN 572-9:2004**<br>**Declaration of performances**<br>**Planibel Linea Azzurra (annealed)** | CE |

We

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Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **PLANIBEL LINEA AZZURRA**, intended to be used in buildings and construction works, following **EN 572-9:2004**

| | **Planibel Linea Azzurra** characteristics in : | **AVCP Systems** | **8 mm** | **10 mm** | **12 mm** | **15 mm** | **19 mm** | **25 mm** |
|---|---|---|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 | A1 | A1 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD | NPD | NPD | NPD | NPD | NPD |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | NPD | NPD | NPD | NPD | NPD | NPD |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 32 (-1;-2) | 34 (-2;-3) | 35 (-2;-3) | NPD | NPD | NPD |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | 5,7<br>0,89 | 5,6<br>0,89 | 5,6<br>0,89 | 5,5<br>0,89 | 5,4<br>0,89 | 5,2<br>0,89 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 87 / 8 / 8 | 86 / 8 / 8 | 85 / 8 / 8 | 83 / 8 / 8 | 81 / 7 / 7 | 78 / 7 / 7 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 73 / 7 / 7<br>78 | 69 / 6 / 6<br>75 | 66 / 6 / 6<br>72 | 61 / 6 / 6<br>69 | 56 / 6 / 6<br>65 | 50 / 6 / 6<br>60 |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

| | | |
|---|---|---|
| AGC | **CE Marking of Heat strengthened glass - EN 1863-2:2004**<br>**Declaration of performances**<br>**Planibel Linea Azzurra Heat strengthened** | CE |

We

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Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **PLANIBEL LINEA AZZURRA Heat strengthened**, intended to be used in buildings and construction works, following **EN 1863-2:2004**

| | **Planibel Linea Azzurra Heat strengthened** characteristics in : | **AVCP Systems** | **8 mm** | **10 mm** |
|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD | NPD |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | 100 K | 100 K |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 32 (-1;-2) | 34 (-2;-3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | 5,7<br>0,89 | 5,6<br>0,89 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 87 / 8 / 8 | 86 / 8 / 8 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 73 / 7 / 7<br>78 | 69 / 6 / 6<br>75 |
| 14. | Durability | 3 | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

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|---|---|---|
| AGC | **CE Marking of Thermally toughened glass - EN 12150-2:2004**<br>**CE Marking of Heat soaked Thermally toughened glass - EN 14179-2:2005**<br>**Declaration of performances**<br>**Planibel Linea Azzurra Thermally toughened or Heat soaked thermally toughened** | CE |

We

**AGC Glass Europe**
**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **PLANIBEL LINEA AZZURRA Thermally toughened or Heat soaked thermally toughened**, intended to be used in buildings and construction works, following **EN 12150-2:2004 / 14179-2:2005**

| | **Planibel Linea Azzurra Thermally toughened or Heat soaked thermally toughened** characteristics in : | **AVCP Systems** | **8 mm** | **10 mm** | **12 mm** | **15 mm** | **19 mm** |
|---|---|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 | A1 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | 1C2 | 1C1 | 1C1 | 1C1 | 1C1 |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | 200 K | 200 K | 200 K | 200 K | 200 K |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 32 (-1;-2) | 34 (-2;-3) | 35 (-2;-3) | NPD | NPD |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | 5,7<br>0,89 | 5,6<br>0,89 | 5,6<br>0,89 | 5,5<br>0,89 | 5,4<br>0,89 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 87 / 8 / 8 | 86 / 8 / 8 | 85 / 8 / 8 | 83 / 8 / 8 | 81 / 7 / 7 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 73 / 7 / 7<br>78 | 69 / 6 / 6<br>75 | 66 / 6 / 6<br>72 | 61 / 6 / 6<br>69 | 56 / 6 / 6<br>65 |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

| | | |
|---|---|---|
| AGC | **CE Marking of Float glass - EN 572-9:2004**<br>**Declaration of performances**<br>**Planibel Clearvision, Sunmax, Sunmax Premium (annealed)** | CE |

We

**AGC Glass Europe**
**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **PLANIBEL CLEARVISION, SUNMAX, SUNMAX PREMIUM**, intended to be used in buildings and construction works, following **EN 572-9:2004**

| | **Planibel Clearvision, Sunmax, Sunmax Premium** characteristics in : | **AVCP Systems** | **3 mm** | **4 mm** | **5 mm** | **6 mm** | **8 mm** |
|---|---|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 | A1 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD | NPD | NPD | NPD | NPD |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | NPD | NPD | NPD | NPD | NPD |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 29 (-2;-5) | 30 (-2;-4) | 30 (-1;-2) | 31 (-2;-3) | 32 (-1;-2) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | 5,8<br>0,89 | 5,8<br>0,89 | 5,8<br>0,89 | 5,7<br>0,89 | 5,7<br>0,89 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 92 / 8 / 8 | 92 / 8 / 8 | 91 / 8 / 8 | 91 / 8 / 8 | 91 / 8 / 8 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 91 / 8 / 8<br>91 | 91 / 8 / 8<br>91 | 90 / 8 / 8<br>91 | 90 / 8 / 8<br>90 | 89 / 8 / 8<br>90 |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

| | | |
|---|---|---|
| AGC | **CE Marking of Float glass - EN 572-9:2004**<br>**Declaration of performances**<br>**Planibel Clearvision, Sunmax, Sunmax Premium (annealed)** | CE |

We

**AGC Glass Europe**
**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **PLANIBEL CLEARVISION, SUNMAX, SUNMAX PREMIUM**, intended to be used in buildings and construction works, following **EN 572-9:2004**

| | **Planibel Clearvision, Sunmax, Sunmax Premium** characteristics in : | **AVCP Systems** | **10 mm** | **12 mm** | **15 mm** |
|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD | NPD | NPD |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | NPD | NPD | NPD |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 34 (-2;-3) | 35 (-2;-3) | NPD |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | 5,6<br>0,89 | 5,6<br>0,89 | 5,5<br>0,89 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 91 / 8 / 8 | 90 / 8 / 8 | 89 / 8 / 8 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 89 / 8 / 8<br>89 | 86 / 8 / 8<br>89 | 85 / 8 / 8<br>87 |
| 14. | Durability | 3 | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

| | | |
|---|---|---|
| AGC | **CE Marking of Heat strengthened glass - EN 1863-2:2004**<br>**Declaration of performances**<br>**Planibel Clearvision, Sunmax, Sunmax Premium Heat strengthened** | CE |

We

**AGC Glass Europe**
**Building Division**
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Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **PLANIBEL CLEARVISION, SUNMAX, SUNMAX PREMIUM Heat strengthened**, intended to be used in buildings and construction works, following **EN 1863-2:2004**

| | **Planibel Clearvision, Sunmax, Sunmax Premium Heat strengthened** characteristics in : | **AVCP Systems** | **4 mm** | **5 mm** | **6 mm** | **8 mm** | **10 mm** |
|---|---|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 | A1 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD | NPD | NPD | NPD | NPD |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | 100 K | 100 K | 100 K | 100 K | 100 K |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 30 (-2;-4) | 30 (-1;-2) | 31 (-2;-3) | 32 (-1;-2) | 34 (-2;-3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | 5,8<br>0,89 | 5,8<br>0,89 | 5,7<br>0,89 | 5,7<br>0,89 | 5,6<br>0,89 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 92 / 8 / 8 | 91 / 8 / 8 | 91 / 8 / 8 | 91 / 8 / 8 | 91 / 8 / 8 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 91 / 8 / 8<br>91 | 90 / 8 / 8<br>91 | 90 / 8 / 8<br>90 | 89 / 8 / 8<br>90 | 89 / 8 / 8<br>89 |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

| | | |
|---|---|---|
| AGC | **CE Marking of Thermally toughened glass - EN 12150-2:2004**<br>**CE Marking of Heat soaked Thermally toughened glass - EN 14179-2:2005**<br>**Declaration of performances**<br>**Planibel Clearvision, Sunmax, Sunmax Premium Thermally toughened or Heat soaked thermally toughened** | CE |

We

**AGC Glass Europe**
**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
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Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **PLANIBEL CLEARVISION, SUNMAX, SUNMAX PREMIUM Thermally toughened or Heat soaked thermally toughened**, intended to be used in buildings and construction works, following **EN 12150-2:2004 / 14179-2:2005**

| | **Planibel Clearvision, Sunmax, Sunmax Premium Thermally toughened or Heat soaked thermally toughened** characteristics in | **AVCP Systems** | **3 mm** | **4 mm** | **5 mm** | **6 mm** | **8 mm** |
|---|---|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 | A1 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD | 1C3 | 1C3 | 1C2 | 1C2 |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | 200 K | 200 K | 200 K | 200 K | 200 K |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 29 (-2;-5) | 30 (-2;-4) | 30 (-1;-2) | 31 (-2;-3) | 32 (-1;-2) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | 5,8<br>0,89 | 5,8<br>0,89 | 5,8<br>0,89 | 5,7<br>0,89 | 5,7<br>0,89 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 92 / 8 / 8 | 92 / 8 / 8 | 91 / 8 / 8 | 91 / 8 / 8 | 91 / 8 / 8 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 91 / 8 / 8<br>91 | 91 / 8 / 8<br>91 | 90 / 8 / 8<br>91 | 90 / 8 / 8<br>90 | 89 / 8 / 8<br>90 |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

| | | |
|---|---|---|
| AGC | **CE Marking of Thermally toughened glass - EN 12150-2:2004**<br>**CE Marking of Heat soaked Thermally toughened glass - EN 14179-2:2005**<br>**Declaration of performances**<br>**Planibel Clearvision, Sunmax, Sunmax Premium Thermally toughened or Heat soaked thermally toughened** | CE |

We

**AGC Glass Europe**
**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **PLANIBEL CLEARVISION, SUNMAX, SUNMAX PREMIUM Thermally toughened or Heat soaked thermally toughened**, intended to be used in buildings and construction works, following **EN 12150-2:2004 / 14179-2:2005**

| | **Planibel Clearvision, Sunmax, Sunmax Premium Thermally toughened or Heat soaked thermally toughened** characteristics in | **AVCP Systems** | **10 mm** | **12 mm** | **15 mm** |
|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | 1C1 | 1C1 | 1C1 |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | 200 K | 200 K | 200 K |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 34 (-2;-3) | 35 (-2;-3) | NPD |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | 5,6<br>0,89 | 5,6<br>0,89 | 5,5<br>0,89 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 91 / 8 / 8 | 90 / 8 / 8 | 89 / 8 / 8 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 89 / 8 / 8<br>89 | 86 / 8 / 8<br>89 | 85 / 8 / 8<br>87 |
| 14. | Durability | 3 | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

| | | |
|---|---|---|
| AGC | **CE Marking of Float glass - EN 572-9:2004**<br>**Declaration of performances**<br>**Planibel Clear Plus (annealed)** | CE |

We

**AGC Glass Europe**
**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **PLANIBEL CLEAR PLUS** intended to be used in buildings and construction works, following **EN 572-9:2004**

| | **Planibel Clear Plus** characteristics in : | **AVCP Systems** | **4 mm** |
|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 |
| 3. | External fire performances | 3, 4 | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | NPD |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 30 (-2;-4) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | 5,8<br>0,89 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 92 / 8 / 8 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 91 / 8 / 8<br>91 |
| 14. | Durability | 3 | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

# Planibel coloured

| | | |
|---|---|---|
| AGC | **CE Marking of Float glass - EN 572-9:2004**<br>**Declaration of performances**<br>**Planibel Green (annealed)** | CE |

We

**AGC Glass Europe**
**Building Division**
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Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **PLANIBEL GREEN**, intended to be used in buildings and construction works, following **EN 572-9:2004**

| | **Planibel Green** characteristics in : | **AVCP Systems** | **3 mm** | **4 mm** | **5 mm** | **6 mm** | **8 mm** | **10 mm** |
|---|---|---|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 | A1 | A1 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD | NPD | NPD | NPD | NPD | NPD |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | NPD | NPD | NPD | NPD | NPD | NPD |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 29 (-2;-5) | 30 (-2;-4) | 30 (-1;-2) | 31 (-2;-3) | 32 (-1;-2) | 34 (-2;-3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | 5,8<br>0,89 | 5,8<br>0,89 | 5,8<br>0,89 | 5,7<br>0,89 | 5,7<br>0,89 | 5,6<br>0,89 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 81 / 7 / 7 | 79 / 7 / 7 | 76 / 7 / 7 | 73 / 7 / 7 | 68 / 6 / 6 | 63 / 6 / 6 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 59 / 6 / 6<br>69 | 54 / 6 / 6<br>64 | 49 / 6 / 6<br>60 | 44 / 5 / 5<br>56 | 37 / 5 / 5<br>51 | 31 / 5 / 5<br>46 |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

| | | |
|---|---|---|
| AGC | **CE Marking of Heat strengthened glass - EN 1863-2:2004**<br>**Declaration of performances**<br>**Planibel Green Heat strengthened** | CE |

We

**AGC Glass Europe**
**Building Division**
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Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **PLANIBEL GREEN Heat strengthened**, intended to be used in buildings and construction works, following **EN 1863-2:2004**

| | **Planibel Green Heat strengthened** characteristics in : | **AVCP Systems** | **4 mm** | **5 mm** | **6 mm** | **8 mm** | **10 mm** |
|---|---|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 | A1 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD | NPD | NPD | NPD | NPD |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | 100 K | 100 K | 100 K | 100 K | 100 K |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 30 (-2;-4) | 30 (-1;-2) | 31 (-2;-3) | 32 (-1;-2) | 34 (-2;-3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | 5,8<br>0,89 | 5,8<br>0,89 | 5,7<br>0,89 | 5,7<br>0,89 | 5,6<br>0,89 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 79 / 7 / 7 | 76 / 7 / 7 | 73 / 7 / 7 | 68 / 6 / 6 | 63 / 6 / 6 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 54 / 6 / 6<br>64 | 49 / 6 / 6<br>60 | 44 / 5 / 5<br>56 | 37 / 5 / 5<br>51 | 31 / 5 / 5<br>46 |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

**CE Marking of Thermally toughened glass - EN 12150-2:2004**
**CE Marking of Heat soaked Thermally toughened glass - EN 14179-2:2005**
**Declaration of performances**
**Planibel Green Thermally toughened or Heat soaked thermally toughened**

CE

We

**AGC Glass Europe**
**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **PLANIBEL GREEN Thermally toughened or Heat soaked thermally toughened**, intended to be used in buildings and construction works, following **EN 12150-2:2004 / 14179-2:2005**

| | **Planibel Green Thermally toughened or Heat soaked thermally toughened** characteristics in : | **AVCP Systems** | **3 mm** | **4 mm** | **5 mm** | **6 mm** | **8 mm** | **10 mm** |
|---|---|---|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 | A1 | A1 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD | 1C3 | 1C3 | 1C2 | 1C2 | 1C1 |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | 200 K | 200 K | 200 K | 200 K | 200 K | 200 K |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 29 (-2;-5) | 30 (-2;-4) | 30 (-1;-2) | 31 (-2;-3) | 32 (-1;-2) | 34 (-2;-3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | 5,8<br>0,89 | 5,8<br>0,89 | 5,8<br>0,89 | 5,7<br>0,89 | 5,7<br>0,89 | 5,6<br>0,89 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 81 / 7 / 7 | 79 / 7 / 7 | 76 / 7 / 7 | 73 / 7 / 7 | 68 / 6 / 6 | 63 / 6 / 6 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 59 / 6 / 6<br>69 | 54 / 6 / 6<br>64 | 49 / 6 / 6<br>60 | 44 / 5 / 5<br>56 | 37 / 5 / 5<br>51 | 31 / 5 / 5<br>46 |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

| | | |
|---|---|---|
| AGC | **CE Marking of Float glass - EN 572-9:2004**<br>**Declaration of performances**<br>**Planibel Bronze (annealed)** | CE |

We

**AGC Glass Europe**
**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **PLANIBEL BRONZE**, intended to be used in buildings and construction works, following **EN 572-9:2004**

| | **Planibel Bronze** characteristics in : | **AVCP Systems** | **3 mm** | **4 mm** | **5 mm** | **6 mm** | **8 mm** | **10 mm** |
|---|---|---|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 | A1 | A1 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD | NPD | NPD | NPD | NPD | NPD |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | NPD | NPD | NPD | NPD | NPD | NPD |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 29 (-2;-5) | 30 (-2;-4) | 30 (-1;-2) | 31 (-2;-3) | 32 (-1;-2) | 34 (-2;-3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | 5,8<br>0,89 | 5,8<br>0,89 | 5,8<br>0,89 | 5,7<br>0,89 | 5,7<br>0,89 | 5,6<br>0,89 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 68 / 6 / 6 | 62 / 6 / 6 | 56 / 6 / 6 | 51 / 6 / 6 | 41 / 5 / 5 | 34 / 5 / 5 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 67 / 6 / 6<br>74 | 61 / 6 / 6<br>69 | 56 / 6 / 6<br>65 | 50 / 5 / 5<br>61 | 42 / 5 / 5<br>54 | 34 / 5 / 5<br>49 |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

**CE Marking of Heat strengthened glass - EN 1863-2:2004**
**Declaration of performances**
**Planibel Bronze Heat strengthened**

CE

We

**AGC Glass Europe**
**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **PLANIBEL BRONZE Heat strengthened**, intended to be used in buildings and construction works, following **EN 1863-2:2004**

| | **Planibel Bronze Heat strengthened** characteristics in : | **AVCP Systems** | **4 mm** | **5 mm** | **6 mm** | **8 mm** | **10 mm** |
|---|---|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 | A1 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD | NPD | NPD | NPD | NPD |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | 100 K | 100 K | 100 K | 100 K | 100 K |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 30 (-2;-4) | 30 (-1;-2) | 31 (-2;-3) | 32 (-1;-2) | 34 (-2;-3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | 5,8<br>0,89 | 5,8<br>0,89 | 5,7<br>0,89 | 5,7<br>0,89 | 5,6<br>0,89 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 62 / 6 / 6 | 56 / 6 / 6 | 51 / 6 / 6 | 41 / 5 / 5 | 34 / 5 / 5 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 61 / 6 / 6<br>69 | 56 / 6 / 6<br>65 | 50 / 5 / 5<br>61 | 42 / 5 / 5<br>54 | 34 / 5 / 5<br>49 |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

**CE Marking of Thermally toughened glass - EN 12150-2:2004**
**CE Marking of Heat soaked Thermally toughened glass - EN 14179-2:2005**
**Declaration of performances**
**Planibel Bronze Thermally toughened or Heat soaked thermally toughened**

CE

We

**AGC Glass Europe**
**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **PLANIBEL BRONZE Thermally toughened or Heat soaked thermally toughened**, intended to be used in buildings and construction works, following **EN 12150-2:2004 / 14179-2:2005**

| | **Planibel Bronze Thermally toughened or Heat soaked thermally toughened** characteristics in : | **AVCP Systems** | **3 mm** | **4 mm** | **5 mm** | **6 mm** | **8 mm** | **10 mm** |
|---|---|---|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 | A1 | A1 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD | 1C3 | 1C3 | 1C2 | 1C2 | 1C1 |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | 200 K | 200 K | 200 K | 200 K | 200 K | 200 K |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 29 (-2;-5) | 30 (-2;-4) | 30 (-1;-2) | 31 (-2;-3) | 32 (-1;-2) | 34 (-2;-3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | 5,8<br>0,89 | 5,8<br>0,89 | 5,8<br>0,89 | 5,7<br>0,89 | 5,7<br>0,89 | 5,6<br>0,89 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 68 / 6 / 6 | 62 / 6 / 6 | 56 / 6 / 6 | 51 / 6 / 6 | 41 / 5 / 5 | 34 / 5 / 5 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 67 / 6 / 6<br>74 | 61 / 6 / 6<br>69 | 56 / 6 / 6<br>65 | 50 / 5 / 5<br>61 | 42 / 5 / 5<br>54 | 34 / 5 / 5<br>49 |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

| | | |
|---|---|---|
| AGC | **CE Marking of Float glass - EN 572-9:2004**<br>**Declaration of performances**<br>**Planibel Grey (annealed)** | CE |

We

**AGC Glass Europe**
**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **PLANIBEL GREY**, intended to be used in buildings and construction works, following **EN 572-9:2004**

| | **Planibel Grey** characteristics in : | **AVCP Systems** | **3 mm** | **4 mm** | **5 mm** | **6 mm** | **8 mm** | **10 mm** | **12 mm** |
|---|---|---|---|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 | A1 | A1 | A1 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD | NPD | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD | NPD | NPD | NPD | NPD | NPD | NPD |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | NPD | NPD | NPD | NPD | NPD | NPD | NPD |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 29 (-2;-5) | 30 (-2;-4) | 30 (-1;-2) | 31 (-2;-3) | 32 (-1;-2) | 34 (-2;-3) | 35 (-2;-3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | 5,8<br>0,89 | 5,8<br>0,89 | 5,8<br>0,89 | 5,7<br>0,89 | 5,7<br>0,89 | 5,6<br>0,89 | 5,6<br>0,89 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 63 / 6 / 6 | 57 / 6 / 6 | 50 / 5 / 5 | 44 / 5 / 5 | 34 / 5 / 5 | 27 / 5 / 5 | 21 / 5 / 5 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 64 / 6 / 6<br>72 | 58 / 6 / 6<br>67 | 52 / 6 / 6<br>62 | 46 / 5 / 5<br>58 | 37 / 5 / 5<br>51 | 30 / 5 / 5<br>45 | 24 / 4 / 4<br>41 |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

| | | |
|---|---|---|
| AGC | **CE Marking of Heat strengthened glass - EN 1863-2:2004**<br>**Declaration of performances**<br>**Planibel Grey Heat strengthened** | CE |

We

**AGC Glass Europe**
**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **PLANIBEL GREY Heat strengthened**, intended to be used in buildings and construction works, following **EN 1863-2:2004**

| | **Planibel Grey Heat strengthened** characteristics in : | **AVCP Systems** | **4 mm** | **5 mm** | **6 mm** | **8 mm** | **10 mm** |
|---|---|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 | A1 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD | NPD | NPD | NPD | NPD |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | 100 K | 100 K | 100 K | 100 K | 100 K |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 30 (-2;-4) | 30 (-1;-2) | 31 (-2;-3) | 32 (-1;-2) | 34 (-2;-3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | 5,8<br>0,89 | 5,8<br>0,89 | 5,7<br>0,89 | 5,7<br>0,89 | 5,6<br>0,89 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 57 / 6 / 6 | 50 / 5 / 5 | 44 / 5 / 5 | 34 / 5 / 5 | 27 / 5 / 5 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 58 / 6 / 6<br>67 | 52 / 6 / 6<br>62 | 46 / 5 / 5<br>58 | 37 / 5 / 5<br>51 | 30 / 5 / 5<br>45 |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

**CE Marking of Thermally toughened glass - EN 12150-2:2004**
**CE Marking of Heat soaked Thermally toughened glass - EN 14179-2:2005**
**Declaration of performances**
**Planibel Grey Thermally toughened or Heat soaked thermally toughened**

CE

We

**AGC Glass Europe**
**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **PLANIBEL GREY Thermally toughened or Heat soaked thermally toughened**, intended to be used in buildings and construction works, following **EN 12150-2:2004 / 14179-2:2005**

| | **Planibel Grey Thermally toughened or Heat soaked thermally toughened** characteristics in : | **AVCP Systems** | **3 mm** | **4 mm** | **5 mm** | **6 mm** | **8 mm** | **10 mm** | **12 mm** |
|---|---|---|---|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 | A1 | A1 | A1 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD | NPD | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD | 1C3 | 1C3 | 1C2 | 1C2 | 1C1 | 1C1 |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | 200 K | 200 K | 200 K | 200 K | 200 K | 200 K | 200 K |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 29 (-2;-5) | 30 (-2;-4) | 30 (-1;-2) | 31 (-2;-3) | 32 (-1;-2) | 34 (-2;-3) | 35 (-2;-3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | 5,8<br>0,89 | 5,8<br>0,89 | 5,8<br>0,89 | 5,7<br>0,89 | 5,7<br>0,89 | 5,6<br>0,89 | 5,6<br>0,89 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 63 / 6 / 6 | 57 / 6 / 6 | 50 / 5 / 5 | 44 / 5 / 5 | 34 / 5 / 5 | 27 / 5 / 5 | 21 / 5 / 5 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 64 / 6 / 6<br>72 | 58 / 6 / 6<br>67 | 52 / 6 / 6<br>62 | 46 / 5 / 5<br>58 | 37 / 5 / 5<br>51 | 30 / 5 / 5<br>45 | 24 / 4 / 4<br>41 |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

| | | |
|---|---|---|
| AGC | **CE Marking of Float glass - EN 572-9:2004**<br>**Declaration of performances**<br>**Planibel Dark Grey (annealed)** | CE |

We

**AGC Glass Europe**
**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **PLANIBEL DARK GREY**, intended to be used in buildings and construction works, following **EN 572-9:2004**

| | **Planibel Dark Grey** characteristics in : | **AVCP Systems** | **4 mm** | **6 mm** | **8 mm** | **10 mm** |
|---|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD | NPD | NPD | NPD |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | NPD | NPD | NPD | NPD |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 30 (-2;-4) | 31 (-2;-3) | 32 (-1;-2) | 34 (-2;-3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | 5,8<br>0,89 | 5,7<br>0,89 | 5,7<br>0,89 | 5,6<br>0,89 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 18 / 4 / 4 | 8 / 4 / 4 | 4/ 4 / 4 | 2/ 4 / 4 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 18 / 4 / 4<br>36 | 8 / 4 / 4<br>29 | 4/ 4 / 4<br>25 | 2/ 4 / 4<br>24 |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

| | | |
|---|---|---|
| AGC | **CE Marking of Heat strengthened glass - EN 1863-2:2004**<br>**Declaration of performances**<br>**Planibel Dark Grey Heat strengthened** | CE |

We

**AGC Glass Europe**
**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **PLANIBEL DARK GREY Heat strengthened**, intended to be used in buildings and construction works, following **EN 1863-2:2004**

| | **Planibel Dark Grey Heat strengthened** characteristics in : | **AVCP Systems** | **4 mm** | **6 mm** | **8 mm** | **10 mm** |
|---|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD | NPD | NPD | NPD |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | 100 K | 100 K | 100 K | 100 K |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 30 (-2;-4) | 31 (-2;-3) | 32 (-1;-2) | 34 (-2;-3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | 5,8<br>0,89 | 5,7<br>0,89 | 5,7<br>0,89 | 5,6<br>0,89 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 18 / 4 / 4 | 8 / 4 / 4 | 4/ 4 / 4 | 2/ 4 / 4 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 18 / 4 / 4<br>36 | 8 / 4 / 4<br>29 | 4/ 4 / 4<br>25 | 2/ 4 / 4<br>24 |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

**CE Marking of Thermally toughened glass - EN 12150-2:2004**
**CE Marking of Heat soaked Thermally toughened glass - EN 14179-2:2005**
**Declaration of performances**
**Planibel Dark Grey Thermally toughened or Heat soaked thermally toughened**

CE

We

**AGC Glass Europe**
**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **PLANIBEL DARK GREY Thermally toughened or Heat soaked thermally toughened**, intended to be used in buildings and construction works, following **EN 12150-2:2004 / 14179-2:2005**

| | **Planibel Dark Grey Thermally toughened or Heat soaked thermally toughened** characteristics in : | **AVCP Systems** | **4 mm** | **6 mm** | **8 mm** | **10 mm** |
|---|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | 1C3 | 1C2 | 1C2 | 1C1 |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | 200 K | 200 K | 200 K | 200 K |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 30 (-2;-4) | 31 (-2;-3) | 32 (-1;-2) | 34 (-2;-3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | 5,8<br>0,89 | 5,7<br>0,89 | 5,7<br>0,89 | 5,6<br>0,89 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 18 / 4 / 4 | 8 / 4 / 4 | 4/ 4 / 4 | 2/ 4 / 4 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 18 / 4 / 4<br>36 | 8 / 4 / 4<br>29 | 4/ 4 / 4<br>25 | 2/ 4 / 4<br>24 |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

**CE Marking of Float glass - EN 572-9:2004**
**Declaration of performances**
**Planibel Azur (annealed)**

CE

We

**AGC Glass Europe**
**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **PLANIBEL AZUR**, intended to be used in buildings and construction works, following **EN 572-9:2004**

| | **Planibel Azur** characteristics in : | **AVCP Systems** | **4 mm** | **6 mm** | **8 mm** | **10 mm** |
|---|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD | NPD | NPD | NPD |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | NPD | NPD | NPD | NPD |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 30 (-2;-4) | 31 (-2;-3) | 32 (-1;-2) | 34 (-2;-3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | 5,8<br>0,89 | 5,7<br>0,89 | 5,7<br>0,89 | 5,6<br>0,89 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 79 / 7 / 7 | 73 / 7 / 7 | 68 / 6 / 6 | 63 / 6 / 6 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 59 / 6 / 6<br>67 | 49 / 6 / 6<br>60 | 42 / 5 / 5<br>54 | 36 / 5 / 5<br>50 |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

| | | |
|---|---|---|
| AGC | **CE Marking of Heat strengthened glass - EN 1863-2:2004**<br>**Declaration of performances**<br>**Planibel Azur Heat strengthened** | CE |

We

**AGC Glass Europe**
**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **PLANIBEL AZUR Heat strengthened**, intended to be used in buildings and construction works, following **EN 1863-2:2004**

| | **Planibel Azur Heat strengthened** characteristics in : | **AVCP Systems** | **4 mm** | **6 mm** | **8 mm** | **10 mm** |
|---|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD | NPD | NPD | NPD |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | 100 K | 100 K | 100 K | 100 K |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 30 (-2;-4) | 31 (-2;-3) | 32 (-1;-2) | 34 (-2;-3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | 5,8<br>0,89 | 5,7<br>0,89 | 5,7<br>0,89 | 5,6<br>0,89 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 79 / 7 / 7 | 73 / 7 / 7 | 68 / 6 / 6 | 63 / 6 / 6 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 59 / 6 / 6<br>67 | 49 / 6 / 6<br>60 | 42 / 5 / 5<br>54 | 36 / 5 / 5<br>50 |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

**CE Marking of Thermally toughened glass - EN 12150-2:2004**
**CE Marking of Heat soaked Thermally toughened glass - EN 14179-2:2005**
**Declaration of performances**
**Planibel Azur Thermally toughened or Heat soaked thermally toughened**

CE

We

**AGC Glass Europe**
**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **PLANIBEL AZUR Thermally toughened or Heat soaked thermally toughened**, intended to be used in buildings and construction works, following **EN 12150-2:2004 / 14179-2:2005**

| | **Planibel Azur Thermally toughened or Heat soaked thermally toughened** characteristics in : | **AVCP Systems** | **4 mm** | **6 mm** | **8 mm** | **10 mm** |
|---|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | 1C3 | 1C2 | 1C2 | 1C1 |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | 200 K | 200 K | 200 K | 200 K |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 30 (-2;-4) | 31 (-2;-3) | 32 (-1;-2) | 34 (-2;-3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | 5,8<br>0,89 | 5,7<br>0,89 | 5,7<br>0,89 | 5,6<br>0,89 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 79 / 7 / 7 | 73 / 7 / 7 | 68 / 6 / 6 | 63 / 6 / 6 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 59 / 6 / 6<br>67 | 49 / 6 / 6<br>60 | 42 / 5 / 5<br>54 | 36 / 5 / 5<br>50 |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

| | | |
|---|---|---|
| AGC | **CE Marking of Float glass - EN 572-9:2004**<br>**Declaration of performances**<br>**Planibel Dark Blue (annealed)** | CE |

We

**AGC Glass Europe**
**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **PLANIBEL DARK BLUE**, intended to be used in buildings and construction works, following **EN 572-9:2004**

| | **Planibel Dark Blue** characteristics in : | **AVCP Systems** | **4 mm** | **6 mm** | **8 mm** |
|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD | NPD | NPD |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | NPD | NPD | NPD |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 30 (-2;-4) | 31 (-2;-3) | 32 (-1;-2) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | 5,8<br>0,89 | 5,7<br>0,89 | 5,7<br>0,89 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 68 / 6 / 6 | 58 / 6 / 6 | 50 / 5 / 5 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 52 / 6 / 6<br>62 | 41 / 5 / 5<br>53 | 33 / 5 / 5<br>47 |
| 14. | Durability | 3 | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

**CE Marking of Heat strengthened glass - EN 1863-2:2004**
**Declaration of performances**
**Planibel Dark Blue Heat strengthened**

CE

We

**AGC Glass Europe**
**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **PLANIBEL DARK BLUE Heat strengthened**, intended to be used in buildings and construction works, following **EN 1863-2:2004**

| | **Planibel Dark Blue Heat strengthened** characteristics in : | **AVCP Systems** | **4 mm** | **6 mm** | **8 mm** |
|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD | NPD | NPD |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | 100 K | 100 K | 100 K |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 30 (-2;-4) | 31 (-2;-3) | 32 (-1;-2) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | 5,8<br>0,89 | 5,7<br>0,89 | 5,7<br>0,89 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 68 / 6 / 6 | 57 / 6 / 6 | 50 / 5 / 5 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 52 / 6 / 6<br>62 | 41 / 5 / 5<br>53 | 33 / 5 / 5<br>47 |
| 14. | Durability | 3 | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

**CE Marking of Thermally toughened glass - EN 12150-2:2004**
**CE Marking of Heat soaked Thermally toughened glass - EN 14179-2:2005**
**Declaration of performances**
**Planibel Dark Blue Thermally toughened or Heat soaked thermally toughened**

CE

We

**AGC Glass Europe**
**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **PLANIBEL DARK BLUE Thermally toughened or Heat soaked thermally toughened**, intended to be used in buildings and construction works, following **EN 12150-2:2004 / 14179-2:2005**

| | **Planibel Dark Blue Thermally toughened or Heat soaked thermally toughened** characteristics in : | **AVCP Systems** | **4 mm** | **6 mm** | **8 mm** |
|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | 1C2 | 1C2 | 1C2 |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | 200 K | 200 K | 200 K |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 30 (-2;-4) | 31 (-2;-3) | 32 (-1;-2) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | 5,8<br>0,89 | 5,7<br>0,89 | 5,7<br>0,89 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 68 / 6 / 6 | 57 / 6 / 6 | 50 / 5 / 5 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 52 / 6 / 6<br>62 | 41 / 5 / 5<br>53 | 33 / 5 / 5<br>47 |
| 14. | Durability | 3 | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

| | | |
|---|---|---|
| AGC | **CE Marking of Float glass - EN 572-9:2004**<br>**Declaration of performances**<br>**Planibel PrivaBlue (annealed)** | CE |

We

**AGC Glass Europe**
**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **PLANIBEL PRIVABLUE**, intended to be used in buildings and construction works, following **EN 572-9:2004**

| | **Planibel PrivaBlue** characteristics in : | **AVCP Systems** | **4 mm** | **6 mm** | **8 mm** | **10 mm** |
|---|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD | NPD | NPD | NPD |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | NPD | NPD | NPD | NPD |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 30 (-2;-4) | 31 (-2;-3) | 32 (-1;-2) | 34 (-2;-3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | 5,8<br>0,89 | 5,7<br>0,89 | 5,7<br>0,89 | 5,6<br>0,89 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 48 / 5 / 5 | 35 / 5 / 5 | 25 / 5 / 5 | 18 / 4 / 4 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 31 / 5 / 5<br>46 | 20 / 4 / 4<br>38 | 14 / 4 / 4<br>33 | 10 / 4 / 4<br>30 |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

| | | |
|---|---|---|
| AGC | **CE Marking of Heat strengthened glass - EN 1863-2:2004**<br>**Declaration of performances**<br>**Planibel PrivaBlue Heat strengthened** | CE |

We

**AGC Glass Europe**
**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **PLANIBEL PRIVABLUE Heat strengthened**, intended to be used in buildings and construction works, following **EN 1863-2:2004**

| | **Planibel PrivaBlue Heat strengthened** characteristics in : | **AVCP Systems** | **4 mm** | **6 mm** | **8 mm** | **10 mm** |
|---|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD | NPD | NPD | NPD |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | 100 K | 100 K | 100 K | 100 K |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 30 (-2;-4) | 31 (-2;-3) | 32 (-1;-2) | 34 (-2;-3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | 5,8<br>0,89 | 5,7<br>0,89 | 5,7<br>0,89 | 5,6<br>0,89 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 48 / 5 / 5 | 35 / 5 / 5 | 25 / 5 / 5 | 18 / 4 / 4 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 31 / 5 / 5<br>46 | 20 / 4 / 4<br>38 | 14 / 4 / 4<br>33 | 10 / 4 / 4<br>30 |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

**CE Marking of Thermally toughened glass - EN 12150-2:2004**
**CE Marking of Heat soaked Thermally toughened glass - EN 14179-2:2005**
**Declaration of performances**
**Planibel PrivaBlue Thermally toughened or Heat soaked thermally toughened**

CE

We

**AGC Glass Europe**
**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **PLANIBEL PRIVABLUE Thermally toughened or Heat soaked thermally toughened**, intended to be used in buildings and construction works, following **EN 12150-2:2004 / 14179-2:2005**

| | **Planibel PrivaBlue Thermally toughened or Heat soaked thermally toughened** characteristics in : | **AVCP Systems** | **4 mm** | **6 mm** | **8 mm** | **10 mm** |
|---|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | 1C3 | 1C2 | 1C2 | 1C1 |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | 200 K | 200 K | 200 K | 200 K |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 30 (-2;-4) | 31 (-2;-3) | 32 (-1;-2) | 34 (-2;-3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | 5,8<br>0,89 | 5,7<br>0,89 | 5,7<br>0,89 | 5,6<br>0,89 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 48 / 5 / 5 | 35 / 5 / 5 | 25 / 5 / 5 | 18 / 4 / 4 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 31 / 5 / 5<br>46 | 20 / 4 / 4<br>38 | 14 / 4 / 4<br>33 | 10 / 4 / 4<br>30 |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

# Planibel low-e

| | | |
|---|---|---|
| AGC | **CE Marking of Coated glass - EN 1096-4:2004**<br>**Declaration of performances**<br>**Planibel AF Top N+ (annealed)** | CE |

We

**AGC Glass Europe**
**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **Planibel AF Top N+**, intended to be used in buildings and construction works, following **EN 1096-4:2004**

| | **Planibel AF Top N+** characteristics in : | **AVCP Systems** | **4 mm** |
|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 |
| 3. | External fire performances | 3, 4 | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | NPD |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 30 (-2;-4) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | NPD<br>0,03 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 80 / 8 / 10 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 54 / 30 / 21<br>NPD |
| 14. | Durability | 3 | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

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|---|---|---|
| AGC | **CE Marking of Coated glass - EN 1096-4:2004**<br>**Declaration of performances**<br>**Planibel Top N (annealed)** | CE |

We

**AGC Glass Europe**
**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **Planibel Top N**, intended to be used in buildings and construction works, following **EN 1096-4:2004**

| | **Planibel Top N** characteristics in : | **AVCP Systems** | **4 mm** | **5 mm** | **6 mm** | **8 mm** | **10 mm** | **12 mm** |
|---|---|---|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 | A1 | A1 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD | NPD | NPD | NPD | NPD | NPD |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | NPD | NPD | NPD | NPD | NPD | NPD |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 30 (-2;-4) | 30 (-1;-2) | 31 (-2;-3) | 32 (-1;-2) | 34 (-2;-3) | 35 (-2;-3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | NPD<br>0,04 | NPD<br>0,04 | NPD<br>0,04 | NPD<br>0,04 | NPD<br>0,04 | NPD<br>0,04 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 87 / 6 / 8 | 87 / 6 / 8 | 87 / 6 / 8 | 86 / 6 / 8 | 86 / 6 / 8 | 85 / 6 / 8 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 64 / 25 / 23<br>NPD | 63 / 25 / 22<br>NPD | 63 / 25 / 22<br>NPD | 62 / 25 / 21<br>NPD | 61 / 25 / 20<br>NPD | 60 / 25 / 19<br>NPD |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

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|---|---|---|
| AGC | **CE Marking of Coated glass - EN 1096-4:2004**<br>**Declaration of performances**<br>**Planibel Top N+ (annealed)** | CE |

We

**AGC Glass Europe**
**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **Planibel Top N+**, intended to be used in buildings and construction works, following **EN 1096-4:2004**

| | **Planibel Top N+** characteristics in : | **AVCP Systems** | **4 mm** | **5 mm** | **6 mm** | **8 mm** | **10 mm** | **12 mm** |
|---|---|---|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 | A1 | A1 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD | NPD | NPD | NPD | NPD | NPD |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | NPD | NPD | NPD | NPD | NPD | NPD |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 30 (-2;-4) | 30 (-1;-2) | 31 (-2;-3) | 32 (-1;-2) | 34 (-2;-3) | 35 (-2;-3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | NPD<br>0,03 | NPD<br>0,03 | NPD<br>0,03 | NPD<br>0,03 | NPD<br>0,03 | NPD<br>0,03 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 87 / 6 / 8 | 86 / 6 / 8 | 86 / 6 / 7 | 85 / 6 / 7 | 84 / 6 / 7 | 83 / 6 / 7 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 59 / 29 / 25<br>NPD | 58 / 29 / 24<br>NPD | 57 / 29 / 23<br>NPD | 56 / 29 / 21<br>NPD | 54 / 29 / 19<br>NPD | 52 / 29 / 17<br>NPD |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

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|---|---|---|
| AGC | **CE Marking of Coated glass - EN 1096-4:2004**<br>**Declaration of performances**<br>**Planibel Tri (annealed)** | CE |

We

**AGC Glass Europe**
**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
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Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **Planibel Tri**, intended to be used in buildings and construction works, following **EN 1096-4:2004**

| | **Planibel Tri** characteristics in : | **AVCP Systems** | **3 mm** | **4 mm** | **6 mm** |
|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD | NPD | NPD |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | NPD | NPD | NPD |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 29 (-2;-5) | 30 (-2;-4) | 31 (-2;-3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | NPD<br>0,07 | NPD<br>0,07 | NPD<br>0,07 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 89 / 8 / 8 | 88 / 8 / 8 | 87 / 8 / 8 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 72 / 17 / 16<br>NPD | 71 / 17 / 15<br>NPD | 69 / 17 / 14<br>NPD |
| 14. | Durability | 3 | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

| | | |
|---|---|---|
| AGC | **CE Marking of Coated glass - EN 1096-4:2004**<br>**Declaration of performances**<br>**Planibel Top 1.0 (annealed)** | CE |

We

**AGC Glass Europe**
**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
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Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **Planibel Top 1.0**, intended to be used in buildings and construction works, following **EN 1096-4:2004**

| | **Planibel top 1.0** characteristics in : | **AVCP Systems** | **3 mm** | **4 mm** | **6 mm** | **8 mm** | **10 mm** |
|---|---|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 | A1 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD | NPD | NPD | NPD | NPD |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | NPD | NPD | NPD | NPD | NPD |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 29 (-2;-5) | 30 (-2;-4) | 31 (-2;-3) | 32 (-1;-2) | 34 (-2;-3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | NPD<br>0,01 | NPD<br>0,01 | NPD<br>0,01 | NPD<br>0,01 | NPD<br>0,01 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 77 / 15 / 17 | 77 / 15 / 17 | 76 / 15 / 17 | 76 / 15 / 17 | 75 / 15 / 16 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 48 / 42 / 34<br>NPD | 47 / 42 / 32<br>NPD | 46 / 42 / 30<br>NPD | 45 / 42 / 27<br>NPD | 44 / 41 / 25<br>NPD |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

| | | |
|---|---|---|
| AGC | **CE Marking of Coated glass - EN 1096-4:2004**<br>**Declaration of performances**<br>**Planibel Tri on Clearvision (annealed)** | CE |

We

**AGC Glass Europe**
**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **Planibel Tri on Clearvision**, intended to be used in buildings and construction works, following **EN 1096-4:2004**

| | **Planibel Tri on Clearvision** characteristics in : | **AVCP Systems** | **3 mm** | **4 mm** | **6 mm** |
|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD | NPD | NPD |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | NPD | NPD | NPD |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 29 (-2;-5) | 30 (-2;-4) | 31 (-2;-3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | NPD<br>0,07 | NPD<br>0,07 | NPD<br>0,07 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 89 / 7 / 8 | 89 / 7 / 8 | 89 / 7 / 8 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 75 / 18 / 17<br>NPD | 75 / 18 / 17<br>NPD | 75 / 17 / 17<br>NPD |
| 14. | Durability | 3 | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

| | | |
|---|---|---|
| AGC | **CE Marking of Coated glass - EN 1096-4:2004**<br>**Declaration of performances**<br>**Planibel I-Top (annealed)** | CE |

We

**AGC Glass Europe**
**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **Planibel I-Top**, intended to be used in buildings and construction works, following **EN 1096-4:2004**

| | **Planibel I-Top** characteristics in : | **AVCP Systems** | **3 mm** | **4 mm** | **5 mm** | **6 mm** |
|---|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD | NPD | NPD | NPD |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | NPD | NPD | NPD | NPD |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 29 (-2;-5) | 30 (-2;-4) | 30 (-1;-2) | 31 (-2;-3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | NPD<br>0,03 | NPD<br>0,03 | NPD<br>0,03 | NPD<br>0,03 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 88 / 6 / 7 | 87 / 6 / 7 | 86 / 6 / 7 | 86 / 5 / 7 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 59 / 29 / 24<br>NPD | 58 / 29 / 22<br>NPD | 57 / 29 / 21<br>NPD | 56 / 28 / 19<br>NPD |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

| | | |
|---|---|---|
| AGC | **CE Marking of Coated glass - EN 1096-4:2004**<br>**Declaration of performances**<br>**Planibel I-Top on Clearvision (annealed)** | CE |

We

**AGC Glass Europe**
**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **Planibel I-Top on clearvision**, intended to be used in buildings and construction works, following **EN 1096-4:2004**

| | **Planibel I-Top on Clearvision** characteristics in : | **AVCP Systems** | **4 mm** | **6 mm** |
|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD | NPD |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | NPD | NPD |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 30 (-2;-4) | 31 (-2;-3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | NPD<br>0,03 | NPD<br>0,03 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 89 / 6 / 7 | 89 / 6 / 7 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 63 / 29 / 29<br>NPD | 63 / 29 / 29<br>NPD |
| 14. | Durability | 3 | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

| | | |
|---|---|---|
| AGC | **CE Marking of Heat strengthened glass - EN 1863-2:2004**<br>**Declaration of performances**<br>**Planibel Top NT Heat strengthened** | CE |

We

**AGC Glass Europe**
**Building Division**
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Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **Planibel Top NT Heat strengthened**, intended to be used in buildings and construction works, following **EN 1863-2:2004**

| | **Planibel Top NT Heat strengthened** characteristics in : | **AVCP Systems** | **4 mm** | **6 mm** | **8 mm** | **10 mm** |
|---|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD | NPD | NPD | NPD |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | 100 K | 100 K | 100 K | 100 K |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 30 (-2;-4) | 31 (-2;-3) | 32 (-1;-2) | 34 (-2;-3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | NPD<br>0,05 | NPD<br>0,05 | NPD<br>0,05 | NPD<br>0,05 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 88 / 6 / 6 | 87 / 6 / 6 | 86 / 6 / 6 | 85 / 6 / 6 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 67 / 21 / 17<br>NPD | 64 / 21 / 16<br>NPD | 62 / 21 / 15<br>NPD | 60 / 21 / 14<br>NPD |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

**CE Marking of Thermally toughened glass - EN 12150-2:2004**
**CE Marking of Heat soaked Thermally toughened glass - EN 14179-2:2005**
**Declaration of performances**
**Planibel Top NT Thermally toughened or Heat soaked thermally toughened**

CE

We

**AGC Glass Europe**
**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **Planibel Top NT Thermally toughened or Heat soaked thermally toughened**, intended to be used in buildings and construction works, following **EN 12150-2:2004 / 14179-2:2005**

| | **Planibel Top NT Thermally toughened or Heat soaked thermally toughened** characteristics in : | **AVCP Systems** | **4 mm** | **6 mm** | **8 mm** | **10 mm** |
|---|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | 1C3 | 1C2 | 1C2 | 1C1 |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | 200 K | 200 K | 200 K | 200 K |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 30 (-2;-4) | 31 (-2;-3) | 32 (-1;-2) | 34 (-2;-3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | NPD<br>0,05 | NPD<br>0,05 | NPD<br>0,05 | NPD<br>0,05 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 88 / 6 / 6 | 87 / 6 / 6 | 86 / 6 / 6 | 85 / 6 / 6 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 67 / 21 / 17<br>NPD | 64 / 21 / 16<br>NPD | 62 / 21 / 15<br>NPD | 60 / 21 / 14<br>NPD |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

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|---|---|---|
| AGC | **CE Marking of Coated glass - EN 1096-4:2004**<br>**Declaration of performances**<br>**Planibel Top N+T (annealed)** | CE |

We

**AGC Glass Europe**
**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **Planibel Top N+T**, intended to be used in buildings and construction works, following **EN 1096-4:2004**

| | **Planibel Top N+T** characteristics in : | **AVCP Systems** | **4 mm** | **6 mm** | **8 mm** | **10 mm** |
|---|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD | NPD | NPD | NPD |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | NPD | NPD | NPD | NPD |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 30 (-2;-4) | 31 (-2;-3) | 32 (-1;-2) | 34 (-2;-3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | NPD<br>NPD | NPD<br>NPD | NPD<br>NPD | NPD<br>NPD |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | NPD | NPD | NPD | NPD |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | NPD<br>NPD | NPD<br>NPD | NPD<br>NPD | NPD<br>NPD |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

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|---|---|---|
| AGC | **CE Marking of Heat strengthened glass - EN 1863-2:2004**<br>**Declaration of performances**<br>**Planibel Top N+T Heat strengthened** | CE |

We

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Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **Planibel Top N+T Heat strengthened**, intended to be used in buildings and construction works, following **EN 1863-2:2004**

| | **Planibel Top N+T Heat strengthened** characteristics in : | **AVCP Systems** | **4 mm** | **6 mm** | **8 mm** | **10 mm** |
|---|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD | NPD | NPD | NPD |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | 100 K | 100 K | 100 K | 100 K |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 30 (-2;-4) | 31 (-2;-3) | 32 (-1;-2) | 34 (-2;-3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | NPD<br>0,03 | NPD<br>0,03 | NPD<br>0,03 | NPD<br>0,03 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 88 / 8 / 6 | 87 / 8 / 6 | 86 / 8 / 6 | 85 / 8 / 6 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 65 / 25 / 22<br>NPD | 63 / 25 / 20<br>NPD | 61 / 25 / 19<br>NPD | 59 / 25 / 17<br>NPD |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

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| AGC | **CE Marking of Thermally toughened glass - EN 12150-2:2004**<br>**CE Marking of Heat soaked Thermally toughened glass - EN 14179-2:2005**<br>**Declaration of performances**<br>**Planibel Top N+T Thermally toughened or Heat soaked thermally toughened** | CE |

We

**AGC Glass Europe**
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Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **Planibel Top N+T Thermally toughened or Heat soaked thermally toughened**, intended to be used in buildings and construction works, following **EN 12150-2:2004 / 14179-2:2005**

| | **Planibel Top N+T Thermally toughened or Heat soaked thermally toughened** characteristics in : | **AVCP Systems** | **4 mm** | **6 mm** | **8 mm** | **10 mm** |
|---|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | 1C3 | 1C2 | 1C2 | 1C1 |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | 200 K | 200 K | 200 K | 200 K |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 30 (-2;-4) | 31 (-2;-3) | 32 (-1;-2) | 34 (-2;-3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | NPD<br>0,03 | NPD<br>0,03 | NPD<br>0,03 | NPD<br>0,03 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 88 / 8 / 6 | 87 / 8 / 6 | 86 / 8 / 6 | 85 / 8 / 6 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 65 / 25 / 22<br>NPD | 63 / 25 / 20<br>NPD | 61 / 25 / 19<br>NPD | 59 / 25 / 17<br>NPD |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

**CE Marking of Coated glass – EN 1096-4:2004**
**Declaration of performances**
**Planibel Energy N (annealed)**

CE

We

**AGC Glass Europe**
**Division Raw Glass Products**
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Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **Planibel Energy N**, intended to be used in buildings and construction works, following **EN 1096-4:2004**

| | **Planibel Energy N** characteristics in : | **AVCP Systems** | **4 mm** | **6 mm** | **8 mm** | **10 mm** |
|---|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD | NPD | NPD | NPD |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | NPD | NPD | NPD | NPD |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 30 (-2;-4) | 31 (-2;-3) | 32 (-1;-2) | 34 (-2;-3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | NPD<br>0,01 | NPD<br>0,01 | NPD<br>0,01 | NPD<br>0,01 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 81 / 7 / 7 | 80 / 7 / 7 | 79 / 7 / 7 | 78 / 7 / 7 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 43 / 41 / 32<br>NPD | 42 / 41 / 29<br>NPD | 41 / 41 / 26<br>NPD | 40 / 41 / 23<br>NPD |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

| AGC | **CE Marking of Coated glass – EN 1096-4:2004**<br>**Declaration of performances**<br>**Planibel Energy N on Clearvision (annealed)** | CE |
|---|---|---|

We

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**Division Raw Glass Products**
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Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **Planibel Energy N on Clearvision**, intended to be used in buildings and construction works, following **EN 1096-4:2004**

| | **Planibel Energy N on Clearvision** characteristics in : | **AVCP Systems** | **4 mm** | **6 mm** | **8 mm** | **10 mm** |
|---|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD | NPD | NPD | NPD |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | NPD | NPD | NPD | NPD |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 30 (-2;-4) | 31 (-2;-3) | 32 (-1;-2) | 34 (-2;-3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | NPD<br>0,01 | NPD<br>0,01 | NPD<br>0,01 | NPD<br>0,01 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 82 / 7 / 7 | 82 / 7 / 7 | 82 / 7 / 7 | 82 / 7 / 7 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 44 / 41 / 42<br>NPD | 44 / 41 / 40<br>NPD | 44 / 41 / 38<br>NPD | 44 / 41 / 37<br>NPD |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

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|---|---|---|
| AGC | **CE Marking of Coated glass - EN 1096-4:2004**<br>**Declaration of performances**<br>**Planibel Energy NT (annealed)** | CE |

We

**AGC Glass Europe**
**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **Planibel Energy NT**, intended to be used in buildings and construction works, following **EN 1096-4:2004**

| | **Planibel Energy NT** characteristics in : | **AVCP Systems** | **4 mm** | **6 mm** | **8 mm** | **10 mm** |
|---|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD | NPD | NPD | NPD |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | NPD | NPD | NPD | NPD |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 30 (-2;-4) | 31 (-2;-3) | 32 (-1;-2) | 34 (-2;-3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | NPD<br>NPD | NPD<br>NPD | NPD<br>NPD | NPD<br>NPD |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | NPD | NPD | NPD | NPD |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | NPD<br>NPD | NPD<br>NPD | NPD<br>NPD | NPD<br>NPD |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

| | | |
|---|---|---|
| AGC | **CE Marking of Heat strengthened glass - EN 1863-2:2004**<br>**Declaration of performances**<br>**Planibel Energy NT Heat strengthened** | CE |

We

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**Building Division**
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Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **Planibel Energy NT Heat strengthened**, intended to be used in buildings and construction works, following **EN 1863-2:2004**

| | **Planibel Energy NT Heat strengthened** characteristics in : | **AVCP Systems** | **4 mm** | **6 mm** | **8 mm** | **10 mm** |
|---|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD | NPD | NPD | NPD |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | 100 K | 100 K | 100 K | 100 K |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 30 (-2;-4) | 31 (-2;-3) | 32 (-1;-2) | 34 (-2;-3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | NPD<br>0,01 | NPD<br>0,01 | NPD<br>0,01 | NPD<br>0,01 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 81 / 7 / 7 | 80 / 7 / 7 | 79 / 7 / 7 | 78 / 7 / 7 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 44 / 40 / 33<br>NPD | 43 / 40 / 29<br>NPD | 42 / 40 / 26<br>NPD | 41 / 40 / 24<br>NPD |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

| | | |
|---|---|---|
| AGC | **CE Marking of Thermally toughened glass - EN 12150-2:2004**<br>**CE Marking of Heat soaked Thermally toughened glass - EN 14179-2:2005**<br>**Declaration of performances**<br>**Planibel Energy NT Thermally toughened or Heat soaked thermally toughened** | CE |

We

**AGC Glass Europe**
**Building Division**
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Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **Planibel Energy NT Thermally toughened or Heat soaked thermally toughened**, intended to be used in buildings and construction works, following **EN 12150-2:2004 / 14179-2:2005**

| | **Planibel Energy NT Thermally toughened or Heat soaked thermally toughened** characteristics in : | **AVCP Systems** | **4 mm** | **6 mm** | **8 mm** | **10 mm** |
|---|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | 1C3 | 1C2 | 1C2 | 1C1 |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | 200 K | 200 K | 200 K | 200 K |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 30 (-2;-4) | 31 (-2;-3) | 32 (-1;-2) | 34 (-2;-3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | NPD<br>0,01 | NPD<br>0,01 | NPD<br>0,01 | NPD<br>0,01 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 81 / 7 / 7 | 80 / 7 / 7 | 79 / 7 / 7 | 78 / 7 / 7 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 44 / 40 / 33<br>NPD | 43 / 40 / 29<br>NPD | 42 / 40 / 26<br>NPD | 41 / 40 / 24<br>NPD |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

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|---|---|---|
| AGC | **CE Marking of Coated glass - EN 1096-4:2004**<br>**Declaration of performances**<br>**Planibel Light (annealed)** | CE |

We

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Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **Planibel Light**, intended to be used in buildings and construction works, following **EN 1096-4:2004**

| | **Planibel Light** characteristics in : | **AVCP Systems** | **4 mm** | **6 mm** |
|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD | NPD |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | NPD | NPD |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 30 (-2;-4) | 31 (-2;-3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | NPD<br>0,01 | NPD<br>0,01 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 72 / 19 / 21 | 71 / 19 / 21 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 44 / 43 / 34<br>NPD | 42 / 43 / 30<br>NPD |
| 14. | Durability | 3 | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

| | | |
|---|---|---|
| AGC | **CE Marking of Coated glass - EN 1096-4:2004**<br>**Declaration of performances**<br>**Planibel G (annealed)** | CE |

We

**AGC Glass Europe**
**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **Planibel G**, intended to be used in buildings and construction works, following **EN 1096-4:2004**

| | **Planibel G** characteristics in : | **AVCP Systems** | **4 mm** | **6 mm** |
|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD | NPD |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | NPD | NPD |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 30 (-2;-4) | 31 (-2;-3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | NPD<br>0,14 | NPD<br>0,14 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 82 / 11 / 10 | 81 / 11 / 10 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 73 / 11 / 10<br>NPD | 70 / 11 / 10<br>NPD |
| 14. | Durability | 3 | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

| | | |
|---|---|---|
| AGC | **CE Marking of Heat strengthened glass - EN 1863-2:2004**<br>**Declaration of performances**<br>**Planibel G Heat strengthened** | CE |

We

**AGC Glass Europe**
**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **Planibel G Heat strengthened**, intended to be used in buildings and construction works, following **EN 1863-2:2004**

| | **Planibel G Heat strengthened** characteristics in : | **AVCP Systems** | **4 mm** | **6 mm** |
|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD | NPD |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | 100 K | 100 K |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 30 (-2;-4) | 31 (-2;-3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | NPD<br>NPD | NPD<br>NPD |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 82 / 11 / 10 | 81 / 11 / 10 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 73 / 11 / 10<br>NPD | 70 / 11 / 10<br>NPD |
| 14. | Durability | 3 | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

**CE Marking of Thermally toughened glass - EN 12150-2:2004**
**CE Marking of Heat soaked Thermally toughened glass - EN 14179-2:2005**
**Declaration of performances**
**Planibel G Thermally toughened or Heat soaked thermally toughened**

CE

We

**AGC Glass Europe**
**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **Planibel G Thermally toughened or Heat soaked thermally toughened**, intended to be used in buildings and construction works, following **EN 12150-2:2004 / 14179-2:2005**

| | **Planibel G Thermally toughened or Heat soaked thermally toughened** characteristics in : | **AVCP Systems** | **4 mm** | **6 mm** |
|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | 1C3 | 1C2 |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | 200 K | 200 K |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 30 (-2;-4) | 31 (-2;-3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | NPD<br>NPD | NPD<br>NPD |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 82 / 11 / 10 | 81 / 11 / 10 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 73 / 11 / 10<br>NPD | 70 / 11 / 10<br>NPD |
| 14. | Durability | 3 | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

| | | |
|---|---|---|
| AGC | **CE Marking of Coated glass - EN 1096-4:2004**<br>**Declaration of performances**<br>**Planibel G fasT (annealed)** | CE |

We

**AGC Glass Europe**
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Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **Planibel G fasT**, intended to be used in buildings and construction works, following **EN 1096-4:2004**

| | **Planibel G fasT** characteristics in : | **AVCP Systems** | **4 mm** | **6 mm** |
|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD | NPD |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | NPD | NPD |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 30 (-2;-4) | 31 (-2;-3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | NPD<br>0,14 | NPD<br>0,14 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 82 / 11 / 10 | 82 / 11 / 10 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 73 / 11 / 10<br>NPD | 70 / 11 / 10<br>NPD |
| 14. | Durability | 3 | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

| | | |
|---|---|---|
| AGC | **CE Marking of Heat strengthened glass - EN 1863-2:2004**<br>**Declaration of performances**<br>**Planibel G fasT Heat strengthened** | CE |

We

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Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **Planibel G fasT Heat strengthened**, intended to be used in buildings and construction works, following **EN 1863-2:2004**

| | **Planibel G fasT Heat strengthened** characteristics in : | **AVCP Systems** | **4 mm** | **6 mm** |
|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD | NPD |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | 100 K | 100 K |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 30 (-2;-4) | 31 (-2;-3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | NPD<br>NPD | NPD<br>NPD |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 82 / 11 / 10 | 82 / 11 / 10 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 73 / 11 / 10<br>NPD | 70 / 11 / 10<br>NPD |
| 14. | Durability | 3 | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

| | | |
|---|---|---|
| AGC | **CE Marking of Thermally toughened glass - EN 12150-2:2004**<br>**CE Marking of Heat soaked Thermally toughened glass - EN 14179-2:2005**<br>**Declaration of performances**<br>**Planibel G fasT Thermally toughened or Heat soaked thermally toughened** | CE |

We

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**Building Division**
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Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **Planibel G fasT Thermally toughened or Heat soaked thermally toughened**, intended to be used in buildings and construction works, following **EN 12150-2:2004 / 14179-2:2005**

| | **Planibel G fasT Thermally toughened or Heat soaked thermally toughened** characteristics in : | **AVCP Systems** | **4 mm** | **6 mm** |
|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | 1C3 | 1C2 |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | 200 K | 100 K |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 30 (-2;-4) | 31 (-2;-3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | NPD<br>NPD | NPD<br>NPD |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 82 / 11 / 10 | 82 / 11 / 10 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 73 / 11 / 10<br>NPD | 70 / 11 / 10<br>NPD |
| 14. | Durability | 3 | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

| | | |
|---|---|---|
| AGC | **CE Marking of Coated glass - EN 1096-4:2004**<br>**Declaration of performances**<br>**Planibel A (annealed)** | CE |

We

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**Building Division**
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Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **Planibel A**, intended to be used in buildings and construction works, following **EN 1096-4:2004**

| | **Planibel A** characteristics in : | **AVCP Systems** | **4 mm** | **6 mm** |
|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD | NPD |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | NPD | NPD |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 30 (-2;-4) | 31 (-2;-3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | NPD<br>0,10 | NPD<br>0,10 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 80 / 11 / 10 | 79 / 11 / 10 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 68 / 12 / 11<br>NPD | 65 / 11 / 10<br>NPD |
| 14. | Durability | 3 | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

| | | |
|---|---|---|
| AGC | **CE Marking of Heat strengthened glass - EN 1863-2:2004**<br>**Declaration of performances**<br>**Planibel A Heat strengthened** | CE |

We

**AGC Glass Europe**
**Building Division**
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Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **Planibel A Heat strengthened**, intended to be used in buildings and construction works, following **EN 1863-2:2004**

| | **Planibel A Heat strengthened** characteristics in : | **AVCP Systems** | **4 mm** | **6 mm** |
|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD | NPD |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | 100 K | 100 K |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 30 (-2;-4) | 31 (-2;-3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | NPD<br>NPD | NPD<br>NPD |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 80 / 11 / 10 | 79 / 11 / 10 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 68 / 12 / 11<br>NPD | 65 / 11 / 10<br>NPD |
| 14. | Durability | 3 | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

**CE Marking of Thermally toughened glass - EN 12150-2:2004**
**CE Marking of Heat soaked Thermally toughened glass - EN 14179-2:2005**
**Declaration of performances**
**Planibel A Thermally toughened or Heat soaked thermally toughened**

We

**AGC Glass Europe**
**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
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Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **Planibel A Thermally toughened or Heat soaked thermally toughened**, intended to be used in buildings and construction works, following **EN 12150-2:2004 / 14179-2:2005**

| | **Planibel A Thermally toughened or Heat soaked thermally toughened** characteristics in : | **AVCP Systems** | **4 mm** | **6 mm** |
|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | 1C3 | 1C2 |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | 200 K | 200 K |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 30 (-2;-4) | 31 (-2;-3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | NPD<br>NPD | NPD<br>NPD |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 80 / 11 / 10 | 79 / 11 / 10 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 68 / 12 / 11<br>NPD | 65 / 11 / 10<br>NPD |
| 14. | Durability | 3 | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

| | | |
|---|---|---|
| AGC | **CE Marking of Coated glass - EN 1096-4:2004**<br>**Declaration of performances**<br>**Planibel Hortiplus N (annealed)** | CE |

We

**AGC Glass Europe**
**Building Division**
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Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **Planibel Hortiplus N**, intended to be used in buildings and construction works, following **EN 1096-4:2004**

| | **Planibel Hortiplus N** characteristics in : | **AVCP Systems** | **4 mm** | **6 mm** |
|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD | NPD |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | NPD | NPD |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 30 (-2;-4) | 31 (-2;-3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | NPD<br>0,15 | NPD<br>0,15 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 82 / 12 / 11 | 81 / 12 / 11 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 70 / 12 / 11<br>NPD | 68 / 12 / 10<br>NPD |
| 14. | Durability | 3 | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

| | | |
|---|---|---|
| AGC | **CE Marking of Heat strengthened glass - EN 1863-2:2004**<br>**Declaration of performances**<br>**Planibel Hortiplus N Heat strengthened** | CE |

We

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Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **Planibel Hortiplus N Heat strengthened**, intended to be used in buildings and construction works, following **EN 1863-2:2004**

| | **Planibel Hortiplus N Heat strengthened** characteristics in : | **AVCP Systems** | **4 mm** | **6 mm** |
|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD | NPD |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | 100 K | 100 K |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 30 (-2;-4) | 31 (-2;-3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | NPD<br>NPD | NPD<br>NPD |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 82 / 12 / 11 | 81 / 12 / 11 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 70 / 12 / 11<br>NPD | 68 / 12 / 10<br>NPD |
| 14. | Durability | 3 | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

| | | |
|---|---|---|
| AGC | **CE Marking of Thermally toughened glass - EN 12150-2:2004**<br>**CE Marking of Heat soaked Thermally toughened glass - EN 14179-2:2005**<br>**Declaration of performances**<br>**Planibel Hortiplus N Thermally toughened or Heat soaked thermally toughened** | CE |

We

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**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **Planibel Hortiplus N Thermally toughened or Heat soaked thermally toughened**, intended to be used in buildings and construction works, following **EN 12150-2:2004 / 14179-2:2005**

| | **Planibel Hortiplus N Thermally toughened or Heat soaked thermally toughened** characteristics in : | **AVCP Systems** | **4 mm** | **6 mm** |
|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | 1C3 | 1C2 |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | 200 K | 200 K |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 30 (-2;-4) | 31 (-2;-3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | NPD<br>NPD | NPD<br>NPD |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 82 / 12 / 11 | 81 / 12 / 11 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 70 / 12 / 11<br>NPD | 68 / 12 / 10<br>NPD |
| 14. | Durability | 3 | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

# Polished wired glass

| | | |
|---|---|---|
| AGC | **CE Marking of Polished wired glass - EN 572-9:2004**<br>**Declaration of performances**<br>**Polished wired glass** | CE |

We

**AGC Glass Europe**
**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **Polished wired glass**, intended to be used in buildings and construction works, following **EN 572-9:2004**

| | **Polished wired glass** characteristics in : | **AVCP Systems** | **6 mm Polished wired glass J** | **6 mm Polished wired glass Safety J** |
|---|---|---|---|---|
| | **Certificate Number:** | | 0749-CPD-410 143AS | 0749-CPD-410 143AS |
| | **Notified Body:** | | 0749 | 0749 |
| 1. | Resistance to fire (EN 13501-2) | 1 | E30 | E30 |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD | 3B3 |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | NPD | NPD |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 31 (-2;-3) | 31 (-2;-3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | 5,7<br>0,89 | 5,7<br>0,89 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 80 / 8 / 8 | 80 / 8 / 8 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 70 / 7 / 7<br>NDP | 70 / 7 / 7<br>NDP |
| 14. | Durability | 3 | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

# Pyrobelite / Pyrobel

| | | |
|---|---|---|
| AGC | **CE Marking of Pyrobel – EN 14449:2005**<br>**Declaration of performances**<br>**Pyrobelite** | CE |

We

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Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **Pyrobelite**, intended to be used in buildings and construction works, following **EN 14449:2005**

| | **Pyrobelite** characteristics in : | **AVCP Systems** | **Pyrobelite 7** | **Pyrobelite 7 EG** | **Pyrobelite 10** |
|---|---|---|---|---|---|
| | **Certificate Number:**<br>**Notified Body :** | | 1121 – CPD – CA0004<br>1121 | 1121 – CPD – CA0004<br>1121 | 1121 – CPD – CA0004<br>1121 |
| 1. | Resistance to fire (EN 13501-2) | 1 | EW30 | EW30 | EW30 |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A2 s1 d0 | NPD | A2 – s1, d0 |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | 3B3 | 1B1 | 2B2 |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | NPD | NPD | NPD |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 34 (0; -3) | 35 (-1; -2) | 37 (-1;-3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | 5,7<br>NPD | 5,5<br>NPD | 5,6<br>NPD |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 89 / 8 / 8 | 87 / 8 / 8 | 86 / 8 / 8 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 73 / 7 / 7<br>76 | 65 / 7 / 7<br>71 | 68 / 7 / 7<br>73 |
| 14. | Durability | 3 | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

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|---|---|---|
| AGC | **CE Marking of Pyrobel – EN 14449:2005**<br>**Declaration of performances**<br>**Pyrobelite** | CE |

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| | **Pyrobelite** characteristics in : | **AVCP Systems** | **Pyrobelite 11** | **Pyrobelite 12** | **Pyrobelite 12 EG** |
|---|---|---|---|---|---|
| | **Certificate Number:**<br>**Notified Body :** | | 1121 – CPD – CA0004<br>1121 | 1121 – CPD – CA0004<br>1121 | 1121 – CPD – CA0004<br>1121 |
| 1. | Resistance to fire (EN 13501-2) | 1 | EW30 | EI20 / EW60 | EI20 / EW60 |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | NPD | A2 – s1, d0 | NPD |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | 1B1 | 2B2 | 1B1 |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | NPD | NPD | NPD |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 35 (-1; -2) | 36 (-1; -3) | 38 (-1; -3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | 5,5<br>NPD | 5,6<br>NPD | 5,4<br>NPD |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 87 / 8 / 8 | 86 / 8 / 8 | 85 / 8 / 8 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 65 / 7 / 7<br>71 | 65 / 7 / 7<br>71 | 58 / 6 / 6<br>67 |
| 14. | Durability | 3 | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
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|---|---|---|
| AGC | **CE Marking of Pyrobel – EN 14449:2005**<br>**Declaration of performances**<br>**Pyrobelite** | CE |

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| | **Pyrobelite** characteristics in : | **AVCP Systems** | **Pyrobelite 13** |
|---|---|---|---|
| | **Certificate Number:**<br>**Notified Body :** | | 1121 – CPD – CA0004<br>1121 |
| 1. | Resistance to fire (EN 13501-2) | 1 | EW30 |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A2 – s1, d0 |
| 3. | External fire performances | 3, 4 | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | 2B2 |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | NPD |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 37 (-1; -2) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | 5,5<br>NPD |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 86 / 8 / 8 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 65 / 6 / 6<br>73 |
| 14. | Durability | 3 | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

**CE Marking of Pyrobel – EN 14449:2005**
**Declaration of performances**
**Pyrobel**

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| | **Pyrobel** characteristics in : | **AVCP Systems** | **Pyrobel 8** | **Pyrobel 8 EG** | **Pyrobel 16** |
|---|---|---|---|---|---|
| | **Certificate Number:**<br>**Notified Body :** | | 1121 – CPD – CA0004<br>1121 | 1121 – CPD – CA0004<br>1121 | 1121 – CPD – CA0004<br>1121 |
| 1. | Resistance to fire (EN 13501-2) | 1 | EI15 / EW30 | EI15 / EW30 | EI30 / EW60 |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A2 – s1, d0 | NPD | A2 – s1, d0 |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD | 1B1 | 2B2 |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | NPD | NPD | NPD |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 34 (-1; -3) | 36 (-1; -3) | 39 (-1; -3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | 5,6<br>NPD | 5,4<br>NPD | 5,4<br>NPD |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 88 / 8 / 8 | 86 / 8 / 8 | 84 / 8 / 8 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 70 / 7 / 7<br>74 | 62 / 6 / 6<br>70 | 60 / 6 / 6<br>67 |
| 14. | Durability | 3 | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

**CE Marking of Pyrobel – EN 14449:2005**
**Declaration of performances**
**Pyrobel**

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| | **Pyrobel** characteristics in : | **AVCP Systems** | **Pyrobel 16 EG** | **Pyrobel 17** | **Pyrobel 17 EG** |
|---|---|---|---|---|---|
| | **Certificate Number:**<br>**Notified Body :** | | 1121 – CPD – CA0004<br>1121 | 1121 – CPD – CA0004<br>1121 | 1121 – CPD – CA0004<br>1121 |
| 1. | Resistance to fire (EN 13501-2) | 1 | EI30 / EW60 | EI45 | EI45 |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | NPD | A2 – s1, d0 | NPD |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | 1B1 | 2B2 | 1B1 |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | NPD | NPD | NPD |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 39 (-1; -3) | 37 (-1; -3) | 38 (0; -3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | 5,2<br>NPD | 5,4<br>NPD | 5,2<br>NPD |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 83 / 7 / 7 | 84 / 8 / 8 | 84 / 8 / 8 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 54 / 6 / 6<br>63 | 61 / 6 / 6<br>69 | 56 / 6 / 6<br>65 |
| 14. | Durability | 3 | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

**CE Marking of Pyrobel – EN 14449:2005**
**Declaration of performances**
**Pyrobel**

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| | **Pyrobel** characteristics in : | **AVCP Systems** | **Pyrobel 17N** | **Pyrobel 17N EG** | **Pyrobel 21** |
|---|---|---|---|---|---|
| | **Certificate Number:**<br>**Notified Body :** | | 1121 – CPD – CA0004<br>1121 | 1121 – CPD – CA0004<br>1121 | 1121 – CPD – CA0004<br>1121 |
| 1. | Resistance to fire (EN 13501-2) | 1 | EI45 / EW60 | EI45 / EW60 | EI45 / EW60 |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A2 – s1, d0 | NPD | A2 – s1, d0 |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | 1B1 | 1B1 | 1B1 |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | NPD | NPD | NPD |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 39 (0; -3) | 40 (-1; -3) | 38 (0; -3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | 5,4<br>NPD | 5,2<br>NPD | 5,3<br>NPD |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 86 / 8 / 8 | 85 / 8 / 8 | 82 / 7 / 7 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 67 / 7 / 7<br>72 | 60 / 7 / 7<br>68 | 59 / 6 / 6<br>64 |
| 14. | Durability | 3 | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
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**CE Marking of Pyrobel – EN 14449:2005**
**Declaration of performances**
**Pyrobel**

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| | **Pyrobel** characteristics in : | **AVCP Systems** | **Pyrobel 21 EG** | **Pyrobel 23** | **Pyrobel 23 EG** |
|---|---|---|---|---|---|
| | **Certificate Number:**<br>**Notified Body :** | | 1121 – CPD – CA0004<br>1121 | 1121 – CPD – CA0004<br>1121 | 1121 – CPD – CA0004<br>1121 |
| 1. | Resistance to fire (EN 13501-2) | 1 | EI45 / EW60 | EI60 | EI60 |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | NPD | A2 – s1, d0 | NPD |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | 1B1 | 1B1 | 1B1 |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | NPD | NPD | NPD |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 40 (-1; -3) | 40 (-1; -3) | 43 (-1; -4) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | 5,1<br>NPD | 5,2<br>NPD | 5,0<br>NPD |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 81 / 7 / 7 | 81 / 7 / 7 | 80 / 7 / 7 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 54 / 6 / 6<br>61 | 53 / 6 / 6<br>NPD | 48 / 6 / 6<br>NPD |
| 14. | Durability | 3 | PASS | PASS | PASS |

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14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

**CE Marking of Pyrobel – EN 14449:2005**
**Declaration of performances**
**Pyrobel**

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| | **Pyrobel** characteristics in : | **AVCP Systems** | **Pyrobel 25** | **Pyrobel 25 EG** | **Pyrobel 30** |
|---|---|---|---|---|---|
| | **Certificate Number:**<br>**Notified Body :** | | 1121 – CPD – CA0004<br>1121 | 1121 – CPD – CA0004<br>1121 | 1121 – CPD – CA0004<br>1121 |
| 1. | Resistance to fire (EN 13501-2) | 1 | EI60 | EI60 | EI90 |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A2 – s1, d0 | NPD | A2 – s1, d0 |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | 1B1 | 1B1 | 1B1 |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | NPD | NPD | NPD |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 40 (-1; -3) | 43 (-1; -4) | 42 (-1; -4) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | 5,2<br>NPD | 5,0<br>NPD | 5,1<br>NPD |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 81 / 7 / 7 | 80 / 7 / 7 | 83 / 8 / 8 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 53 / 6 / 6<br>62 | 48 / 6 / 6<br>59 | 59 / 7 / 7<br>66 |
| 14. | Durability | 3 | PASS | PASS | PASS |

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14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

| | | |
|---|---|---|
| AGC | **CE Marking of Pyrobel – EN 14449:2005**<br>**Declaration of performances**<br>**Pyrobel** | CE |

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| | **Pyrobel** characteristics in : | **AVCP Systems** | **Pyrobel 30 EG** | **Pyrobel 35** | **Pyrobel 35 EG** |
|---|---|---|---|---|---|
| | **Certificate Number:**<br>**Notified Body :** | | 1121 – CPD – CA0004<br>1121 | 1121 – CPD – CA0004<br>1121 | 1121 – CPD – CA0004<br>1121 |
| 1. | Resistance to fire (EN 13501-2) | 1 | EI90 | EI90 | EI90 |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | NPD | NPD | NPD |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | 1B1 | 1B1 | 1B1 |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | NPD | NPD | NPD |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 43 (-1; -4) | 41 (-1; -4) | 42 (-1; -4) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | 4,9<br>NPD | 4,9<br>NPD | 4,8<br>NPD |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 81 / 8 / 8 | 79 / 7 / 7 | 77 / 7 / 7 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 53 / 6 / 6<br>63 | 49 / 6 / 6<br>59 | 46 / 6 / 6<br>57 |
| 14. | Durability | 3 | PASS | PASS | PASS |

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Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **Pyrobel**, intended to be used in buildings and construction works, following **EN 14449:2005**

| | **Pyrobel** characteristics in : | **AVCP Systems** | **Pyrobel 53** | **Pyrobel 53 EG** | **Pyrobel 53N** |
|---|---|---|---|---|---|
| | **Certificate Number:**<br>**Notified Body :** | | 1121 – CPD – CA0004<br>1121 | 1121 – CPD – CA0004<br>1121 | 1121 – CPD – CA0004<br>1121 |
| 1. | Resistance to fire (EN 13501-2) | 1 | EI120 | EI120 | EI120 |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | NPD | NPD | NPD |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | 1B1 | 1B1 | 1B1 |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | NPD | NPD | NPD |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 45 (-1; -4) | 46 (-2; -5) | 48 (-2; -7) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | 4,5<br>NPD | 4,3<br>NPD | 4,5<br>NPD |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 72 / 7 / 7 | 71 / 7 / 7 | 75 / 6 / 6 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 40 / 5 / 5<br>53 | 38 / 5 / 5<br>51 | 42 / 5 / 5<br>55 |
| 14. | Durability | 3 | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

| | | |
|---|---|---|
| AGC | **CE Marking of Pyrobel – EN 14449:2005**<br>**Declaration of performances**<br>**Pyrobel** | CE |

We

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**Building Division**
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Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **Pyrobel**, intended to be used in buildings and construction works, following **EN 14449:2005**

| | **Pyrobel** characteristics in : | **AVCP Systems** | **Pyrobel 53N EG** |
|---|---|---|---|
| | **Certificate Number:**<br>**Notified Body :** | | 1121 – CPD – CA0004<br>1121 |
| 1. | Resistance to fire (EN 13501-2) | 1 | EI120 |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | NPD |
| 3. | External fire performances | 3, 4 | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | 1B1 |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | NPD |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 49 (-2; -7) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | 4,4<br>NPD |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 73 / 7 / 7 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 40 / 5 / 5<br>53 |
| 14. | Durability | 3 | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

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|---|---|---|
| AGC | **CE Marking of Pyrobel – EN 14449:2005**<br>**Declaration of performances**<br>**Pyrobel** | CE |

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Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **Pyrobel**, intended to be used in buildings and construction works, following **EN 14449:2005**

| | **Pyrobel** characteristics in : | **AVCP Systems** | **Pyrobel 19H** | **Pyrobel 23H** | **Pyrobel 28H** |
|---|---|---|---|---|---|
| | **Certificate Number:**<br>**Notified Body :** | | 1121 – CPD – CA0004<br>1121 | 1121 – CPD – CA0004<br>1121 | 1121 – CPD – CA0004<br>1121 |
| 1. | Resistance to fire (EN 13501-2) | 1 | EI30 | EI45 | EI60 |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | NPD | NPD | NPD |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | 1B1 | 1B1 | 1B1 |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | NPD | NPD | NPD |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 38 (-1; -3) | 39 (0; -3) | 41 (0;-3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | 5,2<br>NPD | 5,0<br>NPD | 4,9<br>NPD |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 81 / 7 / 7 | 80 / 7 / 7 | 78 / 7 / 7 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 53 / 6 / 6<br>63 | 49 / 6 / 6<br>60 | 47 / 6 / 6<br>58 |
| 14. | Durability | 3 | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

# Pyropane

**CE Marking of Heat soaked Thermally toughened glass - EN 14179-2:2005**
**Declaration of performances**
**Pyropane 100 – Pyropane 110**

CE

We

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**Building Division**
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Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **Pyropane**, intended to be used in buildings and construction works, following **EN 14179-2:2005**

| | **Pyropane** characteristics in : | **AVCP Systems** | **Pyropane 100** | **Pyropane 110** |
|---|---|---|---|---|
| | **Certificate Number:**<br>**Notified Body :** | | 0336-CPD-9265A<br>0336 | 0336-CPD-9265A<br>0336 |
| 1. | Resistance to fire (EN 13501-2) | 1 | E30 | E30 |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | 1C1 | 1C1 |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | NPD | NPD |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 31 (-2; -3) | 31 (-2; -3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | 5,7<br>0,89 | 5,7<br>0,89 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 89 / 8 / 8 | NPD |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 81 / 7 / 7<br>NPD | NPD<br>NPD |
| 14. | Durability | 3 | PASS | PASS |

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14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

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|---|---|---|
| AGC | **CE Marking of Static Smoke Barrier - EN 12101-1**<br>**Declaration of performances**<br>**Pyropane 100 SB 30** | CE |

We

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Declare, under his sole responsibility, the following characteristics for the CE Marking of the static smoke barrier product named **Pyropane**, intended to be used in buildings and construction works, following **EN 12101-1**

| | **Pyropane** characteristics in : | **AVCP Systems** | **Pyropane 100 SB30** |
|---|---|---|---|
| | **Certificate Number:**<br>**Notified Body :** | | 0336-CPD-9265E<br>0336 |
| 1. | Resistance to fire classification | 1 | DH 30 |
| 2. | Response delay | 4 | NPD |
| 3. | Openings, gaps and perimeter spaces :<br>Gap head<br>Gap edge<br>Gap joint<br>Area head<br>Area edge<br>Area joint | 4 | <br>10 mm<br>11 mm<br>6 mm<br>NPD<br>NPD<br>NPD |
| 4. | Maximum barrier permeability | 4 | NPD |

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E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

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|---|---|---|
| AGC | **CE Marking of Insulating glass unit – EN 1279-5:2005**<br>**Declaration of performances**<br>**Pyropane 211-44** | CE |

We

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Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **Pyropane**, intended to be used in buildings and construction works, following **EN 1279-5:2005**

| | **Pyropane** characteristics in : | **AVCP Systems** | **Pyropane 211–44** |
|---|---|---|---|
| | **Certificate Number:**<br>**Notified Body :** | | 0749-CPD-143<br>0749 |
| 1. | Resistance to fire (EN 13501-2) | 1 | E30/60 – EW30/60 |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | **For 12 characteristics, see www.YourGlass.com\ce** |
| 3. | External fire performances | 3, 4 | |
| 4. | Bullet resistance (EN 1063) | 1 | |
| 5. | Explosion resistance (EN 13541) | 1 | |
| 6. | Burglar resistance (EN 356) | 3 | |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | |
| 14. | Durability | 3 | PASS |

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14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

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|---|---|---|
| AGC | **CE Marking of Insulating glass unit – EN 1279-5:2005**<br>**Declaration of performances**<br>**Pyropane 231-28** | CE |

We

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Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **Pyropane**, intended to be used in buildings and construction works, following **EN 1279-5:2005**

| | **Pyropane** characteristics in : | **AVCP Systems** | **Pyropane 231-28** |
|---|---|---|---|
| | **Certificate Number:**<br>**Notified Body :** | | 0749-CPD-143<br>0749 |
| 1. | Resistance to fire (EN 13501-2) | 1 | E30/60 – EW30/60 |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | **For 12 characteristics, see www.YourGlass.com\ce** |
| 3. | External fire performances | 3, 4 | |
| 4. | Bullet resistance (EN 1063) | 1 | |
| 5. | Explosion resistance (EN 13541) | 1 | |
| 6. | Burglar resistance (EN 356) | 3 | |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | |
| 14. | Durability | 3 | PASS |

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14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

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|---|---|---|
| AGC | **CE Marking of Insulating glass unit – EN 1279-5:2005**<br>**Declaration of performances**<br>**Pyropane 221-37** | CE |

We

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**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
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Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **Pyropane**, intended to be used in buildings and construction works, following **EN 1279-5:2005**

| | **Pyropane** characteristics in : | **AVCP Systems** | **Pyropane 221 - 37** |
|---|---|---|---|
| | **Certificate Number:**<br>**Notified Body :** | | 0749-CPD-143<br>0749 |
| 1. | Resistance to fire (EN 13501-2) | 1 | E30 – EW30 |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | **For 12 characteristics, see www.YourGlass.com\ce** |
| 3. | External fire performances | 3, 4 | |
| 4. | Bullet resistance (EN 1063) | 1 | |
| 5. | Explosion resistance (EN 13541) | 1 | |
| 6. | Burglar resistance (EN 356) | 3 | |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | |
| 14. | Durability | 3 | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

| | | |
|---|---|---|
| AGC | **CE Marking of Insulating glass unit – EN 1279-5:2005**<br>**Declaration of performances**<br>**Pyropane 241-60 – Pyropane 204** | CE |

We

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Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **Pyropane**, intended to be used in buildings and construction works, following **EN 1279-5:2005**

| | **Pyropane** characteristics in : | **AVCP Systems** | **Pyropane 241-60** | **Pyropane 204** |
|---|---|---|---|---|
| | **Certificate Number:**<br>**Notified Body :** | | 0749-CPD-143<br>0749 | 0749-CPD-143<br>0749 |
| 1. | Resistance to fire (EN 13501-2) | 1 | E30 – EW30 | E30 – EW30 |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | **For 12 characteristics, see www.YourGlass.com\ce** | **For 12 characteristics, see www.YourGlass.com\ce** |
| 3. | External fire performances | 3, 4 | | |
| 4. | Bullet resistance (EN 1063) | 1 | | |
| 5. | Explosion resistance (EN 13541) | 1 | | |
| 6. | Burglar resistance (EN 356) | 3 | | |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | | |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | | |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | | |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | | |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | | |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | | |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | | |
| 14. | Durability | 3 | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

| | | |
|---|---|---|
| AGC | **CE Marking of Insulating glass unit – EN 1279-5:2005**<br>**Declaration of performances**<br>**Pyropane 151-70 ; 151-70/100 ; 152-70 ; 201 ; 201/100 ; 202** | CE |

We

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**Building Division**
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Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **Pyropane**, intended to be used in buildings and construction works, following **EN 1279-5:2005**

| | **Pyropane** characteristics in : | **AVCP Systems** | **Pyropane 151-70**<br>**Pyropane 151-70/100**<br>**Pyropane 152-70** | **Pyropane 201**<br>**Pyropane 201/100**<br>**Pyropane 202** |
|---|---|---|---|---|
| | **Certificate Number:**<br>**Notified Body :** | | 0749-CPD-143<br>0749 | 0749-CPD-143<br>0749 |
| 1. | Resistance to fire (EN 13501-2) | 1 | E30 – EW30 | E30 – EW30 |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | **For 12 characteristics, see www.YourGlass.com\ce** | **For 12 characteristics, see www.YourGlass.com\ce** |
| 3. | External fire performances | 3, 4 | | |
| 4. | Bullet resistance (EN 1063) | 1 | | |
| 5. | Explosion resistance (EN 13541) | 1 | | |
| 6. | Burglar resistance (EN 356) | 3 | | |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | | |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | | |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | | |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | | |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | | |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | | |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | | |
| 14. | Durability | 3 | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

# Solar patterned glass

| | | |
|---|---|---|
| AGC | **CE Marking of Patterned glass - EN 572-9:2004**<br>**Declaration of performances**<br>**Solatex (annealed)** | CE |

We

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Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **SOLATEX**, intended to be used in buildings and construction works, following **EN 572-9:2004**

| | **Solatex** characteristics in : | **AVCP Systems** | **3,2 mm** | **4 mm** |
|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD | NPD |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | NPD | NPD |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | NPD | NPD |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | 5,8<br>0,89 | 5,8<br>0,89 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 92 / 8 / 8 | 92 / 8 / 8 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 91 / 8 / 8<br>91 | 91 / 8 / 8<br>91 |
| 14. | Durability | 3 | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

| | | |
|---|---|---|
| AGC | **CE Marking of Patterned glass - EN 572-9:2004**<br>**Declaration of performances**<br>**Solite (annealed)** | CE |

We

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Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **SOLITE**, intended to be used in buildings and construction works, following **EN 572-9:2004**

| | **Solite** characteristics in : | **AVCP Systems** | **3,2 mm** | **4 mm** |
|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD | NPD |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | NPD | NPD |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | NPD | NPD |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | 5,8<br>0,89 | 5,8<br>0,89 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 92 / 8 / 8 | 92 / 8 / 8 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 91 / 8 / 8<br>91 | 91 / 8 / 8<br>91 |
| 14. | Durability | 3 | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

| | | |
|---|---|---|
| AGC | **CE Marking of Patterned glass - EN 572-9:2004**<br>**Declaration of performances**<br>**Astralite (annealed)** | CE |

We

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**Building Division**
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Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **ASTRALITE**, intended to be used in buildings and construction works, following **EN 572-9:2004**

| | **ASTRALITE** characteristics in : | **AVCP Systems** | **3,2 mm** | **4 mm** |
|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD | NPD |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | NPD | NPD |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | NPD | NPD |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | 5,8<br>0,89 | 5,8<br>0,89 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 91 / 8 / 8 | 91 / 8 / 8 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 91 / 8 / 8<br>91 | 90 / 8 / 8<br>91 |
| 14. | Durability | 3 | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

| | | |
|---|---|---|
| AGC | **CE Marking of Thermally toughened glass - EN 12150-2:2004**<br>**Declaration of performances**<br>**Solatex Thermally toughened** | CE |

We

**AGC Glass Europe**
**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **SOLATEX Thermally toughened**, intended to be used in buildings and construction works, following **EN 12150-2:2004**

| | **Solatex Thermally toughened** characteristics in : | **AVCP Systems** | **3,2 mm** | **4 mm** |
|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | 1C3 | 1C3 |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | 200 K | 200 K |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | NPD | NPD |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | 5,8<br>0,89 | 5,8<br>0,89 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 92 / 8 / 8 | 92 / 8 / 8 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 91 / 8 / 8<br>91 | 91 / 8 / 8<br>91 |
| 14. | Durability | 3 | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

| | | |
|---|---|---|
| AGC | **CE Marking of Thermally toughened glass - EN 12150-2:2004**<br>**Declaration of performances**<br>**Solite Thermally toughened** | CE |

We

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Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **SOLITE Thermally toughened**, intended to be used in buildings and construction works, following **EN 12150-2:2004**

| | **Solite Thermally toughened** characteristics in : | **AVCP Systems** | **3,2 mm** | **4 mm** |
|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | 1C3 | 1C3 |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | 200 K | 200 K |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | NPD | NPD |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | 5,8<br>0,89 | 5,8<br>0,89 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 92 / 8 / 8 | 92 / 8 / 8 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 91 / 8 / 8<br>91 | 91 / 8 / 8<br>91 |
| 14. | Durability | 3 | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

| | | |
|---|---|---|
| AGC | **CE Marking of Thermally toughened glass - EN 12150-2:2004**<br>**Declaration of performances**<br>**Astralite Thermally toughened** | CE |

We

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Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **ASTRALITE Thermally toughened**, intended to be used in buildings and construction works, following **EN 12150-2:2004**

| | **Astralite Thermally toughened** characteristics in : | **AVCP Systems** | **3,2 mm** | **4 mm** |
|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | 1C3 | 1C3 |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | 200 K | 200 K |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | NPD | NPD |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | 5,8<br>0,89 | 5,8<br>0,89 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 91 / 8 / 8 | 91 / 8 / 8 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 91 / 8 / 8<br>91 | 90 / 8 / 8<br>91 |
| 14. | Durability | 3 | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

# Stopray

| | | |
|---|---|---|
| AGC | **CE Marking of Coated glass - EN 1096-4:2004**<br>**Declaration of performances**<br>**Stopray Elite (annealed)** | CE |

We

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**Building Division**
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Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **Stopray Elite**, intended to be used in buildings and construction works, following **EN 1096-4:2004**

| | **Stopray Elite** characteristics in : | **AVCP Systems** | **4 mm** | **5 mm** | **6 mm** | **8 mm** | **10 mm** | **12 mm** |
|---|---|---|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 | A1 | A1 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD | NPD | NPD | NPD | NPD | NPD |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | NPD | NPD | NPD | NPD | NPD | NPD |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 30 (-2;-4) | 30 (-1;-2) | 31 (-2;-3) | 32 (-1;-2) | 34 (-2;-3) | 35 (-2;-3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | NPD<br>0,03 | NPD<br>0,03 | NPD<br>0,03 | NPD<br>0,03 | NPD<br>0,03 | NPD<br>0,03 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 75 / 9 / 9 | 75 / 9 / 9 | 75 / 9 / 9 | 74 / 9 / 9 | 73 / 9 / 9 | 72 / 9 / 9 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 42 / 38 / 30<br>NPD | 42 / 38 / 29<br>NPD | 42 / 38 / 28<br>NPD | 41 / 38 / 26<br>NPD | 40 / 38 / 23<br>NPD | 39 / 38 / 22<br>NPD |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

**CE Marking of Coated glass - EN 1096-4:2004**
**Declaration of performances**
**Stopray Elite (heat strengthened)**

CE

We

**AGC Glass Europe**
**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **Stopray Elite**, intended to be used in buildings and construction works, following **EN 1096-4:2004**

| | **Stopray Elite** characteristics in : | **AVCP Systems** | **4 mm** | **5 mm** | **6 mm** | **8 mm** | **10 mm** | **12 mm** |
|---|---|---|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 | A1 | A1 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD | NPD | NPD | NPD | NPD | NPD |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | 100 K | 100 K | 100 K | 100 K | 100 K | 100 K |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 30 (-2;-4) | 30 (-1;-2) | 31 (-2;-3) | 32 (-1;-2) | 34 (-2;-3) | 35 (-2;-3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | NPD<br>0,03 | NPD<br>0,03 | NPD<br>0,03 | NPD<br>0,03 | NPD<br>0,03 | NPD<br>0,03 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 75 / 9 / 9 | 75 / 9 / 9 | 75 / 9 / 9 | 74 / 9 / 9 | 73 / 9 / 9 | 72 / 9 / 9 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 42 / 38 / 30<br>NPD | 42 / 38 / 29<br>NPD | 42 / 38 / 28<br>NPD | 41 / 38 / 26<br>NPD | 40 / 38 / 23<br>NPD | 39 / 38 / 22<br>NPD |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

| | | |
|---|---|---|
| AGC | **CE Marking of Coated glass - EN 1096-4:2004**<br>**Declaration of performances**<br>**Stopray Elite (Thermally toughened or Heat soaked thermally toughened)** | CE |

We

**AGC Glass Europe**
**Building Division**
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Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **Stopray Elite**, intended to be used in buildings and construction works, following **EN 1096-4:2004**

| | **Stopray Elite** characteristics in : | **AVCP Systems** | **4 mm** | **5 mm** | **6 mm** | **8 mm** | **10 mm** | **12 mm** |
|---|---|---|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 | A1 | A1 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | 1C3 | 1C3 | 1C2 | 1C2 | 1C1 | 1C1 |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | 200 K | 200 K | 200 K | 200 K | 200 K | 200 K |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 30 (-2;-4) | 30 (-1;-2) | 31 (-2;-3) | 32 (-1;-2) | 34 (-2;-3) | 35 (-2;-3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | NPD<br>0,03 | NPD<br>0,03 | NPD<br>0,03 | NPD<br>0,03 | NPD<br>0,03 | NPD<br>0,03 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 75 / 9 / 9 | 75 / 9 / 9 | 75 / 9 / 9 | 74 / 9 / 9 | 73 / 9 / 9 | 72 / 9 / 9 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 42 / 38 / 30<br>NPD | 42 / 38 / 29<br>NPD | 42 / 38 / 28<br>NPD | 41 / 38 / 26<br>NPD | 40 / 38 / 23<br>NPD | 39 / 38 / 22<br>NPD |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

| | | |
|---|---|---|
| AGC | **CE Marking of Coated glass - EN 1096-4:2004**<br>**Declaration of performances**<br>**Stopray Safir (annealed)** | CE |

We

**AGC Glass Europe**
**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **Stopray Safir**, intended to be used in buildings and construction works, following **EN 1096-4:2004**

| | **Stopray Safir** characteristics in : | **AVCP Systems** | **4 mm** | **5 mm** | **6 mm** | **8 mm** | **10 mm** | **12 mm** |
|---|---|---|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 | A1 | A1 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD | NPD | NPD | NPD | NPD | NPD |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | NPD | NPD | NPD | NPD | NPD | NPD |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 30 (-2;-4) | 30 (-1;-2) | 31 (-2;-3) | 32 (-1;-2) | 34 (-2;-3) | 35 (-2;-3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | NPD<br>0,03 | NPD<br>0,03 | NPD<br>0,03 | NPD<br>0,03 | NPD<br>0,03 | NPD<br>0,03 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 68 / 13 / 11 | 68 / 13 / 11 | 68 / 13 / 11 | 67 / 13 / 11 | 66 / 13 / 11 | 65 / 13 / 11 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 36 / 42 / 33<br>NPD | 36 / 42 / 32<br>NPD | 36 / 42 / 30<br>NPD | 35 / 42 / 28<br>NPD | 34 / 42 / 25<br>NPD | 33 / 42 / 24<br>NPD |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

| | | |
|---|---|---|
| AGC | **CE Marking of Coated glass - EN 1096-4:2004**<br>**Declaration of performances**<br>**Stopray Safir (heat strengthened)** | CE |

We

**AGC Glass Europe**
**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **Stopray Safir**, intended to be used in buildings and construction works, following **EN 1096-4:2004**

| | **Stopray Safir** characteristics in : | **AVCP Systems** | **4 mm** | **5 mm** | **6 mm** | **8 mm** | **10 mm** | **12 mm** |
|---|---|---|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 | A1 | A1 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD | NPD | NPD | NPD | NPD | NPD |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | 100 K | 100 K | 100 K | 100 K | 100 K | 100 K |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 30 (-2;-4) | 30 (-1;-2) | 31 (-2;-3) | 32 (-1;-2) | 34 (-2;-3) | 35 (-2;-3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | NPD<br>0,03 | NPD<br>0,03 | NPD<br>0,03 | NPD<br>0,03 | NPD<br>0,03 | NPD<br>0,03 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 68 / 13 / 11 | 68 / 13 / 11 | 68 / 13 / 11 | 67 / 13 / 11 | 66 / 13 / 11 | 65 / 13 / 11 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 36 / 42 / 33<br>NPD | 36 / 42 / 32<br>NPD | 36 / 42 / 30<br>NPD | 35 / 42 / 28<br>NPD | 34 / 42 / 25<br>NPD | 33 / 42 / 24<br>NPD |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

| AGC | **CE Marking of Coated glass - EN 1096-4:2004**<br>**Declaration of performances**<br>**Stopray Safir (Thermally toughened or Heat soaked thermally toughened)** | CE |
|---|---|---|

We

**AGC Glass Europe**
**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **Stopray Safir**, intended to be used in buildings and construction works, following **EN 1096-4:2004**

| | **Stopray Safir** characteristics in : | **AVCP Systems** | **4 mm** | **5 mm** | **6 mm** | **8 mm** | **10 mm** | **12 mm** |
|---|---|---|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 | A1 | A1 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | 1C3 | 1C3 | 1C2 | 1C2 | 1C1 | 1C1 |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | 200 K | 200 K | 200 K | 200 K | 200 K | 200 K |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 30 (-2;-4) | 30 (-1;-2) | 31 (-2;-3) | 32 (-1;-2) | 34 (-2;-3) | 35 (-2;-3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | NPD<br>0,03 | NPD<br>0,03 | NPD<br>0,03 | NPD<br>0,03 | NPD<br>0,03 | NPD<br>0,03 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 68 / 13 / 11 | 68 / 13 / 11 | 68 / 13 / 11 | 67 / 13 / 11 | 66 / 13 / 11 | 65 / 13 / 11 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 36 / 42 / 33<br>NPD | 36 / 42 / 32<br>NPD | 36 / 42 / 30<br>NPD | 35 / 42 / 28<br>NPD | 34 / 42 / 25<br>NPD | 33 / 42 / 24<br>NPD |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

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|---|---|---|
| AGC | **CE Marking of Coated glass - EN 1096-4:2004**<br>**Declaration of performances**<br>**Stopray Smart 30/20 (annealed)** | CE |

We

**AGC Glass Europe**
**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **Stopray Smart 30/20**, intended to be used in buildings and construction works, following **EN 1096-4:2004**

| | **Stopray Smart 30/20** characteristics in : | **AVCP Systems** | **6 mm** | **8 mm** | **10 mm** |
|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD | NPD | NPD |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | NPD | NPD | NPD |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 31 (-2;-3) | 32 (-1;-2) | 34 (-2;-3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | NPD<br>0,03 | NPD<br>0,03 | NPD<br>0,03 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 33 / 9 / 28 | 32 / 9 / 27 | 32 / 9 / 26 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 20 / 31 / 30<br>NPD | 19 / 31 / 28<br>NPD | 18 / 31 / 25<br>NPD |
| 14. | Durability | 3 | PASS | PASS | PASS |

Brussels
9th of July 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

| | | |
|---|---|---|
| AGC | **CE Marking of Coated glass - EN 1096-4:2004**<br>**Declaration of performances**<br>**Stopray Smart 30/20 (heat strengthened)** | CE |

We

**AGC Glass Europe**
**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **Stopray Smart 30/20**, intended to be used in buildings and construction works, following **EN 1096-4:2004**

| | **Stopray Smart 30/20** characteristics in : | **AVCP Systems** | **6 mm** | **8 mm** | **10 mm** |
|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD | NPD | NPD |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | 100 K | 100 K | 100 K |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 31 (-2;-3) | 32 (-1;-2) | 34 (-2;-3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | NPD<br>0,03 | NPD<br>0,03 | NPD<br>0,03 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 33 / 9 / 28 | 32 / 9 / 27 | 32 / 9 / 26 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 20 / 31 / 30<br>NPD | 19 / 31 / 28<br>NPD | 18 / 31 / 25<br>NPD |
| 14. | Durability | 3 | PASS | PASS | PASS |

Brussels
9th of July 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

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|---|---|---|
| AGC | **CE Marking of Coated glass - EN 1096-4:2004**<br>**Declaration of performances**<br>**Stopray Smart 30/20 (Thermally toughened or Heat soaked thermally toughened)** | CE |

We

**AGC Glass Europe**
**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **Stopray Smart 30/20**, intended to be used in buildings and construction works, following **EN 1096-4:2004**

| | **Stopray Smart 30/20** characteristics in : | **AVCP Systems** | **6 mm** | **8 mm** | **10 mm** |
|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | 1C2 | 1C2 | 1C1 |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | 200 K | 200 K | 200 K |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 31 (-2;-3) | 32 (-1;-2) | 34 (-2;-3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | NPD<br>0,03 | NPD<br>0,03 | NPD<br>0,03 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 33 / 9 / 28 | 32 / 9 / 27 | 32 / 9 / 26 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 20 / 31 / 30<br>NPD | 19 / 31 / 28<br>NPD | 18 / 31 / 25<br>NPD |
| 14. | Durability | 3 | PASS | PASS | PASS |

Brussels
9th of July 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

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|---|---|---|
| AGC | **CE Marking of Coated glass - EN 1096-4:2004**<br>**Declaration of performances**<br>**Stopray Smart 51/33 (annealed)** | CE |

We

**AGC Glass Europe**
**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **Stopray Smart 51/33**, intended to be used in buildings and construction works, following **EN 1096-4:2004**

| | **Stopray Smart 51/33** characteristics in : | **AVCP Systems** | **6 mm** | **8 mm** | **10 mm** |
|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD | NPD | NPD |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | NPD | NPD | NPD |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 31 (-2;-3) | 32 (-1;-2) | 34 (-2;-3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | NPD<br>0,03 | NPD<br>0,03 | NPD<br>0,03 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 56 / 12 / 23 | 55 / 12 / 22 | 54 / 11 / 22 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 34 / 37 / 30<br>NPD | 32 / 37 / 27<br>NPD | 31 / 37 / 24<br>NPD |
| 14. | Durability | 3 | PASS | PASS | PASS |

Brussels
9th of July 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

**CE Marking of Coated glass - EN 1096-4:2004**
**Declaration of performances**
**Stopray Smart 51/33 (heat strengthened)**

CE

We

**AGC Glass Europe**
**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **Stopray Smart 51/33**, intended to be used in buildings and construction works, following **EN 1096-4:2004**

| | **Stopray Smart 51/33** characteristics in : | **AVCP Systems** | **6 mm** | **8 mm** | **10 mm** |
|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD | NPD | NPD |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | 100 K | 100 K | 100 K |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 31 (-2;-3) | 32 (-1;-2) | 34 (-2;-3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | NPD<br>0,03 | NPD<br>0,03 | NPD<br>0,03 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 56 / 12 / 23 | 55 / 12 / 22 | 54 / 11 / 22 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 34 / 37 / 30<br>NPD | 32 / 37 / 27<br>NPD | 31 / 37 / 24<br>NPD |
| 14. | Durability | 3 | PASS | PASS | PASS |

Brussels
9th of July 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

| | | |
|---|---|---|
| AGC | **CE Marking of Coated glass - EN 1096-4:2004**<br>**Declaration of performances**<br>**Stopray Smart 51/33 (Thermally toughened or Heat soaked thermally toughened)** | CE |

We

**AGC Glass Europe**
**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **Stopray Smart 51/33**, intended to be used in buildings and construction works, following **EN 1096-4:2004**

| | **Stopray Smart 51/33** characteristics in : | **AVCP Systems** | **6 mm** | **8 mm** | **10 mm** |
|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | 1C2 | 1C2 | 1C1 |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | 200 K | 200 K | 200 K |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 31 (-2;-3) | 32 (-1;-2) | 34 (-2;-3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | NPD<br>0,03 | NPD<br>0,03 | NPD<br>0,03 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 56 / 12 / 23 | 55 / 12 / 22 | 54 / 11 / 22 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 34 / 37 / 30<br>NPD | 32 / 37 / 27<br>NPD | 31 / 37 / 24<br>NPD |
| 14. | Durability | 3 | PASS | PASS | PASS |

Brussels
9th of July 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

**CE Marking of Coated glass - EN 1096-4:2004**
**Declaration of performances**
**Stopray Vision-60 (annealed)**

CE

We

**AGC Glass Europe**
**Division Raw Glass Products**
Chaussée de La Hulpe 166 - B 1170 Brussels
Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **STOPRAY VISION-60,** intended to be used in buildings and construction works, following **EN 1096-4:2004**

| | **Stopray Vision-60** characteristics in : | **AVCP Systems** | **6 mm** | **8 mm** | **10 mm** |
|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD | NPD | NPD |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | NPD | NPD | NPD |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 31 (-2;-3) | 32 (-1;-2) | 34 (-2;-3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | NPD<br>0,01 | NPD<br>0,01 | NPD<br>0,01 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 67 / 12 / 12 | 66 / 12 / 11 | 65 / 12 / 11 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 36 / 38 / 29<br>NPD | 35 / 38 / 26<br>NPD | 34 / 38 / 24<br>NPD |
| 14. | Durability | 3 | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

| | | |
|---|---|---|
| AGC | **CE Marking of Coated glass - EN 1096-4:2004**<br>**Declaration of performances**<br>**Stopray Vision-60T (annealed)** | CE |

We

**AGC Glass Europe**
**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **STOPRAY VISION-60T**, intended to be used in buildings and construction works, following **EN 1096-4:2004**

| | **Stopray Vision-60T** characteristics in : | **AVCP Systems** | **4 mm** | **6 mm** | **8 mm** | **10 mm** |
|---|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD | NPD | NPD | NPD |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | NPD | NPD | NPD | NPD |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 30 (-2;-4) | 31 (-2;-3) | 32 (-1;-2) | 34 (-2;-3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | NPD<br>NPD | NPD<br>NPD | NPD<br>NPD | NPD<br>NPD |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | NPD | NPD | NPD | NPD |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | NPD<br>NPD | NPD<br>NPD | NPD<br>NPD | NPD<br>NPD |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

| | | |
|---|---|---|
| AGC | **CE Marking of Heat strengthened glass - EN 1863-2:2004**<br>**Declaration of performances**<br>**Stopray Vision-60T (Heat strengthened)** | CE |

We

**AGC Glass Europe**
**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **Stopray Vision-60T Heat strengthened**, intended to be used in buildings and construction works, following **EN 1863-2:2004**

| | **Stopray Vision-60T Heat strengthened** characteristics in : | **AVCP Systems** | **4 mm** | **6 mm** | **8 mm** | **10 mm** |
|---|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD | NPD | NPD | NPD |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | 100 K | 100 K | 100 K | 100 K |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 30 (-2;-4) | 31 (-2;-3) | 32 (-1;-2) | 34 (-2;-3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | NPD<br>0,01 | NPD<br>0,01 | NPD<br>0,01 | NPD<br>0,01 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 66 / 15 / 11 | 66 / 15 / 11 | 65 / 15 / 11 | 64 / 15 / 11 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 39 / 41 / 30<br>NPD | 38 / 41 / 26<br>NPD | 37 / 41 / 23<br>NPD | 36 / 41 / 21<br>NPD |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

**CE Marking of Thermally toughened glass - EN 12150-2:2004**
**CE Marking of Heat soaked Thermally toughened glass - EN 14179-2:2005**
**Declaration of performances**
**Stopray Vision-60T (Thermally toughened or Heat soaked thermally toughened)**

CE

We

**AGC Glass Europe**
**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **Stopray Vision-60T Thermally toughened or Heat soaked thermally toughened**, intended to be used in buildings and construction works, following **EN 12150-2:2004 / 14179-2:2005**

| | **Stopray Vision-60T Thermally toughened or Heat soaked thermally toughened** characteristics in : | **AVCP Systems** | **4 mm** | **6 mm** | **8 mm** | **10 mm** |
|---|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | 1C3 | 1C2 | 1C2 | 1C1 |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | 200 K | 200 K | 200 K | 200 K |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 30 (-2;-4) | 31 (-2;-3) | 32 (-1;-2) | 34 (-2;-3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | NPD<br>0,01 | NPD<br>0,01 | NPD<br>0,01 | NPD<br>0,01 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 66 / 15 / 11 | 66 / 15 / 11 | 65 / 15 / 11 | 64 / 15 / 11 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 39 / 41 / 30<br>NPD | 38 / 41 / 26<br>NPD | 37 / 41 / 23<br>NPD | 36 / 41 / 21<br>NPD |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

| | | |
|---|---|---|
| AGC | **CE Marking of Coated glass - EN 1096-4:2004**<br>**Declaration of performances**<br>**Stopray Carat (annealed)** | CE |

We

**AGC Glass Europe**
**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **Stopray Carat**, intended to be used in buildings and construction works, following **EN 1096-4:2004**

| | **Stopray Carat** characteristics in : | **AVCP Systems** | **4 mm** | **5 mm** | **6 mm** | **8 mm** | **10 mm** | **12 mm** |
|---|---|---|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 | A1 | A1 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD | NPD | NPD | NPD | NPD | NPD |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | NPD | NPD | NPD | NPD | NPD | NPD |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 30 (-2;-4) | 30 (-1;-2) | 31 (-2;-3) | 32 (-1;-2) | 34 (-2;-3) | 35 (-2;-3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | NPD<br>0,03 | NPD<br>0,03 | NPD<br>0,03 | NPD<br>0,03 | NPD<br>0,03 | NPD<br>0,03 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 58 / 9 / 11 | 58 / 9 / 11 | 58 / 9 / 11 | 57 / 9 / 11 | 56 / 9 / 11 | 56 / 9 / 10 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 28 / 45 / 28<br>NPD | 28 / 45 / 27<br>NPD | 27 / 45 / 27<br>NPD | 27 / 45 / 23<br>NPD | 26 / 45 / 21<br>NPD | 26 / 45 / 20<br>NPD |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

| | | |
|---|---|---|
| AGC | **CE Marking of Coated glass - EN 1096-4:2004**<br>**Declaration of performances**<br>**Stopray Carat (heat strengthened)** | CE |

We

**AGC Glass Europe**
**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **Stopray Carat**, intended to be used in buildings and construction works, following **EN 1096-4:2004**

| | **Stopray Carat** characteristics in : | **AVCP Systems** | **4 mm** | **5 mm** | **6 mm** | **8 mm** | **10 mm** | **12 mm** |
|---|---|---|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 | A1 | A1 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD | NPD | NPD | NPD | NPD | NPD |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | 100 K | 100 K | 100 K | 100 K | 100 K | 100 K |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 30 (-2;-4) | 30 (-1;-2) | 31 (-2;-3) | 32 (-1;-2) | 34 (-2;-3) | 35 (-2;-3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | NPD<br>0,03 | NPD<br>0,03 | NPD<br>0,03 | NPD<br>0,03 | NPD<br>0,03 | NPD<br>0,03 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 58 / 9 / 11 | 58 / 9 / 11 | 58 / 9 / 11 | 57 / 9 / 11 | 56 / 9 / 11 | 56 / 9 / 10 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 28 / 45 / 28<br>NPD | 28 / 45 / 27<br>NPD | 27 / 45 / 27<br>NPD | 27 / 45 / 23<br>NPD | 26 / 45 / 21<br>NPD | 26 / 45 / 20<br>NPD |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

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|---|---|---|
| AGC | **CE Marking of Coated glass - EN 1096-4:2004**<br>**Declaration of performances**<br>**Stopray Carat (Thermally toughened or Heat soaked thermally toughened)** | CE |

We

**AGC Glass Europe**
**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **Stopray Carat**, intended to be used in buildings and construction works, following **EN 1096-4:2004**

| | **Stopray Carat** characteristics in : | **AVCP Systems** | **4 mm** | **5 mm** | **6 mm** | **8 mm** | **10 mm** | **12 mm** |
|---|---|---|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 | A1 | A1 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | 1C3 | 1C3 | 1C2 | 1C2 | 1C1 | 1C1 |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | 200 K | 200 K | 200 K | 200 K | 200 K | 200 K |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 30 (-2;-4) | 30 (-1;-2) | 31 (-2;-3) | 32 (-1;-2) | 34 (-2;-3) | 35 (-2;-3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | NPD<br>0,03 | NPD<br>0,03 | NPD<br>0,03 | NPD<br>0,03 | NPD<br>0,03 | NPD<br>0,03 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 58 / 9 / 11 | 58 / 9 / 11 | 58 / 9 / 11 | 57 / 9 / 11 | 56 / 9 / 11 | 56 / 9 / 10 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 28 / 45 / 28<br>NPD | 28 / 45 / 27<br>NPD | 27 / 45 / 27<br>NPD | 27 / 45 / 23<br>NPD | 26 / 45 / 21<br>NPD | 26 / 45 / 20<br>NPD |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

| | | |
|---|---|---|
| AGC | **CE Marking of Coated glass - EN 1096-4:2004**<br>**Declaration of performances**<br>**Stopray Vision-50 (annealed)** | CE |

We

**AGC Glass Europe**
**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **STOPRAY VISION-50**, intended to be used in buildings and construction works, following **EN 1096-4:2004**

| | **Stopray Vision-50** characteristics in : | **AVCP Systems** | **4 mm** | **5 mm** | **6 mm** | **8 mm** | **10 mm** | **12 mm** |
|---|---|---|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 | A1 | A1 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD | NPD | NPD | NPD | NPD | NPD |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | NPD | NPD | NPD | NPD | NPD | NPD |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 30 (-2;-4) | 30 (-1;-2) | 31 (-2;-3) | 32 (-1;-2) | 34 (-2;-3) | 35 (-2;-3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | NPD<br>0,01 | NPD<br>0,01 | NPD<br>0,01 | NPD<br>0,01 | NPD<br>0,01 | NPD<br>0,01 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 55 / 17 / 17 | 55 / 17 / 17 | 55 / 17 / 16 | 54 / 17 / 16 | 53 / 17 / 16 | 53 / 17 / 16 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 29 / 43 / 35<br>NPD | 29 / 43 / 33<br>NPD | 28 / 43 / 32<br>NPD | 28 / 43 / 29<br>NPD | 27 / 43 / 27<br>NPD | 27 / 43 / 25<br>NPD |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

| | | |
|---|---|---|
| AGC | **CE Marking of Coated glass - EN 1096-4:2004**<br>**Declaration of performances**<br>**Stopray Vision-50 on Clearvision (annealed)** | CE |

We

**AGC Glass Europe**
**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **Stopray Vision-50 on Clearvision**, intended to be used in buildings and construction works, following **EN 1096-4:2004**

| | **Stopray Vision-50 on Clearvision** characteristics in : | **AVCP Systems** | **4 mm** | **5 mm** | **6 mm** | **8 mm** | **10 mm** | **12 mm** |
|---|---|---|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 | A1 | A1 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD | NPD | NPD | NPD | NPD | NPD |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | NPD | NPD | NPD | NPD | NPD | NPD |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 30 (-2;-4) | 30 (-1;-2) | 31 (-2;-3) | 32 (-1;-2) | 34 (-2;-3) | 35 (-2;-3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | NPD<br>0,01 | NPD<br>0,01 | NPD<br>0,01 | NPD<br>0,01 | NPD<br>0,01 | NPD<br>0,01 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 56/17/17 | 56/17/17 | 56/17/17 | 56/17/17 | 56/17/17 | 56/17/17 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 30/43/42<br>NPD | 30/43/41<br>NPD | 30/43/41<br>NPD | 30/43/40<br>NPD | 30/43/39<br>NPD | 30/43/38<br>NPD |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

| | | |
|---|---|---|
| AGC | **CE Marking of Coated glass - EN 1096-4:2004**<br>**Declaration of performances**<br>**Stopray Vision-50T (annealed)** | CE |

We

**AGC Glass Europe**
**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **Stopray Vision-50T**, intended to be used in buildings and construction works, following **EN 1096-4:2004**

| | **Stopray Vision-50T** characteristics in : | **AVCP Systems** | **4 mm** | **6 mm** | **8 mm** | **10 mm** |
|---|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD | NPD | NPD | NPD |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | NPD | NPD | NPD | NPD |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 30 (-2;-4) | 31 (-2;-3) | 32 (-1;-2) | 34 (-2;-3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | NPD<br>NPD | NPD<br>NPD | NPD<br>NPD | NPD<br>NPD |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | NPD | NPD | NPD | NPD |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | NPD<br>NPD | NPD<br>NPD | NPD<br>NPD | NPD<br>NPD |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

| | | |
|---|---|---|
| AGC | **CE Marking of Heat strengthened glass - EN 1863-2:2004**<br>**Declaration of performances**<br>**Stopray Vision-50T (Heat strengthened)** | CE |

We

**AGC Glass Europe**
**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **Stopray Vision-50T Heat strengthened**, intended to be used in buildings and construction works, following **EN 1863-2:2004**

| | **Stopray Vision-50T Heat strengthened** characteristics in : | **AVCP Systems** | **4 mm** | **6 mm** | **8 mm** | **10 mm** |
|---|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD | NPD | NPD | NPD |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | 100 K | 100 K | 100 K | 100 K |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 30 (-2;-4) | 31 (-2;-3) | 32 (-1;-2) | 34 (-2;-3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | NPD<br>0,01 | NPD<br>0,01 | NPD<br>0,01 | NPD<br>0,01 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 55 / 16 / 15 | 55 / 16 / 15 | 54 / 16 / 15 | 53 / 16 / 14 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 31 / 44 / 35<br>NPD | 31 / 44 / 31<br>NPD | 30 / 44 / 29<br>NPD | 29 / 44 / 26<br>NPD |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

| | | |
|---|---|---|
| AGC | **CE Marking of Thermally toughened glass - EN 12150-2:2004**<br>**CE Marking of Heat soaked Thermally toughened glass - EN 14179-2:2005**<br>**Declaration of performances**<br>**Stopray Vision-50T (Thermally toughened or Heat soaked thermally toughened)** | CE |

We

**AGC Glass Europe**
**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **Stopray Vision-50T Thermally toughened or Heat soaked thermally toughened**, intended to be used in buildings and construction works, following **EN 12150-2:2004 / 14179-2:2005**

| | **Stopray Vision-50T Thermally toughened or Heat soaked thermally toughened** characteristics in : | **AVCP Systems** | **4 mm** | **6 mm** | **8 mm** | **10 mm** |
|---|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | 1C3 | 1C2 | 1C2 | 1C1 |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | 200 K | 200 K | 200 K | 200 K |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 30 (-2;-4) | 31 (-2;-3) | 32 (-1;-2) | 34 (-2;-3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | NPD<br>0,01 | NPD<br>0,01 | NPD<br>0,01 | NPD<br>0,01 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 55 / 16 / 15 | 55 / 16 / 15 | 54 / 16 / 15 | 53 / 16 / 14 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 31 / 44 / 35<br>NPD | 31 / 44 / 31<br>NPD | 30 / 44 / 29<br>NPD | 29 / 44 / 26<br>NPD |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

| | | |
|---|---|---|
| AGC | **CE Marking of Coated glass - EN 1096-4:2004**<br>**Declaration of performances**<br>**Stopray Ultra-50 on Clearvision (annealed)** | CE |

We

**AGC Glass Europe**
**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **Stopray Ultra-50 on Cleavision**, intended to be used in buildings and construction works, following **EN 1096-4:2004**

| | **Stopray Ultra-50 on Clearvision** characteristics in : | **AVCP Systems** | **4 mm** | **6 mm** | **8 mm** | **10 mm** |
|---|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD | NPD | NPD | 1C1 |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | NPD | NPD | NPD | 200 K |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 30 (-2;-4) | 31 (-2;-3) | 32 (-1;-2) | 34 (-2;-3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | NPD<br>0,01 | NPD<br>0,01 | NPD<br>0,01 | NPD<br>0,01 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 54 / 7 / 16 | 54 / 7 / 16 | 54 / 7 / 16 | 54 / 7 / 16 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 24 / 47 / 46<br>NPD | 24 / 47 / 45<br>NPD | 23 / 47 / 44<br>NPD | 23 / 47 / 43<br>NPD |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

**CE Marking of Coated glass - EN 1096-4:2004**
**Declaration of performances**
**Stopray Ultra-60 (annealed)**

CE

We

**AGC Glass Europe**
**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **Stopray Ultra-60**, intended to be used in buildings and construction works, following **EN 1096-4:2004**

| | **Stopray Ultra-60** characteristics in : | **AVCP Systems** | **4 mm** | **6 mm** | **8 mm** | **10 mm** |
|---|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD | NPD | NPD | 1C1 |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | NPD | NPD | NPD | 200 K |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 30 (-2;-4) | 31 (-2;-3) | 32 (-1;-2) | 34 (-2;-3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | NPD<br>0,01 | NPD<br>0,01 | NPD<br>0,01 | NPD<br>0,01 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 67 / 8 / 9 | 66 / 8 / 9 | 65 / 8 / 9 | 64 / 8 / 9 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 29 / 48 / 38<br>NPD | 29 / 48 / 34<br>NPD | 29 / 48 / 31<br>NPD | 28 / 48 / 28<br>NPD |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

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|---|---|---|
| AGC | **CE Marking of Coated glass - EN 1096-4:2004**<br>**Declaration of performances**<br>**Stopray Galaxy (annealed)** | CE |

We

**AGC Glass Europe**
**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **Stopray Galaxy**, intended to be used in buildings and construction works, following **EN 1096-4:2004**

| | **Stopray Galaxy** characteristics in : | **AVCP Systems** | **4 mm** | **5 mm** | **6 mm** | **8 mm** | **10 mm** | **12 mm** |
|---|---|---|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 | A1 | A1 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD | NPD | NPD | NPD | NPD | NPD |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | NPD | NPD | NPD | NPD | NPD | NPD |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 30 (-2;-4) | 30 (-1;-2) | 31 (-2;-3) | 32 (-1;-2) | 34 (-2;-3) | 35 (-2;-3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | NPD<br>0,03 | NPD<br>0,03 | NPD<br>0,03 | NPD<br>0,03 | NPD<br>0,03 | NPD<br>0,03 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 45 / 14 / 15 | 44 / 14 / 15 | 44 / 14 / 15 | 44 / 14 / 14 | 44 / 14 / 14 | 43 / 14 / 14 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 21 / 43 / 32<br>NPD | 20 / 43 / 31<br>NPD | 20 / 43 / 29<br>NPD | 20 / 43 / 27<br>NPD | 19 / 43 / 25<br>NPD | 19 / 43 / 23<br>NPD |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

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|---|---|---|
| AGC | **CE Marking of Coated glass - EN 1096-4:2004**<br>**Declaration of performances**<br>**Stopray Galaxy (heat strengthened)** | CE |

We

**AGC Glass Europe**
**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **Stopray Galaxy**, intended to be used in buildings and construction works, following **EN 1096-4:2004**

| | **Stopray Galaxy** characteristics in : | **AVCP Systems** | **4 mm** | **5 mm** | **6 mm** | **8 mm** | **10 mm** | **12 mm** |
|---|---|---|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 | A1 | A1 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD | NPD | NPD | NPD | NPD | NPD |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | 100 K | 100 K | 100 K | 100 K | 100 K | 100 K |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 30 (-2;-4) | 30 (-1;-2) | 31 (-2;-3) | 32 (-1;-2) | 34 (-2;-3) | 35 (-2;-3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | NPD<br>0,03 | NPD<br>0,03 | NPD<br>0,03 | NPD<br>0,03 | NPD<br>0,03 | NPD<br>0,03 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 45 / 14 / 15 | 44 / 14 / 15 | 44 / 14 / 15 | 44 / 14 / 14 | 44 / 14 / 14 | 43 / 14 / 14 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 21 / 43 / 32<br>NPD | 20 / 43 / 31<br>NPD | 20 / 43 / 29<br>NPD | 20 / 43 / 27<br>NPD | 19 / 43 / 25<br>NPD | 19 / 43 / 23<br>NPD |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

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|---|---|---|
| AGC | **CE Marking of Coated glass - EN 1096-4:2004**<br>**Declaration of performances**<br>**Stopray Galaxy (Thermally toughened or Heat soaked thermally toughened)** | CE |

We

**AGC Glass Europe**
**Building Division**
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Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **Stopray Galaxy**, intended to be used in buildings and construction works, following **EN 1096-4:2004**

| | **Stopray Galaxy** characteristics in : | **AVCP Systems** | **4 mm** | **5 mm** | **6 mm** | **8 mm** | **10 mm** | **12 mm** |
|---|---|---|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 | A1 | A1 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | 1C3 | 1C3 | 1C2 | 1C2 | 1C1 | 1C1 |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | 200 K | 200 K | 200 K | 200 K | 200 K | 200 K |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 30 (-2;-4) | 30 (-1;-2) | 31 (-2;-3) | 32 (-1;-2) | 34 (-2;-3) | 35 (-2;-3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | NPD<br>0,03 | NPD<br>0,03 | NPD<br>0,03 | NPD<br>0,03 | NPD<br>0,03 | NPD<br>0,03 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 45 / 14 / 15 | 44 / 14 / 15 | 44 / 14 / 15 | 44 / 14 / 14 | 44 / 14 / 14 | 43 / 14 / 14 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 21 / 43 / 32<br>NPD | 20 / 43 / 31<br>NPD | 20 / 43 / 29<br>NPD | 20 / 43 / 27<br>NPD | 19 / 43 / 25<br>NPD | 19 / 43 / 23<br>NPD |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS | PASS | PASS |

Brussels
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E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

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|---|---|---|
| AGC | **CE Marking of Coated glass - EN 1096-4:2004**<br>**Declaration of performances**<br>**Stopray Vision-36T (annealed)** | CE |

We

**AGC Glass Europe**
**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **Stopray Vision-36T**, intended to be used in buildings and construction works, following **EN 1096-4:2004**

| | **Stopray Vision-36T** characteristics in : | **AVCP Systems** | **6 mm** | **8 mm** |
|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD | NPD |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | NPD | NPD |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 31 (-2;-3) | 32 (-1;-2) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | NPD<br>0,01 | NPD<br>0,01 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | NPD | NPD |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | NPD<br>NPD | NPD<br>NPD |
| 14. | Durability | 3 | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

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|---|---|---|
| AGC | **CE Marking of Heat strengthened glass - EN 1863-2:2004**<br>**Declaration of performances**<br>**Stopray Vision-36T (Heat strengthened)** | CE |

We

**AGC Glass Europe**
**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **Stopray Vision-36T**, intended to be used in buildings and construction works, following **EN 1863-2:2004**

| | **Stopray Vision-36T** characteristics in : | **AVCP Systems** | **6 mm** | **8 mm** |
|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD | NPD |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | 100 K | 100 K |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 31 (-2;-3) | 32 (-1;-2) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | NPD<br>0,01 | NPD<br>0,01 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 39 / 31 / 29 | 38 / 31 / 29 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 21 / 55 / 41<br>NPD | 20 / 56 / 37<br>NPD |
| 14. | Durability | 3 | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

**CE Marking of Thermally toughened glass - EN 12150-2:2004**
**CE Marking of Heat soaked Thermally toughened glass - EN 14179-2:2005**
**Declaration of performances**
**Stopray Vision-36T (thermally toughened or heat soaked thermally toughened)**

CE

We

**AGC Glass Europe**
**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **Stopray Vision-36T**, intended to be used in buildings and construction works, following **EN 12150-2:2004**

| | **Stopray Vision-36T** characteristics in : | **AVCP Systems** | **6 mm** | **8 mm** |
|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | 1C3 | 1C2 |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | 200 K | 200 K |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 31 (-2;-3) | 32 (-1;-2) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | NPD<br>0,01 | NPD<br>0,01 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 39 / 31 / 29 | 38 / 31 / 29 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 21 / 55 / 41<br>NPD | 20 / 56 / 37<br>NPD |
| 14. | Durability | 3 | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

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|---|---|---|
| AGC | **CE Marking of Coated glass - EN 1096-4:2004**<br>**Declaration of performances**<br>**Stopray Silver (annealed)** | CE |

We

**AGC Glass Europe**
**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **Stopray Silver**, intended to be used in buildings and construction works, following **EN 1096-4:2004**

| | **Stopray Silver** characteristics in : | **AVCP Systems** | **4 mm** | **5 mm** | **6 mm** | **8 mm** | **10 mm** | **12 mm** |
|---|---|---|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 | A1 | A1 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD | NPD | NPD | NPD | NPD | NPD |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | NPD | NPD | NPD | NPD | NPD | NPD |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 30 (-2;-4) | 30 (-1;-2) | 31 (-2;-3) | 32 (-1;-2) | 34 (-2;-3) | 35 (-2;-3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | NPD<br>0,01 | NPD<br>0,01 | NPD<br>0,01 | NPD<br>0,01 | NPD<br>0,01 | NPD<br>0,01 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 47 / 42 / 46 | 47 / 42 / 46 | 46 / 42 / 45 | 46 / 42 / 44 | 45 / 42 / 44 | 45 / 42 / 43 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 27 / 61 / 52<br>NPD | 27 / 61 / 50<br>NPD | 27 / 61 / 48<br>NPD | 26 / 60 / 44<br>NPD | 25 / 60 / 41<br>NPD | 25 / 60 / 39<br>NPD |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

| | | |
|---|---|---|
| AGC | **CE Marking of Coated glass - EN 1096-4:2004**<br>**Declaration of performances**<br>**Stopray Silver (heat strengthened)** | CE |

We

**AGC Glass Europe**
**Building Division**
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Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **Stopray Silver**, intended to be used in buildings and construction works, following **EN 1096-4:2004**

| | **Stopray Silver** characteristics in : | **AVCP Systems** | **4 mm** | **5 mm** | **6 mm** | **8 mm** | **10 mm** | **12 mm** |
|---|---|---|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 | A1 | A1 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD | NPD | NPD | NPD | NPD | NPD |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | 100 K | 100 K | 100 K | 100 K | 100 K | 100 K |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 30 (-2;-4) | 30 (-1;-2) | 31 (-2;-3) | 32 (-1;-2) | 34 (-2;-3) | 35 (-2;-3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | NPD<br>0,01 | NPD<br>0,01 | NPD<br>0,01 | NPD<br>0,01 | NPD<br>0,01 | NPD<br>0,01 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 47 / 42 / 46 | 47 / 42 / 46 | 46 / 42 / 45 | 46 / 42 / 44 | 45 / 42 / 44 | 45 / 42 / 43 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 27 / 61 / 52<br>NPD | 27 / 61 / 50<br>NPD | 27 / 61 / 48<br>NPD | 26 / 60 / 44<br>NPD | 25 / 60 / 41<br>NPD | 25 / 60 / 39<br>NPD |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

| | | |
|---|---|---|
| AGC | **CE Marking of Coated glass - EN 1096-4:2004**<br>**Declaration of performances**<br>**Stopray Silver (Thermally toughened or Heat soaked thermally toughened)** | CE |

We

**AGC Glass Europe**
**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
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Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **Stopray Silver**, intended to be used in buildings and construction works, following **EN 1096-4:2004**

| | **Stopray Silver** characteristics in : | **AVCP Systems** | **4 mm** | **5 mm** | **6 mm** | **8 mm** | **10 mm** | **12 mm** |
|---|---|---|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 | A1 | A1 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | 1C3 | 1C3 | 1C2 | 1C2 | 1C1 | 1C1 |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | 200 K | 200 K | 200 K | 200 K | 200 K | 200 K |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 30 (-2;-4) | 30 (-1;-2) | 31 (-2;-3) | 32 (-1;-2) | 34 (-2;-3) | 35 (-2;-3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | NPD<br>0,01 | NPD<br>0,01 | NPD<br>0,01 | NPD<br>0,01 | NPD<br>0,01 | NPD<br>0,01 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 47 / 42 / 46 | 47 / 42 / 46 | 46 / 42 / 45 | 46 / 42 / 44 | 45 / 42 / 44 | 45 / 42 / 43 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 27 / 61 / 52<br>NPD | 27 / 61 / 50<br>NPD | 27 / 61 / 48<br>NPD | 26 / 60 / 44<br>NPD | 25 / 60 / 41<br>NPD | 25 / 60 / 39<br>NPD |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

| | | |
|---|---|---|
| AGC | **CE Marking of Coated glass - EN 1096-4:2004**<br>**Declaration of performances**<br>**Stopray Cristal (annealed)** | CE |

We

**AGC Glass Europe**
**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **Stopray Cristal**, intended to be used in buildings and construction works, following **EN 1096-4:2004**

| | **Stopray Cristal** characteristics in : | **AVCP Systems** | **4 mm** | **5 mm** | **6 mm** | **8 mm** | **10 mm** | **12 mm** |
|---|---|---|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 | A1 | A1 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD | NPD | NPD | NPD | NPD | NPD |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | NPD | NPD | NPD | NPD | NPD | NPD |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 30 (-2;-4) | 30 (-1;-2) | 31 (-2;-3) | 32 (-1;-2) | 34 (-2;-3) | 35 (-2;-3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | NPD<br>0,06 | NPD<br>0,06 | NPD<br>0,06 | NPD<br>0,06 | NPD<br>0,06 | NPD<br>0,06 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 69 / 6 / 14 | 68 / 6 / 14 | 68 / 6 / 14 | 67 / 6 / 14 | 67 / 6 / 14 | 66 / 6 / 13 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 45 / 31 / 28<br>NPD | 44 / 31 / 27<br>NPD | 44 / 31 / 26<br>NPD | 42 / 31 / 24<br>NPD | 41 / 31 / 23<br>NPD | 40 / 30 / 21<br>NPD |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

**CE Marking of Coated glass - EN 1096-4:2004**
**Declaration of performances**
**Stopray Cristal (heat strengthened)**

CE

We

**AGC Glass Europe**
**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **Stopray Cristal**, intended to be used in buildings and construction works, following **EN 1096-4:2004**

| | **Stopray Cristal** characteristics in : | **AVCP Systems** | **4 mm** | **5 mm** | **6 mm** | **8 mm** | **10 mm** | **12 mm** |
|---|---|---|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 | A1 | A1 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD | NPD | NPD | NPD | NPD | NPD |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | 100 K | 100 K | 100 K | 100 K | 100 K | 100 K |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 30 (-2;-4) | 30 (-1;-2) | 31 (-2;-3) | 32 (-1;-2) | 34 (-2;-3) | 35 (-2;-3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | NPD<br>0,06 | NPD<br>0,06 | NPD<br>0,06 | NPD<br>0,06 | NPD<br>0,06 | NPD<br>0,06 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 69 / 6 / 14 | 68 / 6 / 14 | 68 / 6 / 14 | 67 / 6 / 14 | 67 / 6 / 14 | 66 / 6 / 13 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 45 / 31 / 28<br>NPD | 44 / 31 / 27<br>NPD | 44 / 31 / 26<br>NPD | 42 / 31 / 24<br>NPD | 41 / 31 / 23<br>NPD | 40 / 30 / 21<br>NPD |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

| | | |
|---|---|---|
| AGC | **CE Marking of Coated glass - EN 1096-4:2004**<br>**Declaration of performances**<br>**Stopray Cristal (Thermally toughened or Heat soaked thermally toughened)** | CE |

We

**AGC Glass Europe**
**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **Stopray Cristal**, intended to be used in buildings and construction works, following **EN 1096-4:2004**

| | **Stopray Cristal** characteristics in : | **AVCP Systems** | **4 mm** | **5 mm** | **6 mm** | **8 mm** | **10 mm** | **12 mm** |
|---|---|---|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 | A1 | A1 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | 1C3 | 1C3 | 1C2 | 1C2 | 1C1 | 1C1 |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | 200 K | 200 K | 200 K | 200 K | 200 K | 200 K |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 30 (-2;-4) | 30 (-1;-2) | 31 (-2;-3) | 32 (-1;-2) | 34 (-2;-3) | 35 (-2;-3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | NPD<br>0,06 | NPD<br>0,06 | NPD<br>0,06 | NPD<br>0,06 | NPD<br>0,06 | NPD<br>0,06 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 69 / 6 / 14 | 68 / 6 / 14 | 68 / 6 / 14 | 67 / 6 / 14 | 67 / 6 / 14 | 66 / 6 / 13 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 45 / 31 / 28<br>NPD | 44 / 31 / 27<br>NPD | 44 / 31 / 26<br>NPD | 42 / 31 / 24<br>NPD | 41 / 31 / 23<br>NPD | 40 / 30 / 21<br>NPD |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

| | | |
|---|---|---|
| AGC | **CE Marking of Coated glass - EN 1096-4:2004**<br>**Declaration of performances**<br>**Stopray Neutral (annealed)** | CE |

We

**AGC Glass Europe**
**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **Stopray Neutral**, intended to be used in buildings and construction works, following **EN 1096-4:2004**

| | **Stopray Neutral** characteristics in : | **AVCP Systems** | **4 mm** | **5 mm** | **6 mm** | **8 mm** | **10 mm** | **12 mm** |
|---|---|---|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 | A1 | A1 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD | NPD | NPD | NPD | NPD | NPD |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | NPD | NPD | NPD | NPD | NPD | NPD |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 30 (-2;-4) | 30 (-1;-2) | 31 (-2;-3) | 32 (-1;-2) | 34 (-2;-3) | 35 (-2;-3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | NPD<br>0,10 | NPD<br>0,10 | NPD<br>0,10 | NPD<br>0,10 | NPD<br>0,10 | NPD<br>0,10 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 56 / 24 / 10 | 56 / 24 / 10 | 55 / 24 / 10 | 55 / 24 / 10 | 54 / 24 / 9 | 53 / 24 / 9 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 44 / 31 / 18<br>NPD | 43 / 31 / 17<br>NPD | 42 / 31 / 16<br>NPD | 40 / 31 / 15<br>NPD | 39 / 31 / 14<br>NPD | 38 / 31 / 13<br>NPD |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

**CE Marking of Coated glass - EN 1096-4:2004**
**Declaration of performances**
**Stopray Neutral (heat strengthened)**

CE

We

**AGC Glass Europe**
**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **Stopray Neutral**, intended to be used in buildings and construction works, following **EN 1096-4:2004**

| | **Stopray Neutral** characteristics in : | **AVCP Systems** | **4 mm** | **5 mm** | **6 mm** | **8 mm** | **10 mm** | **12 mm** |
|---|---|---|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 | A1 | A1 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD | NPD | NPD | NPD | NPD | NPD |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | 100 K | 100 K | 100 K | 100 K | 100 K | 100 K |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 30 (-2;-4) | 30 (-1;-2) | 31 (-2;-3) | 32 (-1;-2) | 34 (-2;-3) | 35 (-2;-3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | NPD<br>0,10 | NPD<br>0,10 | NPD<br>0,10 | NPD<br>0,10 | NPD<br>0,10 | NPD<br>0,10 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 56 / 24 / 10 | 56 / 24 / 10 | 55 / 24 / 10 | 55 / 24 / 10 | 54 / 24 / 9 | 53 / 24 / 9 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 44 / 31 / 18<br>NPD | 43 / 31 / 17<br>NPD | 42 / 31 / 16<br>NPD | 40 / 31 / 15<br>NPD | 39 / 31 / 14<br>NPD | 38 / 31 / 13<br>NPD |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

**CE Marking of Coated glass - EN 1096-4:2004**
**Declaration of performances**
**Stopray Neutral (Thermally toughened or Heat soaked thermally toughened)**

CE

We

**AGC Glass Europe**
**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **Stopray Neutral**, intended to be used in buildings and construction works, following **EN 1096-4:2004**

| | **Stopray Neutral** characteristics in : | **AVCP Systems** | **4 mm** | **5 mm** | **6 mm** | **8 mm** | **10 mm** | **12 mm** |
|---|---|---|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 | A1 | A1 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | 1C3 | 1C3 | 1C2 | 1C2 | 1C1 | 1C1 |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | 200 K | 200 K | 200 K | 200 K | 200 K | 200 K |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 30 (-2;-4) | 30 (-1;-2) | 31 (-2;-3) | 32 (-1;-2) | 34 (-2;-3) | 35 (-2;-3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | NPD<br>0,10 | NPD<br>0,10 | NPD<br>0,10 | NPD<br>0,10 | NPD<br>0,10 | NPD<br>0,10 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 56 / 24 / 10 | 56 / 24 / 10 | 55 / 24 / 10 | 55 / 24 / 10 | 54 / 24 / 9 | 53 / 24 / 9 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 44 / 31 / 18<br>NPD | 43 / 31 / 17<br>NPD | 42 / 31 / 16<br>NPD | 40 / 31 / 15<br>NPD | 39 / 31 / 14<br>NPD | 38 / 31 / 13<br>NPD |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

| | | |
|---|---|---|
| AGC | **CE Marking of Coated glass - EN 1096-4:2004**<br>**Declaration of performances**<br>**Stopray Elite on Clearvision (annealed)** | CE |

We

**AGC Glass Europe**
**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **Stopray Elite on Clearvision**, intended to be used in buildings and construction works, following **EN 1096-4:2004**

| | **Stopray Elite on Clearvision** characteristics in : | **AVCP Systems** | **4 mm** | **5 mm** | **6 mm** | **8 mm** | **10 mm** | **12 mm** |
|---|---|---|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 | A1 | A1 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD | NPD | NPD | NPD | NPD | NPD |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | NPD | NPD | NPD | NPD | NPD | NPD |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 30 (-2;-4) | 30 (-1;-2) | 31 (-2;-3) | 32 (-1;-2) | 34 (-2;-3) | 35 (-2;-3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | NPD<br>0,03 | NPD<br>0,03 | NPD<br>0,03 | NPD<br>0,03 | NPD<br>0,03 | NPD<br>0,03 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 77 / 9 / 10 | 77 / 9 / 10 | 77 / 9 / 10 | 77 / 9 / 10 | 76 / 9 / 10 | 76 / 9 / 10 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 44 / 38 / 35<br>NPD | 44 / 38 / 35<br>NPD | 44 / 38 / 35<br>NPD | 44 / 38 / 34<br>NPD | 44 / 38 / 33<br>NPD | 44 / 38 / 33<br>NPD |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

**CE Marking of Coated glass - EN 1096-4:2004**
**Declaration of performances**
**Stopray Elite on Clearvision (heat strengthened)**

We

**AGC Glass Europe**
**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **Stopray Elite on Clearvision**, intended to be used in buildings and construction works, following **EN 1096-4:2004**

| | **Stopray Elite on Clearvision** characteristics in : | **AVCP Systems** | **4 mm** | **5 mm** | **6 mm** | **8 mm** | **10 mm** | **12 mm** |
|---|---|---|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 | A1 | A1 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD | NPD | NPD | NPD | NPD | NPD |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | 100 K | 100 K | 100 K | 100 K | 100 K | 100 K |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 30 (-2;-4) | 30 (-1;-2) | 31 (-2;-3) | 32 (-1;-2) | 34 (-2;-3) | 35 (-2;-3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | NPD<br>0,03 | NPD<br>0,03 | NPD<br>0,03 | NPD<br>0,03 | NPD<br>0,03 | NPD<br>0,03 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 77 / 9 / 10 | 77 / 9 / 10 | 77 / 9 / 10 | 77 / 9 / 10 | 76 / 9 / 10 | 76 / 9 / 10 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 44 / 38 / 35<br>NPD | 44 / 38 / 35<br>NPD | 44 / 38 / 35<br>NPD | 44 / 38 / 34<br>NPD | 44 / 38 / 33<br>NPD | 44 / 38 / 33<br>NPD |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

| | | |
|---|---|---|
| AGC | **CE Marking of Coated glass - EN 1096-4:2004**<br>**Declaration of performances**<br>**Stopray Elite on Clearvision (Thermally toughened or Heat soaked thermally toughened)** | CE |

We

**AGC Glass Europe**
**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **Stopray Elite on Clearvision**, intended to be used in buildings and construction works, following **EN 1096-4:2004**

| | **Stopray Elite on Clearvision** characteristics in : | **AVCP Systems** | **4 mm** | **5 mm** | **6 mm** | **8 mm** | **10 mm** | **12 mm** |
|---|---|---|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 | A1 | A1 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | 1C3 | 1C3 | 1C2 | 1C2 | 1C1 | 1C1 |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | 200 K | 200 K | 200 K | 200 K | 200 K | 200 K |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 30 (-2;-4) | 30 (-1;-2) | 31 (-2;-3) | 32 (-1;-2) | 34 (-2;-3) | 35 (-2;-3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | NPD<br>0,03 | NPD<br>0,03 | NPD<br>0,03 | NPD<br>0,03 | NPD<br>0,03 | NPD<br>0,03 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 77 / 9 / 10 | 77 / 9 / 10 | 77 / 9 / 10 | 77 / 9 / 10 | 76 / 9 / 10 | 76 / 9 / 10 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 44 / 38 / 35<br>NPD | 44 / 38 / 35<br>NPD | 44 / 38 / 35<br>NPD | 44 / 38 / 34<br>NPD | 44 / 38 / 33<br>NPD | 44 / 38 / 33<br>NPD |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

**CE Marking of Coated glass - EN 1096-4:2004**
**Declaration of performances**
**Stopray Safir on Clearvision (annealed)**

CE

We

**AGC Glass Europe**
**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **Stopray Safir on Clearvision**, intended to be used in buildings and construction works, following **EN 1096-4:2004**

| | **Stopray Safir on Clearvision** characteristics in : | **AVCP Systems** | **4 mm** | **5 mm** | **6 mm** | **8 mm** | **10 mm** | **12 mm** |
|---|---|---|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 | A1 | A1 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD | NPD | NPD | NPD | NPD | NPD |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | NPD | NPD | NPD | NPD | NPD | NPD |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 30 (-2;-4) | 30 (-1;-2) | 31 (-2;-3) | 32 (-1;-2) | 34 (-2;-3) | 35 (-2;-3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | NPD<br>0,03 | NPD<br>0,03 | NPD<br>0,03 | NPD<br>0,03 | NPD<br>0,03 | NPD<br>0,03 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 70 / 13 / 11 | 70 / 13 / 11 | 70 / 13 / 11 | 69 / 13 / 11 | 69 / 13 / 11 | 69 / 13 / 11 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 38 / 42 / 38<br>NPD | 38 / 42 / 38<br>NPD | 38 / 42 / 37<br>NPD | 37 / 42 / 37<br>NPD | 37 / 42 / 36<br>NPD | 37 / 42 / 35<br>NPD |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

| | | |
|---|---|---|
| AGC | **CE Marking of Coated glass - EN 1096-4:2004**<br>**Declaration of performances**<br>**Stopray Safir on Clearvision (heat strengthened)** | CE |

We

**AGC Glass Europe**
**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **Stopray Safir on Clearvision**, intended to be used in buildings and construction works, following **EN 1096-4:2004**

| | **Stopray Safir on Clearvision** characteristics in : | **AVCP Systems** | **4 mm** | **5 mm** | **6 mm** | **8 mm** | **10 mm** | **12 mm** |
|---|---|---|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 | A1 | A1 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD | NPD | NPD | NPD | NPD | NPD |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | 100 K | 100 K | 100 K | 100 K | 100 K | 100 K |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 30 (-2;-4) | 30 (-1;-2) | 31 (-2;-3) | 32 (-1;-2) | 34 (-2;-3) | 35 (-2;-3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | NPD<br>0,03 | NPD<br>0,03 | NPD<br>0,03 | NPD<br>0,03 | NPD<br>0,03 | NPD<br>0,03 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 70 / 13 / 11 | 70 / 13 / 11 | 70 / 13 / 11 | 69 / 13 / 11 | 69 / 13 / 11 | 69 / 13 / 11 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 38 / 42 / 38<br>NPD | 38 / 42 / 38<br>NPD | 38 / 42 / 37<br>NPD | 37 / 42 / 37<br>NPD | 37 / 42 / 36<br>NPD | 37 / 42 / 35<br>NPD |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

| | | |
|---|---|---|
| AGC | **CE Marking of Coated glass - EN 1096-4:2004**<br>**Declaration of performances**<br>**Stopray Safir on Clearvision (Thermally toughened or Heat soaked thermally toughened)** | CE |

We

**AGC Glass Europe**
**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **Stopray Safir on Clearvision**, intended to be used in buildings and construction works, following **EN 1096-4:2004**

| | **Stopray Safir on Clearvision** characteristics in : | **AVCP Systems** | **4 mm** | **5 mm** | **6 mm** | **8 mm** | **10 mm** | **12 mm** |
|---|---|---|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 | A1 | A1 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | 1C3 | 1C3 | 1C2 | 1C2 | 1C1 | 1C1 |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | 200 K | 200 K | 200 K | 200 K | 200 K | 200 K |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 30 (-2;-4) | 30 (-1;-2) | 31 (-2;-3) | 32 (-1;-2) | 34 (-2;-3) | 35 (-2;-3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | NPD<br>0,03 | NPD<br>0,03 | NPD<br>0,03 | NPD<br>0,03 | NPD<br>0,03 | NPD<br>0,03 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 70 / 13 / 11 | 70 / 13 / 11 | 70 / 13 / 11 | 69 / 13 / 11 | 69 / 13 / 11 | 69 / 13 / 11 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 38 / 42 / 38<br>NPD | 38 / 42 / 38<br>NPD | 38 / 42 / 37<br>NPD | 37 / 42 / 37<br>NPD | 37 / 42 / 36<br>NPD | 37 / 42 / 35<br>NPD |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

| | | |
|---|---|---|
| AGC | **CE Marking of Coated glass - EN 1096-4:2004**<br>**Declaration of performances**<br>**Stopray Galaxy on Clearvision (annealed)** | CE |

We

**AGC Glass Europe**
**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **Stopray Galaxy on Clearvision**, intended to be used in buildings and construction works, following **EN 1096-4:2004**

| | **Stopray Galaxy on Clearvision** characteristics in : | **AVCP Systems** | **4 mm** | **5 mm** | **6 mm** | **8 mm** | **10 mm** | **12 mm** |
|---|---|---|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 | A1 | A1 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD | NPD | NPD | NPD | NPD | NPD |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | NPD | NPD | NPD | NPD | NPD | NPD |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 30 (-2;-4) | 30 (-1;-2) | 31 (-2;-3) | 32 (-1;-2) | 34 (-2;-3) | 35 (-2;-3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | NPD<br>0,03 | NPD<br>0,03 | NPD<br>0,03 | NPD<br>0,03 | NPD<br>0,03 | NPD<br>0,03 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 45 / 14 / 15 | 45 / 14 / 15 | 45 / 14 / 15 | 45 / 14 / 15 | 45 / 14 / 15 | 45 / 14 / 15 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 21 / 43 / 39<br>NPD | 21 / 43 / 38<br>NPD | 21 / 43 / 38<br>NPD | 21 / 43 / 37<br>NPD | 21 / 43 / 36<br>NPD | 21 / 43 / 35<br>NPD |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

| | | |
|---|---|---|
| AGC | **CE Marking of Coated glass - EN 1096-4:2004**<br>**Declaration of performances**<br>**Stopray Galaxy on Clearvision (heat strengthened)** | CE |

We

**AGC Glass Europe**
**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **Stopray Galaxy on Clearvision**, intended to be used in buildings and construction works, following **EN 1096-4:2004**

| | **Stopray Galaxy on Clearvision** characteristics in : | **AVCP Systems** | **4 mm** | **5 mm** | **6 mm** | **8 mm** | **10 mm** | **12 mm** |
|---|---|---|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 | A1 | A1 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD | NPD | NPD | NPD | NPD | NPD |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | 100 K | 100 K | 100 K | 100 K | 100 K | 100 K |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 30 (-2;-4) | 30 (-1;-2) | 31 (-2;-3) | 32 (-1;-2) | 34 (-2;-3) | 35 (-2;-3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | NPD<br>0,03 | NPD<br>0,03 | NPD<br>0,03 | NPD<br>0,03 | NPD<br>0,03 | NPD<br>0,03 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 45 / 14 / 15 | 45 / 14 / 15 | 45 / 14 / 15 | 45 / 14 / 15 | 45 / 14 / 15 | 45 / 14 / 15 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 21 / 43 / 39<br>NPD | 21 / 43 / 38<br>NPD | 21 / 43 / 38<br>NPD | 21 / 43 / 37<br>NPD | 21 / 43 / 36<br>NPD | 21 / 43 / 35<br>NPD |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

| | | |
|---|---|---|
| AGC | **CE Marking of Coated glass - EN 1096-4:2004**<br>**Declaration of performances**<br>**Stopray Galaxy on Clearvision (Thermally toughened or Heat soaked thermally toughened)** | CE |

We

**AGC Glass Europe**
**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **Stopray Galaxy on Clearvision**, intended to be used in buildings and construction works, following **EN 1096-4:2004**

| | **Stopray Galaxy on Clearvision** characteristics in : | **AVCP Systems** | **4 mm** | **5 mm** | **6 mm** | **8 mm** | **10 mm** | **12 mm** |
|---|---|---|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 | A1 | A1 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | 1C3 | 1C3 | 1C2 | 1C2 | 1C1 | 1C1 |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | 200 K | 200 K | 200 K | 200 K | 200 K | 200 K |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 30 (-2;-4) | 30 (-1;-2) | 31 (-2;-3) | 32 (-1;-2) | 34 (-2;-3) | 35 (-2;-3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | NPD<br>0,03 | NPD<br>0,03 | NPD<br>0,03 | NPD<br>0,03 | NPD<br>0,03 | NPD<br>0,03 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 45 / 14 / 15 | 45 / 14 / 15 | 45 / 14 / 15 | 45 / 14 / 15 | 45 / 14 / 15 | 45 / 14 / 15 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 21 / 43 / 39<br>NPD | 21 / 43 / 38<br>NPD | 21 / 43 / 38<br>NPD | 21 / 43 / 37<br>NPD | 21 / 43 / 36<br>NPD | 21 / 43 / 35<br>NPD |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

| | | |
|---|---|---|
| AGC | **CE Marking of Coated glass - EN 1096-4:2004**<br>**Declaration of performances**<br>**Stopray Silver on Clearvision (annealed)** | CE |

We

**AGC Glass Europe**
**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **Stopray Silver on Clearvision**, intended to be used in buildings and construction works, following **EN 1096-4:2004**

| | **Stopray Silver on Clearvision** characteristics in : | **AVCP Systems** | **4 mm** | **5 mm** | **6 mm** | **8 mm** | **10 mm** | **12 mm** |
|---|---|---|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 | A1 | A1 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD | NPD | NPD | NPD | NPD | NPD |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | NPD | NPD | NPD | NPD | NPD | NPD |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 30 (-2;-4) | 30 (-1;-2) | 31 (-2;-3) | 32 (-1;-2) | 34 (-2;-3) | 35 (-2;-3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | NPD<br>0,01 | NPD<br>0,01 | NPD<br>0,01 | NPD<br>0,01 | NPD<br>0,01 | NPD<br>0,01 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 48/42/48 | 48/42/48 | 48/42/48 | 48/42/48 | 47/42/47 | 47/42/47 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 29/61/63<br>NPD | 29/61/62<br>NPD | 29/61/61<br>NPD | 29/61/60<br>NPD | 28/61/58<br>NPD | 28/61/57<br>NPD |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

**CE Marking of Coated glass - EN 1096-4:2004**
**Declaration of performances**
**Stopray Silver on Clearvision (heat strengthened)**

CE

We

**AGC Glass Europe**
**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **Stopray Silver on Clearvision**, intended to be used in buildings and construction works, following **EN 1096-4:2004**

| | **Stopray Silver on Clearvision** characteristics in : | **AVCP Systems** | **4 mm** | **5 mm** | **6 mm** | **8 mm** | **10 mm** | **12 mm** |
|---|---|---|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 | A1 | A1 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD | NPD | NPD | NPD | NPD | NPD |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | 100 K | 100 K | 100 K | 100 K | 100 K | 100 K |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 30 (-2;-4) | 30 (-1;-2) | 31 (-2;-3) | 32 (-1;-2) | 34 (-2;-3) | 35 (-2;-3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | NPD<br>0,01 | NPD<br>0,01 | NPD<br>0,01 | NPD<br>0,01 | NPD<br>0,01 | NPD<br>0,01 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 48/42/48 | 48/42/48 | 48/42/48 | 48/42/48 | 47/42/47 | 47/42/47 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 29/61/63<br>NPD | 29/61/62<br>NPD | 29/61/61<br>NPD | 29/61/60<br>NPD | 28/61/58<br>NPD | 28/61/57<br>NPD |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

**CE Marking of Coated glass - EN 1096-4:2004**
**Declaration of performances**
**Stopray Silver on Clearvision (Thermally toughened or Heat soaked thermally toughened)**

CE

We

**AGC Glass Europe**
**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **Stopray Silver on Clearvision**, intended to be used in buildings and construction works, following **EN 1096-4:2004**

| | **Stopray Silver on Clearvision** characteristics in : | **AVCP Systems** | **4 mm** | **5 mm** | **6 mm** | **8 mm** | **10 mm** | **12 mm** |
|---|---|---|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 | A1 | A1 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | 1C3 | 1C3 | 1C2 | 1C2 | 1C1 | 1C1 |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | 200 K | 200 K | 200 K | 200 K | 200 K | 200 K |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 30 (-2;-4) | 30 (-1;-2) | 31 (-2;-3) | 32 (-1;-2) | 34 (-2;-3) | 35 (-2;-3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | NPD<br>0,01 | NPD<br>0,01 | NPD<br>0,01 | NPD<br>0,01 | NPD<br>0,01 | NPD<br>0,01 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 48/42/48 | 48/42/48 | 48/42/48 | 48/42/48 | 47/42/47 | 47/42/47 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 29/61/63<br>NPD | 29/61/62<br>NPD | 29/61/61<br>NPD | 29/61/60<br>NPD | 28/61/58<br>NPD | 28/61/57<br>NPD |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

| | | |
|---|---|---|
| AGC | **CE Marking of Coated glass - EN 1096-4:2004**<br>**Declaration of performances**<br>**Stopray Lime 61T (annealed)** | CE |

We

**AGC Glass Europe**
**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **Stopray Lime 61T**, intended to be used in buildings and construction works, following **EN 1096-4:2004**

| | **Stopray Lime 61T** characteristics in : | **AVCP Systems** | **6 mm** | **8 mm** |
|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD | NPD |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | NPD | NPD |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 31 (-2;-3) | 32 (-1;-2) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | NPD<br>NPD | NPD<br>NPD |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | NPD | NPD |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | NPD<br>NPD | NPD<br>NPD |
| 14. | Durability | 3 | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

**CE Marking of Heat strengthened glass - EN 1863-2:2004**
**Declaration of performances**
**Stopray Lime 61T heat strengthened**

CE

We

**AGC Glass Europe**
**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **Stopray Lime 61T heat strengthened**, intended to be used in buildings and construction works, following **EN 1863-2:2004**

| | **Stopray Lime 61T** characteristics in : | **AVCP Systems** | **6 mm** | **8 mm** |
|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD | NPD |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | 100 K | 100 K |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 31 (-2;-3) | 32 (-1;-2) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | NPD<br>0,01 | NPD<br>0,01 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 68 / 6 / 6 | 63 / 6 / 6 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 34 / 38 / 9<br>NPD | 30 / 38 / 7<br>NPD |
| 14. | Durability | 3 | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

**CE Marking of Thermally toughened glass - EN 12150-2:2004**
**CE Marking of Heat soaked Thermally toughened glass - EN 14179-2:2005**
**Declaration of performances**
**Stopray Lime 61T Thermally toughened or Heat soaked thermally toughened**

CE

We

**AGC Glass Europe**
**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **Stopray Lime 61T Thermally toughened or Heat soaked thermally toughened**, intended to be used in buildings and construction works, following **EN 12150-2:2004 / 14179-2:2005**

| | **Stopray Lime 61T** characteristics in : | **AVCP Systems** | **6 mm** | **8 mm** |
|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | 1C2 | 1C2 |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | 200 K | 200 K |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 31 (-2;-3) | 32 (-1;-2) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | NPD<br>0,01 | NPD<br>0,01 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 68 / 6 / 6 | 63 / 6 / 6 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 34 / 38 / 9<br>NPD | 30 / 38 / 7<br>NPD |
| 14. | Durability | 3 | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

| AGC | **CE Marking of Coated glass - EN 1096-4:2004**<br>**Declaration of performances**<br>**Stopray Emeralda (annealed)** | CE |
|---|---|---|

We

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**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **Stopray Emeralda**, intended to be used in buildings and construction works, following **EN 1096-4:2004**

| | **Stopray Emeralda** characteristics in : | **AVCP Systems** | **4 mm** | **5 mm** | **6 mm** | **8 mm** | **10 mm** |
|---|---|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 | A1 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD | NPD | NPD | NPD | NPD |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | NPD | NPD | NPD | NPD | NPD |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 30 (-2;-4) | 30 (-1;-2) | 31 (-2;-3) | 32 (-1;-2) | 34 (-2;-3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | NPD<br>0,03 | NPD<br>0,03 | NPD<br>0,03 | NPD<br>0,03 | NPD<br>0,03 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 43 / 42 / 36 | 41 / 42 / 34 | 40 / 41 / 32 | 37 / 41 / 28 | 34 / 41 / 25 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 22 / 61 / 27<br>NPD | 21 / 61 / 23<br>NPD | 19 / 60 / 20<br>NPD | 17 / 60 / 16<br>NPD | 15 / 60 / 14<br>NPD |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

| | | |
|---|---|---|
| AGC | **CE Marking of Coated glass - EN 1096-4:2004**<br>**Declaration of performances**<br>**Stopray Emeralda (heat strengthened)** | CE |

We

**AGC Glass Europe**
**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **Stopray Emeralda**, intended to be used in buildings and construction works, following **EN 1096-4:2004**

| | **Stopray Emeralda** characteristics in : | **AVCP Systems** | **4 mm** | **5 mm** | **6 mm** | **8 mm** | **10 mm** |
|---|---|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 | A1 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD | NPD | NPD | NPD | NPD |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | 100 K | 100 K | 100 K | 100 K | 100 K |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 30 (-2;-4) | 30 (-1;-2) | 31 (-2;-3) | 32 (-1;-2) | 34 (-2;-3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | NPD<br>0,03 | NPD<br>0,03 | NPD<br>0,03 | NPD<br>0,03 | NPD<br>0,03 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 43 / 42 / 36 | 41 / 42 / 34 | 40 / 41 / 32 | 37 / 41 / 28 | 34 / 41 / 25 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 22 / 61 / 27<br>NPD | 21 / 61 / 23<br>NPD | 19 / 60 / 20<br>NPD | 17 / 60 / 16<br>NPD | 15 / 60 / 14<br>NPD |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

| | | |
|---|---|---|
| AGC | **CE Marking of Coated glass - EN 1096-4:2004**<br>**Declaration of performances**<br>**Stopray Emeralda (Thermally toughened or Heat soaked thermally toughened)** | CE |

We

**AGC Glass Europe**
**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **Stopray Emeralda**, intended to be used in buildings and construction works, following **EN 1096-4:2004**

| | **Stopray Emeralda** characteristics in : | **AVCP Systems** | **4 mm** | **5 mm** | **6 mm** | **8 mm** | **10 mm** |
|---|---|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 | A1 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | 1C3 | 1C3 | 1C2 | 1C2 | 1C1 |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | 200 K | 200 K | 200 K | 200 K | 200 K |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 30 (-2;-4) | 30 (-1;-2) | 31 (-2;-3) | 32 (-1;-2) | 34 (-2;-3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | NPD<br>0,03 | NPD<br>0,03 | NPD<br>0,03 | NPD<br>0,03 | NPD<br>0,03 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 43 / 42 / 36 | 41 / 42 / 34 | 40 / 41 / 32 | 37 / 41 / 28 | 34 / 41 / 25 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 22 / 61 / 27<br>NPD | 21 / 61 / 23<br>NPD | 19 / 60 / 20<br>NPD | 17 / 60 / 16<br>NPD | 15 / 60 / 14<br>NPD |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

| | | |
|---|---|---|
| AGC | **CE Marking of Coated glass - EN 1096-4:2004**<br>**Declaration of performances**<br>**Stopray Selva (annealed)** | CE |

We

**AGC Glass Europe**
**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **Stopray Selva**, intended to be used in buildings and construction works, following **EN 1096-4:2004**

| | **Stopray Selva** characteristics in : | **AVCP Systems** | **4 mm** | **5 mm** | **6 mm** | **8 mm** | **10 mm** |
|---|---|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 | A1 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD | NPD | NPD | NPD | NPD |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | NPD | NPD | NPD | NPD | NPD |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 30 (-2;-4) | 30 (-1;-2) | 31 (-2;-3) | 32 (-1;-2) | 34 (-2;-3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | NPD<br>0,06 | NPD<br>0,06 | NPD<br>0,06 | NPD<br>0,06 | NPD<br>0,06 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 60 / 6 / 12 | 58 / 6 / 11 | 56 / 6 / 11 | 52 / 6 / 10 | 48 / 5 / 9 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 32 / 30 / 12<br>NPD | 29 / 30 / 10<br>NPD | 27 / 30 / 9<br>NPD | 23 / 30 / 8<br>NPD | 21 / 30 / 7<br>NPD |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

| | | |
|---|---|---|
| AGC | **CE Marking of Coated glass - EN 1096-4:2004**<br>**Declaration of performances**<br>**Stopray Selva (heat strengthened)** | CE |

We

**AGC Glass Europe**
**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **Stopray Selva**, intended to be used in buildings and construction works, following **EN 1096-4:2004**

| | **Stopray Selva** characteristics in : | **AVCP Systems** | **4 mm** | **5 mm** | **6 mm** | **8 mm** | **10 mm** |
|---|---|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 | A1 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD | NPD | NPD | NPD | NPD |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | 100 K | 100 K | 100 K | 100 K | 100 K |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 30 (-2;-4) | 30 (-1;-2) | 31 (-2;-3) | 32 (-1;-2) | 34 (-2;-3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | NPD<br>0,06 | NPD<br>0,06 | NPD<br>0,06 | NPD<br>0,06 | NPD<br>0,06 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 60 / 6 / 12 | 58 / 6 / 11 | 56 / 6 / 11 | 52 / 6 / 10 | 48 / 5 / 9 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 32 / 30 / 12<br>NPD | 29 / 30 / 10<br>NPD | 27 / 30 / 9<br>NPD | 23 / 30 / 8<br>NPD | 21 / 30 / 7<br>NPD |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

**CE Marking of Coated glass - EN 1096-4:2004**
**Declaration of performances**
**Stopray Selva (Thermally toughened or Heat soaked thermally toughened)**

CE

We

**AGC Glass Europe**
**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **Stopray Selva**, intended to be used in buildings and construction works, following **EN 1096-4:2004**

| | **Stopray Selva** characteristics in : | **AVCP Systems** | **4 mm** | **5 mm** | **6 mm** | **8 mm** | **10 mm** |
|---|---|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 | A1 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | 1C3 | 1C3 | 1C2 | 1C2 | 1C1 |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | 200 K | 200 K | 200 K | 200 K | 200 K |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 30 (-2;-4) | 30 (-1;-2) | 31 (-2;-3) | 32 (-1;-2) | 34 (-2;-3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | NPD<br>0,06 | NPD<br>0,06 | NPD<br>0,06 | NPD<br>0,06 | NPD<br>0,06 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 60 / 6 / 12 | 58 / 6 / 11 | 56 / 6 / 11 | 52 / 6 / 10 | 48 / 5 / 9 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 32 / 30 / 12<br>NPD | 29 / 30 / 10<br>NPD | 27 / 30 / 9<br>NPD | 23 / 30 / 8<br>NPD | 21 / 30 / 7<br>NPD |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

| | | |
|---|---|---|
| AGC | **CE Marking of Coated glass - EN 1096-4:2004**<br>**Declaration of performances**<br>**Stopray Oasis (annealed)** | CE |

We

**AGC Glass Europe**
**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **Stopray Oasis**, intended to be used in buildings and construction works, following **EN 1096-4:2004**

| | **Stopray Oasis** characteristics in : | **AVCP Systems** | **4 mm** | **5 mm** | **6 mm** | **8 mm** | **10 mm** |
|---|---|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 | A1 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD | NPD | NPD | NPD | NPD |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | NPD | NPD | NPD | NPD | NPD |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 30 (-2;-4) | 30 (-1;-2) | 31 (-2;-3) | 32 (-1;-2) | 34 (-2;-3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | NPD<br>0,03 | NPD<br>0,03 | NPD<br>0,03 | NPD<br>0,03 | NPD<br>0,03 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 66 / 9 / 8 | 64 / 9 / 8 | 61 / 8 / 8 | 57 / 8 / 7 | 53 / 8 / 7 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 33 / 37 / 11<br>NPD | 30 / 37 / 9<br>NPD | 28 / 37 / 8<br>NPD | 25 / 37 / 6<br>NPD | 22 / 37 / 6<br>NPD |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

**CE Marking of Coated glass - EN 1096-4:2004**
**Declaration of performances**
**Stopray Oasis (heat strengthened)**

CE

We

**AGC Glass Europe**
**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **Stopray Oasis**, intended to be used in buildings and construction works, following **EN 1096-4:2004**

| | **Stopray Oasis** characteristics in : | **AVCP Systems** | **4 mm** | **5 mm** | **6 mm** | **8 mm** | **10 mm** |
|---|---|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 | A1 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD | NPD | NPD | NPD | NPD |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | 100 K | 100 K | 100 K | 100 K | 100 K |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 30 (-2;-4) | 30 (-1;-2) | 31 (-2;-3) | 32 (-1;-2) | 34 (-2;-3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | NPD<br>0,03 | NPD<br>0,03 | NPD<br>0,03 | NPD<br>0,03 | NPD<br>0,03 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 66 / 9 / 8 | 64 / 9 / 8 | 61 / 8 / 8 | 57 / 8 / 7 | 53 / 8 / 7 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 33 / 37 / 11<br>NPD | 30 / 37 / 9<br>NPD | 28 / 37 / 8<br>NPD | 25 / 37 / 6<br>NPD | 22 / 37 / 6<br>NPD |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

**CE Marking of Coated glass - EN 1096-4:2004**
**Declaration of performances**
**Stopray Oasis (Thermally toughened or Heat soaked thermally toughened)**

CE

We

**AGC Glass Europe**
**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **Stopray Oasis**, intended to be used in buildings and construction works, following **EN 1096-4:2004**

| | **Stopray Oasis** characteristics in : | **AVCP Systems** | **4 mm** | **5 mm** | **6 mm** | **8 mm** | **10 mm** |
|---|---|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 | A1 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | 1C3 | 1C3 | 1C2 | 1C2 | 1C1 |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | 200 K | 200 K | 200 K | 200 K | 200 K |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 30 (-2;-4) | 30 (-1;-2) | 31 (-2;-3) | 32 (-1;-2) | 34 (-2;-3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | NPD<br>0,03 | NPD<br>0,03 | NPD<br>0,03 | NPD<br>0,03 | NPD<br>0,03 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 66 / 9 / 8 | 64 / 9 / 8 | 61 / 8 / 8 | 57 / 8 / 7 | 53 / 8 / 7 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 33 / 37 / 11<br>NPD | 30 / 37 / 9<br>NPD | 28 / 37 / 8<br>NPD | 25 / 37 / 6<br>NPD | 22 / 37 / 6<br>NPD |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

| | | |
|---|---|---|
| AGC | **CE Marking of Coated glass - EN 1096-4:2004**<br>**Declaration of performances**<br>**Stopray Aquamarine (annealed)** | CE |

We

**AGC Glass Europe**
**Building Division**
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Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **Stopray Aquamarine**, intended to be used in buildings and construction works, following **EN 1096-4:2004**

| | **Stopray Aquamarine** characteristics in : | **AVCP Systems** | **4 mm** | **5 mm** | **6 mm** | **8 mm** | **10 mm** |
|---|---|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 | A1 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD | NPD | NPD | NPD | NPD |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | NPD | NPD | NPD | NPD | NPD |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 30 (-2;-4) | 30 (-1;-2) | 31 (-2;-3) | 32 (-1;-2) | 34 (-2;-3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | NPD<br>0,04 | NPD<br>0,04 | NPD<br>0,04 | NPD<br>0,04 | NPD<br>0,04 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 72 / 8 / 10 | 69 / 8 / 10 | 66 / 8 / 9 | 61 / 7 / 9 | 56 / 7 / 8 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 39 / 30 / 11<br>NPD | 36 / 30 / 10<br>NPD | 33 / 30 / 8<br>NPD | 28 / 30 / 7<br>NPD | 24 / 30 / 6<br>NPD |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

| | | |
|---|---|---|
| AGC | **CE Marking of Coated glass - EN 1096-4:2004**<br>**Declaration of performances**<br>**Stopray Aquamarine (heat strengthened)** | CE |

We

**AGC Glass Europe**
**Building Division**
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Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **Stopray Aquamarine**, intended to be used in buildings and construction works, following **EN 1096-4:2004**

| | **Stopray Aquamarine** characteristics in : | **AVCP Systems** | **4 mm** | **5 mm** | **6 mm** | **8 mm** | **10 mm** |
|---|---|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 | A1 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD | NPD | NPD | NPD | NPD |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | 100 K | 100 K | 100 K | 100 K | 100 K |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 30 (-2;-4) | 30 (-1;-2) | 31 (-2;-3) | 32 (-1;-2) | 34 (-2;-3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | NPD<br>0,04 | NPD<br>0,04 | NPD<br>0,04 | NPD<br>0,04 | NPD<br>0,04 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 72 / 8 / 10 | 69 / 8 / 10 | 66 / 8 / 9 | 61 / 7 / 9 | 56 / 7 / 8 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 39 / 30 / 11<br>NPD | 36 / 30 / 10<br>NPD | 33 / 30 / 8<br>NPD | 28 / 30 / 7<br>NPD | 24 / 30 / 6<br>NPD |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

**CE Marking of Coated glass - EN 1096-4:2004**
**Declaration of performances**
**Stopray Aquamarine (Thermally toughened or Heat soaked thermally toughened)**

CE

We

**AGC Glass Europe**
**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **Stopray Aquamarine**, intended to be used in buildings and construction works, following **EN 1096-4:2004**

| | **Stopray Aquamarine** characteristics in : | **AVCP Systems** | **4 mm** | **5 mm** | **6 mm** | **8 mm** | **10 mm** |
|---|---|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 | A1 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | 1C3 | 1C3 | 1C2 | 1C2 | 1C1 |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | 200 K | 200 K | 200 K | 200 K | 200 K |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 30 (-2;-4) | 30 (-1;-2) | 31 (-2;-3) | 32 (-1;-2) | 34 (-2;-3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | NPD<br>0,04 | NPD<br>0,04 | NPD<br>0,04 | NPD<br>0,04 | NPD<br>0,04 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 72 / 8 / 10 | 69 / 8 / 10 | 66 / 8 / 9 | 61 / 7 / 9 | 56 / 7 / 8 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 39 / 30 / 11<br>NPD | 36 / 30 / 10<br>NPD | 33 / 30 / 8<br>NPD | 28 / 30 / 7<br>NPD | 24 / 30 / 6<br>NPD |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

**CE Marking of Coated glass - EN 1096-4:2004**
**Declaration of performances**
**Stopray Bright Sepia (annealed)**

CE

We

**AGC Glass Europe**
**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **Stopray Bright Sepia**, intended to be used in buildings and construction works, following **EN 1096-4:2004**

| | **Stopray Bright Sepia** characteristics in : | **AVCP Systems** | **4 mm** | **5 mm** | **6 mm** | **8 mm** | **10 mm** |
|---|---|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 | A1 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD | NPD | NPD | NPD | NPD |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | NPD | NPD | NPD | NPD | NPD |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 30 (-2;-4) | 30 (-1;-2) | 31 (-2;-3) | 32 (-1;-2) | 34 (-2;-3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | NPD<br>0,03 | NPD<br>0,03 | NPD<br>0,03 | NPD<br>0,03 | NPD<br>0,03 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 33 / 41 / 24 | 30 / 41 / 20 | 27 / 41 / 17 | 22 / 41 / 13 | 18 / 41 / 10 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 20 / 60 / 31<br>NPD | 18 / 60 / 26<br>NPD | 16 / 60 / 22<br>NPD | 14 / 60 / 17<br>NPD | 11 / 60 / 13<br>NPD |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

| | | |
|---|---|---|
| AGC | **CE Marking of Coated glass - EN 1096-4:2004**<br>**Declaration of performances**<br>**Stopray Bright Sepia (heat strengthened)** | CE |

We

**AGC Glass Europe**
**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **Stopray Bright Sepia**, intended to be used in buildings and construction works, following **EN 1096-4:2004**

| | **Stopray Bright Sepia** characteristics in : | **AVCP Systems** | **4 mm** | **5 mm** | **6 mm** | **8 mm** | **10 mm** |
|---|---|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 | A1 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD | NPD | NPD | NPD | NPD |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | 100 K | 100 K | 100 K | 100 K | 100 K |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 30 (-2;-4) | 30 (-1;-2) | 31 (-2;-3) | 32 (-1;-2) | 34 (-2;-3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | NPD<br>0,03 | NPD<br>0,03 | NPD<br>0,03 | NPD<br>0,03 | NPD<br>0,03 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 33 / 41 / 24 | 30 / 41 / 20 | 27 / 41 / 17 | 22 / 41 / 13 | 18 / 41 / 10 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 20 / 60 / 31<br>NPD | 18 / 60 / 26<br>NPD | 16 / 60 / 22<br>NPD | 14 / 60 / 17<br>NPD | 11 / 60 / 13<br>NPD |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

**CE Marking of Coated glass - EN 1096-4:2004**
**Declaration of performances**
**Stopray Bright Sepia (Thermally toughened or Heat soaked thermally toughened)**

CE

We

**AGC Glass Europe**
**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **Stopray Bright Sepia**, intended to be used in buildings and construction works, following **EN 1096-4:2004**

| | **Stopray Bright Sepia** characteristics in : | **AVCP Systems** | **4 mm** | **5 mm** | **6 mm** | **8 mm** | **10 mm** |
|---|---|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 | A1 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | 1C3 | 1C3 | 1C2 | 1C2 | 1C1 |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | 200 K | 200 K | 200 K | 200 K | 200 K |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 30 (-2;-4) | 30 (-1;-2) | 31 (-2;-3) | 32 (-1;-2) | 34 (-2;-3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | NPD<br>0,03 | NPD<br>0,03 | NPD<br>0,03 | NPD<br>0,03 | NPD<br>0,03 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 33 / 41 / 24 | 30 / 41 / 20 | 27 / 41 / 17 | 22 / 41 / 13 | 18 / 41 / 10 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 20 / 60 / 31<br>NPD | 18 / 60 / 26<br>NPD | 16 / 60 / 22<br>NPD | 14 / 60 / 17<br>NPD | 11 / 60 / 13<br>NPD |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

| | | |
|---|---|---|
| AGC | **CE Marking of Coated glass - EN 1096-4:2004**<br>**Declaration of performances**<br>**Stopray Sienna (annealed)** | CE |

We

**AGC Glass Europe**
**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **Stopray Sienna**, intended to be used in buildings and construction works, following **EN 1096-4:2004**

| | **Stopray Sienna** characteristics in : | **AVCP Systems** | **4 mm** | **5 mm** | **6 mm** | **8 mm** | **10 mm** |
|---|---|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 | A1 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD | NPD | NPD | NPD | NPD |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | NPD | NPD | NPD | NPD | NPD |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 30 (-2;-4) | 30 (-1;-2) | 31 (-2;-3) | 32 (-1;-2) | 34 (-2;-3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | NPD<br>0,03 | NPD<br>0,03 | NPD<br>0,03 | NPD<br>0,03 | NPD<br>0,03 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 52 / 8 / 7 | 47 / 8 / 6 | 42 / 8 / 6 | 34 / 7 / 5 | 28 / 7 / 5 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 30 / 37 / 20<br>NPD | 27 / 37 / 17<br>NPD | 24 / 37 / 15<br>NPD | 20 / 37 / 12<br>NPD | 16 / 37 / 9<br>NPD |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

| | | |
|---|---|---|
| AGC | **CE Marking of Coated glass - EN 1096-4:2004**<br>**Declaration of performances**<br>**Stopray Sienna (heat strengthened)** | CE |

We

**AGC Glass Europe**
**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **Stopray Sienna**, intended to be used in buildings and construction works, following **EN 1096-4:2004**

| | **Stopray Sienna** characteristics in : | **AVCP Systems** | **4 mm** | **5 mm** | **6 mm** | **8 mm** | **10 mm** |
|---|---|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 | A1 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD | NPD | NPD | NPD | NPD |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | 100 K | 100 K | 100 K | 100 K | 100 K |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 30 (-2;-4) | 30 (-1;-2) | 31 (-2;-3) | 32 (-1;-2) | 34 (-2;-3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | NPD<br>0,03 | NPD<br>0,03 | NPD<br>0,03 | NPD<br>0,03 | NPD<br>0,03 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 52 / 8 / 7 | 47 / 8 / 6 | 42 / 8 / 6 | 34 / 7 / 5 | 28 / 7 / 5 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 30 / 37 / 20<br>NPD | 27 / 37 / 17<br>NPD | 24 / 37 / 15<br>NPD | 20 / 37 / 12<br>NPD | 16 / 37 / 9<br>NPD |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

| | | |
|---|---|---|
| AGC | **CE Marking of Coated glass - EN 1096-4:2004**<br>**Declaration of performances**<br>**Stopray Sienna (Thermally toughened or Heat soaked thermally toughened)** | CE |

We

**AGC Glass Europe**
**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **Stopray Sienna**, intended to be used in buildings and construction works, following **EN 1096-4:2004**

| | **Stopray Sienna** characteristics in : | **AVCP Systems** | **4 mm** | **5 mm** | **6 mm** | **8 mm** | **10 mm** |
|---|---|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 | A1 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | 1C3 | 1C3 | 1C2 | 1C2 | 1C1 |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | 200 K | 200 K | 200 K | 200 K | 200 K |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 30 (-2;-4) | 30 (-1;-2) | 31 (-2;-3) | 32 (-1;-2) | 34 (-2;-3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | NPD<br>0,03 | NPD<br>0,03 | NPD<br>0,03 | NPD<br>0,03 | NPD<br>0,03 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 52 / 8 / 7 | 47 / 8 / 6 | 42 / 8 / 6 | 34 / 7 / 5 | 28 / 7 / 5 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 30 / 37 / 20<br>NPD | 27 / 37 / 17<br>NPD | 24 / 37 / 15<br>NPD | 20 / 37 / 12<br>NPD | 16 / 37 / 9<br>NPD |
| 14. | Durability | 3 | PASS | PASS | PASS | PASSa | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

**CE Marking of Coated glass - EN 1096-4:2004**
**Declaration of performances**
**Stopray Topaz (annealed)**

CE

We

**AGC Glass Europe**
**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **Stopray Topaz**, intended to be used in buildings and construction works, following **EN 1096-4:2004**

| | **Stopray topaz** characteristics in : | **AVCP Systems** | **4 mm** | **5 mm** | **6 mm** | **8 mm** | **10 mm** |
|---|---|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 | A1 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD | NPD | NPD | NPD | NPD |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | NPD | NPD | NPD | NPD | NPD |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 30 (-2;-4) | 30 (-1;-2) | 31 (-2;-3) | 32 (-1;-2) | 34 (-2;-3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | NPD<br>0,04 | NPD<br>0,04 | NPD<br>0,04 | NPD<br>0,04 | NPD<br>0,04 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 56 / 7 / 8 | 51 / 7 / 7 | 45 / 7 / 7 | 37 / 6 / 6 | 30 / 6 / 5 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 40 / 30 / 18<br>NPD | 36 / 30 / 15<br>NPD | 32 / 30 / 13<br>NPD | 27 / 30 / 11<br>NPD | 22 / 30 / 9<br>NPD |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

| | | |
|---|---|---|
| AGC | **CE Marking of Coated glass - EN 1096-4:2004**<br>**Declaration of performances**<br>**Stopray Topaz (heat strengthened)** | CE |

We

**AGC Glass Europe**
**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **Stopray Topaz**, intended to be used in buildings and construction works, following **EN 1096-4:2004**

| | **Stopray topaz** characteristics in : | **AVCP Systems** | **4 mm** | **5 mm** | **6 mm** | **8 mm** | **10 mm** |
|---|---|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 | A1 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD | NPD | NPD | NPD | NPD |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | 100 K | 100 K | 100 K | 100 K | 100 K |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 30 (-2;-4) | 30 (-1;-2) | 31 (-2;-3) | 32 (-1;-2) | 34 (-2;-3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | NPD<br>0,04 | NPD<br>0,04 | NPD<br>0,04 | NPD<br>0,04 | NPD<br>0,04 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 56 / 7 / 8 | 51 / 7 / 7 | 45 / 7 / 7 | 37 / 6 / 6 | 30 / 6 / 5 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 40 / 30 / 18<br>NPD | 36 / 30 / 15<br>NPD | 32 / 30 / 13<br>NPD | 27 / 30 / 11<br>NPD | 22 / 30 / 9<br>NPD |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

| | | |
|---|---|---|
| AGC | **CE Marking of Coated glass - EN 1096-4:2004**<br>**Declaration of performances**<br>**Stopray Topaz (Thermally toughened or Heat soaked thermally toughened)** | CE |

We

**AGC Glass Europe**
**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **Stopray Topaz**, intended to be used in buildings and construction works, following **EN 1096-4:2004**

| | **Stopray topaz** characteristics in : | **AVCP Systems** | **4 mm** | **5 mm** | **6 mm** | **8 mm** | **10 mm** |
|---|---|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 | A1 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | 1C3 | 1C3 | 1C2 | 1C2 | 1C1 |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | 200 K | 200 K | 200 K | 200 K | 200 K |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 30 (-2;-4) | 30 (-1;-2) | 31 (-2;-3) | 32 (-1;-2) | 34 (-2;-3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | NPD<br>0,04 | NPD<br>0,04 | NPD<br>0,04 | NPD<br>0,04 | NPD<br>0,04 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 56 / 7 / 8 | 51 / 7 / 7 | 45 / 7 / 7 | 37 / 6 / 6 | 30 / 6 / 5 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 40 / 30 / 18<br>NPD | 36 / 30 / 15<br>NPD | 32 / 30 / 13<br>NPD | 27 / 30 / 11<br>NPD | 22 / 30 / 9<br>NPD |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

| | | |
|---|---|---|
| AGC | **CE Marking of Coated glass - EN 1096-4:2004**<br>**Declaration of performances**<br>**Stopray Titanium 37T (annealed)** | CE |

We

**AGC Glass Europe**
**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **Titanium 37T**, intended to be used in buildings and construction works, following **EN 1096-4:2004**

| | **Stopray Titanium 37T** characteristics in : | **AVCP Systems** | **6 mm** | **8 mm** |
|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD | NPD |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | NPD | NPD |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 31 (-2;-3) | 32 (-1;-2) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | NPD<br>NPD | NPD<br>NPD |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | NPD | NPD |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | NPD<br>NPD | NPD<br>NPD |
| 14. | Durability | 3 | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

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|---|---|---|
| AGC | **CE Marking of Heat strengthened glass - EN 1863-2:2004**<br>**Declaration of performances**<br>**Stopray Titanium 37T heat strengthened** | CE |

We

**AGC Glass Europe**
**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **Stopray Titanium 37T heat strengthened**, intended to be used in buildings and construction works, following **EN 1863-2:2004**

| | **Stopray Titanium 37T** characteristics in : | **AVCP Systems** | **6 mm** | **8 mm** |
|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD | NPD |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | 100 K | 100 K |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 31 (-2;-3) | 32 (-1;-2) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | NPD<br>0,01 | NPD<br>0,01 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 41 / 5 / 5 | 32 / 4 / 5 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 25 / 38 / 13<br>NPD | 20 / 37 / 10<br>NPD |
| 14. | Durability | 3 | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

**CE Marking of Thermally toughened glass - EN 12150-2:2004**
**CE Marking of Heat soaked Thermally toughened glass - EN 14179-2:2005**
**Declaration of performances**
**Stopray Titanium 37T Thermally toughened or Heat soaked thermally toughened**

CE

We

**AGC Glass Europe**
**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **Stopray Titanium 37T Thermally toughened or Heat soaked thermally toughened**, intended to be used in buildings and construction works, following **EN 12150-2:2004 / 14179-2:2005**

| | **Stopray Titanium 37T** characteristics in : | **AVCP Systems** | **6 mm** | **8 mm** |
|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | 1C2 | 1C2 |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | 200 K | 200 K |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 31 (-2;-3) | 32 (-1;-2) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | NPD<br>0,01 | NPD<br>0,01 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 41 / 5 / 5 | 32 / 4 / 5 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 25 / 38 / 13<br>NPD | 20 / 37 / 10<br>NPD |
| 14. | Durability | 3 | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

| | | |
|---|---|---|
| AGC | **CE Marking of Coated glass - EN 1096-4:2004**<br>**Declaration of performances**<br>**Stopray Granit Grey (annealed)** | CE |

We

**AGC Glass Europe**
**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **Stopray Granit Grey**, intended to be used in buildings and construction works, following **EN 1096-4:2004**

| | **Stopray Granit Grey** characteristics in : | **AVCP Systems** | **4 mm** | **5 mm** | **6 mm** | **8 mm** | **10 mm** | **12 mm** |
|---|---|---|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 | A1 | A1 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD | NPD | NPD | NPD | NPD | NPD |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | NPD | NPD | NPD | NPD | NPD | NPD |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 30 (-2;-4) | 30 (-1;-2) | 31 (-2;-3) | 32 (-1;-2) | 34 (-2;-3) | 35 (-2;-3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | NPD<br>0,03 | NPD<br>0,03 | NPD<br>0,03 | NPD<br>0,03 | NPD<br>0,03 | NPD<br>0,03 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 30 / 41 / 20 | 27 / 41 / 17 | 23 / 41 / 14 | 18 / 41 / 10 | 14 / 41 / 8 | 11 / 41 / 7 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 19 / 60 / 29<br>NPD | 17 / 60 / 24<br>NPD | 15 / 60 / 20<br>NPD | 12 / 60 / 14<br>NPD | 10 / 60 / 11<br>NPD | 8 / 60 / 9<br>NPD |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

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|---|---|---|
| AGC | **CE Marking of Coated glass - EN 1096-4:2004**<br>**Declaration of performances**<br>**Stopray Granit Grey (heat strengthened)** | CE |

We

**AGC Glass Europe**
**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **Stopray Granit Grey**, intended to be used in buildings and construction works, following **EN 1096-4:2004**

| | **Stopray Granit Grey** characteristics in : | **AVCP Systems** | **4 mm** | **5 mm** | **6 mm** | **8 mm** | **10 mm** | **12 mm** |
|---|---|---|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 | A1 | A1 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD | NPD | NPD | NPD | NPD | NPD |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | 100 K | 100 K | 100 K | 100 K | 100 K | 100 K |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 30 (-2;-4) | 30 (-1;-2) | 31 (-2;-3) | 32 (-1;-2) | 34 (-2;-3) | 35 (-2;-3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | NPD<br>0,03 | NPD<br>0,03 | NPD<br>0,03 | NPD<br>0,03 | NPD<br>0,03 | NPD<br>0,03 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 30 / 41 / 20 | 27 / 41 / 17 | 23 / 41 / 14 | 18 / 41 / 10 | 14 / 41 / 8 | 11 / 41 / 7 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 19 / 60 / 29<br>NPD | 17 / 60 / 24<br>NPD | 15 / 60 / 20<br>NPD | 12 / 60 / 14<br>NPD | 10 / 60 / 11<br>NPD | 8 / 60 / 9<br>NPD |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

**CE Marking of Coated glass - EN 1096-4:2004**
**Declaration of performances**
**Stopray Granit Grey (Thermally toughened or Heat soaked thermally toughened)**

CE

We

**AGC Glass Europe**
**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **Stopray Granit Grey**, intended to be used in buildings and construction works, following **EN 1096-4:2004**

| | **Stopray Granit Grey** characteristics in : | **AVCP Systems** | **4 mm** | **5 mm** | **6 mm** | **8 mm** | **10 mm** | **12 mm** |
|---|---|---|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 | A1 | A1 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | 1C3 | 1C3 | 1C2 | 1C2 | 1C1 | 1C1 |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | 200 K | 200 K | 200 K | 200 K | 200 K | 200 K |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 30 (-2;-4) | 30 (-1;-2) | 31 (-2;-3) | 32 (-1;-2) | 34 (-2;-3) | 35 (-2;-3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | NPD<br>0,03 | NPD<br>0,03 | NPD<br>0,03 | NPD<br>0,03 | NPD<br>0,03 | NPD<br>0,03 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 30 / 41 / 20 | 27 / 41 / 17 | 23 / 41 / 14 | 18 / 41 / 10 | 14 / 41 / 8 | 11 / 41 / 7 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 19 / 60 / 29<br>NPD | 17 / 60 / 24<br>NPD | 15 / 60 / 20<br>NPD | 12 / 60 / 14<br>NPD | 10 / 60 / 11<br>NPD | 8 / 60 / 9<br>NPD |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

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|---|---|---|
| AGC | **CE Marking of Coated glass - EN 1096-4:2004**<br>**Declaration of performances**<br>**Stopray Quartz (annealed)** | CE |

We

**AGC Glass Europe**
**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **Stopray Quartz**, intended to be used in buildings and construction works, following **EN 1096-4:2004**

| | **Stopray Quartz** characteristics in : | **AVCP Systems** | **4 mm** | **5 mm** | **6 mm** | **8 mm** | **10 mm** | **12 mm** |
|---|---|---|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 | A1 | A1 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD | NPD | NPD | NPD | NPD | NPD |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | NPD | NPD | NPD | NPD | NPD | NPD |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 30 (-2;-4) | 30 (-1;-2) | 31 (-2;-3) | 32 (-1;-2) | 34 (-2;-3) | 35 (-2;-3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | NPD<br>0,03 | NPD<br>0,03 | NPD<br>0,03 | NPD<br>0,03 | NPD<br>0,03 | NPD<br>0,03 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 48 / 6 / 6 | 42 / 6 / 5 | 37 / 6 / 5 | 28 / 6 / 5 | 22 / 6 / 5 | 17 / 5 / 5 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 28 / 37 / 14<br>NPD | 24 / 37 / 12<br>NPD | 21 / 37 / 10<br>NPD | 16 / 37 / 7<br>NPD | 13 / 37 / 6<br>NPD | 10 / 37 / 6<br>NPD |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

| | | |
|---|---|---|
| AGC | **CE Marking of Coated glass - EN 1096-4:2004**<br>**Declaration of performances**<br>**Stopray Quartz (heat strengthened)** | CE |

We

**AGC Glass Europe**
**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **Stopray Quartz**, intended to be used in buildings and construction works, following **EN 1096-4:2004**

| | **Stopray Quartz** characteristics in : | **AVCP Systems** | **4 mm** | **5 mm** | **6 mm** | **8 mm** | **10 mm** | **12 mm** |
|---|---|---|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 | A1 | A1 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD | NPD | NPD | NPD | NPD | NPD |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | 100 K | 100 K | 100 K | 100 K | 100 K | 100 K |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 30 (-2;-4) | 30 (-1;-2) | 31 (-2;-3) | 32 (-1;-2) | 34 (-2;-3) | 35 (-2;-3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | NPD<br>0,03 | NPD<br>0,03 | NPD<br>0,03 | NPD<br>0,03 | NPD<br>0,03 | NPD<br>0,03 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 48 / 6 / 6 | 42 / 6 / 5 | 37 / 6 / 5 | 28 / 6 / 5 | 22 / 6 / 5 | 17 / 5 / 5 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 28 / 37 / 14<br>NPD | 24 / 37 / 12<br>NPD | 21 / 37 / 10<br>NPD | 16 / 37 / 7<br>NPD | 13 / 37 / 6<br>NPD | 10 / 37 / 6<br>NPD |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

**CE Marking of Coated glass - EN 1096-4:2004**
**Declaration of performances**
**Stopray Quartz (Thermally toughened or Heat soaked thermally toughened)**

CE

We

**AGC Glass Europe**
**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **Stopray Quartz**, intended to be used in buildings and construction works, following **EN 1096-4:2004**

| | **Stopray Quartz** characteristics in : | **AVCP Systems** | **4 mm** | **5 mm** | **6 mm** | **8 mm** | **10 mm** | **12 mm** |
|---|---|---|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 | A1 | A1 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | 1C3 | 1C3 | 1C2 | 1C2 | 1C1 | 1C1 |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD | NPD | NPD | NPD | NPD | NPD |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | 200 K | 200 K | 200 K | 200 K | 200 K | 200 K |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 30 (-2;-4) | 30 (-1;-2) | 31 (-2;-3) | 32 (-1;-2) | 34 (-2;-3) | 35 (-2;-3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | NPD<br>0,03 | NPD<br>0,03 | NPD<br>0,03 | NPD<br>0,03 | NPD<br>0,03 | NPD<br>0,03 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 48 / 6 / 6 | 42 / 6 / 5 | 37 / 6 / 5 | 28 / 6 / 5 | 22 / 6 / 5 | 17 / 5 / 5 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 28 / 37 / 14<br>NPD | 24 / 37 / 12<br>NPD | 21 / 37 / 10<br>NPD | 16 / 37 / 7<br>NPD | 13 / 37 / 6<br>NPD | 10 / 37 / 6<br>NPD |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

| | | |
|---|---|---|
| AGC | **CE Marking of Coated glass - EN 1096-4:2004**<br>**Declaration of performances**<br>**Stopray Chroma (annealed)** | CE |

We

**AGC Glass Europe**
**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **Stopray Chroma**, intended to be used in buildings and construction works, following **EN 1096-4:2004**

| | **Stopray Chroma** characteristics in : | **AVCP Systems** | **4 mm** | **5 mm** | **6 mm** | **8 mm** | **10 mm** | **12 mm** |
|---|---|---|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 | A1 | A1 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD | NPD | NPD | NPD | NPD | NPD |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | NPD | NPD | NPD | NPD | NPD | NPD |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 30 (-2;-4) | 30 (-1;-2) | 31 (-2;-3) | 32 (-1;-2) | 34 (-2;-3) | 35 (-2;-3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | NPD<br>0,04 | NPD<br>0,04 | NPD<br>0,04 | NPD<br>0,04 | NPD<br>0,04 | NPD<br>0,04 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 51 / 7 / 7 | 45 / 6 / 6 | 40 / 6 / 6 | 31 / 6 / 5 | 24 / 6 / 5 | 19 / 6 / 5 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 38 / 30 / 16<br>NPD | 34 / 30 / 14<br>NPD | 30 / 30 / 12<br>NPD | 24 / 29 / 9<br>NPD | 19 / 29 / 8<br>NPD | 15 / 29 / 7<br>NPD |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

| | | |
|---|---|---|
| AGC | **CE Marking of Coated glass - EN 1096-4:2004**<br>**Declaration of performances**<br>**Stopray Chroma (heat strengthened)** | CE |

We

**AGC Glass Europe**
**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **Stopray Chroma**, intended to be used in buildings and construction works, following **EN 1096-4:2004**

| | **Stopray Chroma** characteristics in : | **AVCP Systems** | **4 mm** | **5 mm** | **6 mm** | **8 mm** | **10 mm** | **12 mm** |
|---|---|---|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 | A1 | A1 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD | NPD | NPD | NPD | NPD | NPD |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | 100 K | 100 K | 100 K | 100 K | 100 K | 100 K |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 30 (-2;-4) | 30 (-1;-2) | 31 (-2;-3) | 32 (-1;-2) | 34 (-2;-3) | 35 (-2;-3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | NPD<br>0,04 | NPD<br>0,04 | NPD<br>0,04 | NPD<br>0,04 | NPD<br>0,04 | NPD<br>0,04 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 51 / 7 / 7 | 45 / 6 / 6 | 40 / 6 / 6 | 31 / 6 / 5 | 24 / 6 / 5 | 19 / 6 / 5 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 38 / 30 / 16<br>NPD | 34 / 30 / 14<br>NPD | 30 / 30 / 12<br>NPD | 24 / 29 / 9<br>NPD | 19 / 29 / 8<br>NPD | 15 / 29 / 7<br>NPD |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

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|---|---|---|
| AGC | **CE Marking of Coated glass - EN 1096-4:2004**<br>**Declaration of performances**<br>**Stopray Chroma (Thermally toughened or Heat soaked thermally toughened)** | CE |

We

**AGC Glass Europe**
**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **Stopray Chroma**, intended to be used in buildings and construction works, following **EN 1096-4:2004**

| | **Stopray Chroma** characteristics in : | **AVCP Systems** | **4 mm** | **5 mm** | **6 mm** | **8 mm** | **10 mm** | **12 mm** |
|---|---|---|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 | A1 | A1 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | 1C3 | 1C3 | 1C2 | 1C2 | 1C1 | 1C1 |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | 200 K | 200 K | 200 K | 200 K | 200 K | 200 K |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 30 (-2;-4) | 30 (-1;-2) | 31 (-2;-3) | 32 (-1;-2) | 34 (-2;-3) | 35 (-2;-3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | NPD<br>0,04 | NPD<br>0,04 | NPD<br>0,04 | NPD<br>0,04 | NPD<br>0,04 | NPD<br>0,04 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 51 / 7 / 7 | 45 / 6 / 6 | 40 / 6 / 6 | 31 / 6 / 5 | 24 / 6 / 5 | 19 / 6 / 5 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 38 / 30 / 16<br>NPD | 34 / 30 / 14<br>NPD | 30 / 30 / 12<br>NPD | 24 / 29 / 9<br>NPD | 19 / 29 / 8<br>NPD | 15 / 29 / 7<br>NPD |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

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|---|---|---|
| AGC | **CE Marking of Coated glass - EN 1096-4:2004**<br>**Declaration of performances**<br>**Stopray Reflex Blue (annealed)** | CE |

We

**AGC Glass Europe**
**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **Stopray Reflex Blue**, intended to be used in buildings and construction works, following **EN 1096-4:2004**

| | **Stopray Reflex Blue** characteristics in : | **AVCP Systems** | **4 mm** | **6 mm** | **8 mm** | **10 mm** |
|---|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD | NPD | NPD | NPD |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | NPD | NPD | NPD | NPD |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 30 (-2;-4) | 31 (-2;-3) | 32 (-1;-2) | 34 (-2;-3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | NPD<br>0,03 | NPD<br>0,03 | NPD<br>0,03 | NPD<br>0,03 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 43 / 42 / 36 | 40 / 41 / 32 | 37 / 41 / 28 | 34 / 41 / 25 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 22 / 61 / 28<br>NPD | 20 / 61 / 21<br>NPD | 18 / 60 / 18<br>NPD | 16 / 60 / 15<br>NPD |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

**CE Marking of Coated glass - EN 1096-4:2004**
**Declaration of performances**
**Stopray Reflex Blue (heat strengthened)**

CE

We

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Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **Stopray Reflex Blue**, intended to be used in buildings and construction works, following **EN 1096-4:2004**

| | **Stopray Reflex Blue** characteristics in : | **AVCP Systems** | **4 mm** | **6 mm** | **8 mm** | **10 mm** |
|---|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD | NPD | NPD | NPD |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | 100 K | 100 K | 100 K | 100 K |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 30 (-2;-4) | 31 (-2;-3) | 32 (-1;-2) | 34 (-2;-3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | NPD<br>0,03 | NPD<br>0,03 | NPD<br>0,03 | NPD<br>0,03 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 43 / 42 / 36 | 40 / 41 / 32 | 37 / 41 / 28 | 34 / 41 / 25 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 22 / 61 / 28<br>NPD | 20 / 61 / 21<br>NPD | 18 / 60 / 18<br>NPD | 16 / 60 / 15<br>NPD |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

**CE Marking of Coated glass - EN 1096-4:2004**
**Declaration of performances**
**Stopray Reflex Blue (Thermally toughened or Heat soaked thermally toughened)**

CE

We

**AGC Glass Europe**
**Building Division**
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Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **Stopray Reflex Blue**, intended to be used in buildings and construction works, following **EN 1096-4:2004**

| | **Stopray Reflex Blue** characteristics in : | **AVCP Systems** | **4 mm** | **6 mm** | **8 mm** | **10 mm** |
|---|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | 1C3 | 1C2 | 1C2 | 1C1 |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | 200 K | 200 K | 200 K | 200 K |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 30 (-2;-4) | 31 (-2;-3) | 32 (-1;-2) | 34 (-2;-3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | NPD<br>0,03 | NPD<br>0,03 | NPD<br>0,03 | NPD<br>0,03 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 43 / 42 / 36 | 40 / 41 / 32 | 37 / 41 / 28 | 34 / 41 / 25 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 22 / 61 / 28<br>NPD | 20 / 61 / 21<br>NPD | 18 / 60 / 18<br>NPD | 16 / 60 / 15<br>NPD |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

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|---|---|---|
| AGC | **CE Marking of Coated glass - EN 1096-4:2004**<br>**Declaration of performances**<br>**Stopray Ultramarine (annealed)** | CE |

We

**AGC Glass Europe**
**Building Division**
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Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **Stopray Ultramarine**, intended to be used in buildings and construction works, following **EN 1096-4:2004**

| | **Stopray Ultramarine** characteristics in : | **AVCP Systems** | **4 mm** | **6 mm** | **8 mm** | **10 mm** |
|---|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD | NPD | NPD | NPD |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | NPD | NPD | NPD | NPD |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 30 (-2;-4) | 31 (-2;-3) | 32 (-1;-2) | 34 (-2;-3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | NPD<br>0,03 | NPD<br>0,03 | NPD<br>0,03 | NPD<br>0,03 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 61 / 12 / 10 | 56 / 12 / 9 | 53 / 12 / 9 | 49 / 12 / 8 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 30 / 42 / 14<br>NPD | 27 / 42 / 10<br>NPD | 24 / 41 / 8<br>NPD | 22 / 41 / 7<br>NPD |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

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|---|---|---|
| AGC | **CE Marking of Coated glass - EN 1096-4:2004**<br>**Declaration of performances**<br>**Stopray Ultramarine (heat strengthened)** | CE |

We

**AGC Glass Europe**
**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **Stopray Ultramarine**, intended to be used in buildings and construction works, following **EN 1096-4:2004**

| | **Stopray Ultramarine** characteristics in : | **AVCP Systems** | **4 mm** | **6 mm** | **8 mm** | **10 mm** |
|---|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD | NPD | NPD | NPD |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | 100 K | 100 K | 100 K | 100 K |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 30 (-2;-4) | 31 (-2;-3) | 32 (-1;-2) | 34 (-2;-3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | NPD<br>0,03 | NPD<br>0,03 | NPD<br>0,03 | NPD<br>0,03 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 61 / 12 / 10 | 56 / 12 / 9 | 53 / 12 / 9 | 49 / 12 / 8 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 30 / 42 / 14<br>NPD | 27 / 42 / 10<br>NPD | 24 / 41 / 8<br>NPD | 22 / 41 / 7<br>NPD |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

**CE Marking of Coated glass - EN 1096-4:2004**
**Declaration of performances**
**Stopray Ultramarine (Thermally toughened or Heat soaked thermally toughened)**

CE

We

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**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **Stopray Ultramarine**, intended to be used in buildings and construction works, following **EN 1096-4:2004**

| | **Stopray Ultramarine** characteristics in : | **AVCP Systems** | **4 mm** | **6 mm** | **8 mm** | **10 mm** |
|---|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | 1C3 | 1C2 | 1C2 | 1C1 |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | 200 K | 200 K | 200 K | 200 K |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 30 (-2;-4) | 31 (-2;-3) | 32 (-1;-2) | 34 (-2;-3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | NPD<br>0,03 | NPD<br>0,03 | NPD<br>0,03 | NPD<br>0,03 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 61 / 12 / 10 | 56 / 12 / 9 | 53 / 12 / 9 | 49 / 12 / 8 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 30 / 42 / 14<br>NPD | 27 / 42 / 10<br>NPD | 24 / 41 / 8<br>NPD | 22 / 41 / 7<br>NPD |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

**CE Marking of Coated glass - EN 1096-4:2004**
**Declaration of performances**
**Stopray Metal Blue (annealed)**

CE

We

**AGC Glass Europe**
**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **Stopray Metal Blue**, intended to be used in buildings and construction works, following **EN 1096-4:2004**

| | **Stopray Metal Blue** characteristics in : | **AVCP Systems** | **4 mm** | **6 mm** | **8 mm** | **10 mm** |
|---|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD | NPD | NPD | NPD |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | NPD | NPD | NPD | NPD |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 30 (-2;-4) | 31 (-2;-3) | 32 (-1;-2) | 34 (-2;-3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | NPD<br>0,04 | NPD<br>0,04 | NPD<br>0,04 | NPD<br>0,04 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 72 / 8 / 10 | 67 / 8 / 9 | 62 / 7 / 9 | 58 / 7 / 8 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 42 / 30 / 13<br>NPD | 36 / 30 / 10<br>NPD | 32 / 30 / 8<br>NPD | 28 / 30 / 7<br>NPD |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

**CE Marking of Coated glass - EN 1096-4:2004**
**Declaration of performances**
**Stopray Metal Blue (heat strengthened)**

CE

We

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Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **Stopray Metal Blue**, intended to be used in buildings and construction works, following **EN 1096-4:2004**

| | **Stopray Metal Blue** characteristics in : | **AVCP Systems** | **4 mm** | **6 mm** | **8 mm** | **10 mm** |
|---|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD | NPD | NPD | NPD |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | 100 K | 100 K | 100 K | 100 K |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 30 (-2;-4) | 31 (-2;-3) | 32 (-1;-2) | 34 (-2;-3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | NPD<br>0,04 | NPD<br>0,04 | NPD<br>0,04 | NPD<br>0,04 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 72 / 8 / 10 | 67 / 8 / 9 | 62 / 7 / 9 | 58 / 7 / 8 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 42 / 30 / 13<br>NPD | 36 / 30 / 10<br>NPD | 32 / 30 / 8<br>NPD | 28 / 30 / 7<br>NPD |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

| | | |
|---|---|---|
| AGC | **CE Marking of Coated glass - EN 1096-4:2004**<br>**Declaration of performances**<br>**Stopray Metal Blue (Thermally toughened or Heat soaked thermally toughened)** | CE |

We

**AGC Glass Europe**
**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
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Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **Stopray Metal Blue**, intended to be used in buildings and construction works, following **EN 1096-4:2004**

| | **Stopray Metal Blue** characteristics in : | **AVCP Systems** | **4 mm** | **6 mm** | **8 mm** | **10 mm** |
|---|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | 1C3 | 1C2 | 1C2 | 1C1 |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | 200 K | 200 K | 200 K | 200 K |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 30 (-2;-4) | 31 (-2;-3) | 32 (-1;-2) | 34 (-2;-3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | NPD<br>0,04 | NPD<br>0,04 | NPD<br>0,04 | NPD<br>0,04 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 72 / 8 / 10 | 67 / 8 / 9 | 62 / 7 / 9 | 58 / 7 / 8 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 42 / 30 / 13<br>NPD | 36 / 30 / 10<br>NPD | 32 / 30 / 8<br>NPD | 28 / 30 / 7<br>NPD |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

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|---|---|---|
| AGC | **CE Marking of Coated glass - EN 1096-4:2004**<br>**Declaration of performances**<br>**Stopray Indigo 48T (annealed)** | CE |

We

**AGC Glass Europe**
**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **Stopray Indigo 48T**, intended to be used in buildings and construction works, following **EN 1096-4:2004**

| | **Stopray Indigo 48T** characteristics in : | **AVCP Systems** | **6 mm** | **8 mm** |
|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD | NPD |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | NPD | NPD |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 31 (-2;-3) | 32 (-1;-2) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | NPD<br>NPD | NPD<br>NPD |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | NPD | NPD |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | NPD<br>NPD | NPD<br>NPD |
| 14. | Durability | 3 | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

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|---|---|---|
| AGC | **CE Marking of Heat strengthened glass - EN 1863-2:2004**<br>**Declaration of performances**<br>**Stopray Indigo 48T (Heat strengthened)** | CE |

We

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Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **Stopray Indigo 48T Heat strengthened**, intended to be used in buildings and construction works, following **EN 1863-2:2004**

| | **Stopray Indigo 48T Heat strengthened** characteristics in : | **AVCP Systems** | **6 mm** | **8 mm** |
|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD | NPD |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | 100 K | 100 K |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 31 (-2;-3) | 32 (-1;-2) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | NPD<br>0,01 | NPD<br>0,01 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 53 / 5 / 6 | 46 / 5 / 5 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 28 / 38 / 8<br>NPD | 23 / 38 / 6<br>NPD |
| 14. | Durability | 3 | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

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|---|---|---|
| AGC | **CE Marking of Thermally toughened glass - EN 12150-2:2004**<br>**CE Marking of Heat soaked Thermally toughened glass - EN 14179-2:2005**<br>**Declaration of performances**<br>**Stopray Indigo 48T (Thermally toughened or Heat soaked thermally toughened)** | CE |

We

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Chaussée de La Hulpe 166 - B 1170 Brussels
Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **STOPRAY INDIGO 48T Thermally toughened or Heat soaked thermally toughened**, intended to be used in buildings and construction works, following **EN 12150-2:2004 / 14179-2:2005**

| | **Stopray Indigo 48T Thermally toughened or Heat soaked thermally toughened** characteristics in : | **AVCP Systems** | **6 mm** | **8 mm** |
|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | 1C2 | 1C2 |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | 200 K | 200 K |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 31 (-2;-3) | 32 (-1;-2) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | NPD<br>0,01 | NPD<br>0,01 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 53 / 5 / 6 | 46 / 5 / 5 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 28 / 38 / 8 | 23 / 38 / 6 |
| 14. | Durability | 3 | | |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

| | | |
|---|---|---|
| AGC | **CE Marking of Coated glass - EN 1096-4:2004**<br>**Declaration of performances**<br>**Stopray Blue Night (annealed)** | CE |

We

**AGC Glass Europe**
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Chaussée de La Hulpe 166 - B 1170 Brussels
Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **Stopray Blue Night**, intended to be used in buildings and construction works, following **EN 1096-4:2004**

| | **Stopray Blue Night** characteristics in : | **AVCP Systems** | **4 mm** | **6 mm** | **8 mm** | **10 mm** |
|---|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD | NPD | NPD | NPD |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | NPD | NPD | NPD | NPD |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 30 (-2;-4) | 31 (-2;-3) | 32 (-1;-2) | 34 (-2;-3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | NPD<br>0,03 | NPD<br>0,03 | NPD<br>0,03 | NPD<br>0,03 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 25 / 41 / 16 | 18 / 41 / 11 | 13 / 41 / 8 | 10 / 41 / 6 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 13 / 60 / 12<br>NPD | 9 / 60 / 8<br>NPD | 6 / 60 / 6<br>NPD | 5 / 60 / 6<br>NPD |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

| | | |
|---|---|---|
| AGC | **CE Marking of Coated glass - EN 1096-4:2004**<br>**Declaration of performances**<br>**Stopray Blue Night (heat strengthened)** | CE |

We

**AGC Glass Europe**
**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **Stopray Blue Night**, intended to be used in buildings and construction works, following **EN 1096-4:2004**

| | **Stopray Blue Night** characteristics in : | **AVCP Systems** | **4 mm** | **6 mm** | **8 mm** | **10 mm** |
|---|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD | NPD | NPD | NPD |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | 100 K | 100 K | 100 K | 100 K |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 30 (-2;-4) | 31 (-2;-3) | 32 (-1;-2) | 34 (-2;-3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | NPD<br>0,03 | NPD<br>0,03 | NPD<br>0,03 | NPD<br>0,03 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 25 / 41 / 16 | 18 / 41 / 11 | 13 / 41 / 8 | 10 / 41 / 6 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 13 / 60 / 12<br>NPD | 9 / 60 / 8<br>NPD | 6 / 60 / 6<br>NPD | 5 / 60 / 6<br>NPD |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

| | | |
|---|---|---|
| AGC | **CE Marking of Coated glass - EN 1096-4:2004**<br>**Declaration of performances**<br>**Stopray Blue Night (Thermally toughened or Heat soaked thermally toughened)** | CE |

We

**AGC Glass Europe**
**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **Stopray Blue Night**, intended to be used in buildings and construction works, following **EN 1096-4:2004**

| | **Stopray Blue Night** characteristics in : | **AVCP Systems** | **4 mm** | **6 mm** | **8 mm** | **10 mm** |
|---|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | 1C3 | 1C2 | 1C2 | 1C1 |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | 200 K | 200 K | 200 K | 200 K |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 30 (-2;-4) | 31 (-2;-3) | 32 (-1;-2) | 34 (-2;-3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | NPD<br>0,03 | NPD<br>0,03 | NPD<br>0,03 | NPD<br>0,03 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 25 / 41 / 16 | 18 / 41 / 11 | 13 / 41 / 8 | 10 / 41 / 6 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 13 / 60 / 12<br>NPD | 9 / 60 / 8<br>NPD | 6 / 60 / 6<br>NPD | 5 / 60 / 6<br>NPD |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

**CE Marking of Coated glass - EN 1096-4:2004**
**Declaration of performances**
**Stopray Deep Blue (annealed)**

CE

We

**AGC Glass Europe**
**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **Stopray Deep Blue**, intended to be used in buildings and construction works, following **EN 1096-4:2004**

| | **Stopray Deep Blue** characteristics in : | **AVCP Systems** | **4 mm** | **6 mm** | **8 mm** | **10 mm** |
|---|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD | NPD | NPD | NPD |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | NPD | NPD | NPD | NPD |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 30 (-2;-4) | 31 (-2;-3) | 32 (-1;-2) | 34 (-2;-3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | NPD<br>0,03 | NPD<br>0,03 | NPD<br>0,03 | NPD<br>0,03 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 36 / 12 / 6 | 26 / 11 / 5 | 19 / 11 / 5 | 14 / 11 / 5 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 17 / 41 / 7<br>NPD | 12 / 41 / 5<br>NPD | 9 / 41 / 5<br>NPD | 7 / 41 / 5<br>NPD |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

| | | |
|---|---|---|
| AGC | **CE Marking of Coated glass - EN 1096-4:2004**<br>**Declaration of performances**<br>**Stopray Deep Blue (heat strengthened)** | CE |

We

**AGC Glass Europe**
**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **Stopray Deep Blue**, intended to be used in buildings and construction works, following **EN 1096-4:2004**

| | **Stopray Deep Blue** characteristics in : | **AVCP Systems** | **4 mm** | **6 mm** | **8 mm** | **10 mm** |
|---|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD | NPD | NPD | NPD |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | 100 K | 100 K | 100 K | 100 K |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 30 (-2;-4) | 31 (-2;-3) | 32 (-1;-2) | 34 (-2;-3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | NPD<br>0,03 | NPD<br>0,03 | NPD<br>0,03 | NPD<br>0,03 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 36 / 12 / 6 | 26 / 11 / 5 | 19 / 11 / 5 | 14 / 11 / 5 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 17 / 41 / 7<br>NPD | 12 / 41 / 5<br>NPD | 9 / 41 / 5<br>NPD | 7 / 41 / 5<br>NPD |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

**CE Marking of Coated glass - EN 1096-4:2004**
**Declaration of performances**
**Stopray Deep Blue (Thermally toughened or Heat soaked thermally toughened)**

CE

We

**AGC Glass Europe**
**Building Division**
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Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **Stopray Deep Blue**, intended to be used in buildings and construction works, following **EN 1096-4:2004**

| | **Stopray Deep Blue** characteristics in : | **AVCP Systems** | **4 mm** | **6 mm** | **8 mm** | **10 mm** |
|---|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | 1C3 | 1C2 | 1C2 | 1C1 |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | 200 K | 200 K | 200 K | 200 K |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 30 (-2;-4) | 31 (-2;-3) | 32 (-1;-2) | 34 (-2;-3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | NPD<br>0,03 | NPD<br>0,03 | NPD<br>0,03 | NPD<br>0,03 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 36 / 12 / 6 | 26 / 11 / 5 | 19 / 11 / 5 | 14 / 11 / 5 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 17 / 41 / 7<br>NPD | 12 / 41 / 5<br>NPD | 9 / 41 / 5<br>NPD | 7 / 41 / 5<br>NPD |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

| | | |
|---|---|---|
| AGC | **CE Marking of Coated glass - EN 1096-4:2004**<br>**Declaration of performances**<br>**Stopray Marine Blue (annealed)** | CE |

We

**AGC Glass Europe**
**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **Stopray Marine Blue**, intended to be used in buildings and construction works, following **EN 1096-4:2004**

| | **Stopray Marine Blue** characteristics in : | **AVCP Systems** | **4 mm** | **6 mm** | **8 mm** | **10 mm** |
|---|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD | NPD | NPD | NPD |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | NPD | NPD | NPD | NPD |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 30 (-2;-4) | 31 (-2;-3) | 32 (-1;-2) | 34 (-2;-3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | NPD<br>0,04 | NPD<br>0,04 | NPD<br>0,04 | NPD<br>0,04 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 43 / 6 / 7 | 31 / 6 / 6 | 23 / 6 / 5 | 17 / 6 / 5 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 23 / 29 / 7<br>NPD | 16 / 29 / 5<br>NPD | 11 / 29 / 5<br>NPD | 8 / 29 / 5<br>NPD |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

**CE Marking of Coated glass - EN 1096-4:2004**
**Declaration of performances**
**Stopray Marine Blue (heat strengthened)**

CE

We

**AGC Glass Europe**
**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **Stopray Marine Blue**, intended to be used in buildings and construction works, following **EN 1096-4:2004**

| | **Stopray Marine Blue** characteristics in : | **AVCP Systems** | **4 mm** | **6 mm** | **8 mm** | **10 mm** |
|---|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD | NPD | NPD | NPD |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | 100 K | 100 K | 100 K | 100 K |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 30 (-2;-4) | 31 (-2;-3) | 32 (-1;-2) | 34 (-2;-3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | NPD<br>0,04 | NPD<br>0,04 | NPD<br>0,04 | NPD<br>0,04 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 43 / 6 / 7 | 31 / 6 / 6 | 23 / 6 / 5 | 17 / 6 / 5 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 23 / 29 / 7<br>NPD | 16 / 29 / 5<br>NPD | 11 / 29 / 5<br>NPD | 8 / 29 / 5<br>NPD |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

**CE Marking of Coated glass - EN 1096-4:2004**
**Declaration of performances**
**Stopray Marine Blue (Thermally toughened or Heat soaked thermally toughened)**

CE

We

**AGC Glass Europe**
**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **Stopray Marine Blue**, intended to be used in buildings and construction works, following **EN 1096-4:2004**

| | **Stopray Marine Blue** characteristics in : | **AVCP Systems** | **4 mm** | **6 mm** | **8 mm** | **10 mm** |
|---|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | 1C3 | 1C2 | 1C2 | 1C1 |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | 200 K | 200 K | 200 K | 200 K |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 30 (-2;-4) | 31 (-2;-3) | 32 (-1;-2) | 34 (-2;-3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | NPD<br>0,04 | NPD<br>0,04 | NPD<br>0,04 | NPD<br>0,04 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 43 / 6 / 7 | 31 / 6 / 6 | 23 / 6 / 5 | 17 / 6 / 5 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 23 / 29 / 7<br>NPD | 16 / 29 / 5<br>NPD | 11 / 29 / 5<br>NPD | 8 / 29 / 5<br>NPD |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

# Stopsol

| | | |
|---|---|---|
| AGC | **CE Marking of Coated glass - EN 1096-4:2004**<br>**Declaration of performances**<br>**Stopsol Classic Clear (annealed)** | CE |

We

**AGC Glass Europe**
**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **STOPSOL CLASSIC CLEAR**, intended to be used in buildings and construction works, following **EN 1096-4:2004**

| | **Stopsol Classic Clear** characteristics in : | **AVCP Systems** | **4 mm** | **5 mm** | **6 mm** | **8 mm** |
|---|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD | NPD | NPD | NPD |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | NPD | NPD | NPD | NPD |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 30 (-2;-4) | 30 (-1;-2) | 31 (-2;-3) | 32 (-1;-2) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | 5,8<br>0,89 | 5,8<br>0,89 | 5,7<br>0,89 | 5,7<br>0,89 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 38 / 34 / 27 | 38 / 34 / 27 | 38 / 34 / 27 | 37 / 34 / 26 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 48 / 29 / 22<br>54 | 47 / 29 / 22<br>53 | 46 / 29 / 21<br>52 | 44 / 28 / 20<br>51 |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

| | | |
|---|---|---|
| AGC | **CE Marking of Heat strengthened glass - EN 1863-2:2004**<br>**Declaration of performances**<br>**Stopsol Classic Clear Heat strengthened** | CE |

We

**AGC Glass Europe**
**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **STOPSOL CLASSIC CLEAR Heat strengthened**, intended to be used in buildings and construction works, following **EN 1863-2:2004**

| | **Stopsol Classic Clear Heat strengthened** characteristics in : | **AVCP Systems** | **4 mm** | **5 mm** | **6 mm** | **8 mm** |
|---|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD | NPD | NPD | NPD |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | 100 K | 100 K | 100 K | 100 K |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 30 (-2;-4) | 30 (-1;-2) | 31 (-2;-3) | 32 (-1;-2) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | 5,8<br>0,89 | 5,8<br>0,89 | 5,7<br>0,89 | 5,7<br>0,89 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 38 / 34 / 27 | 38 / 34 / 27 | 38 / 34 / 27 | 37 / 34 / 26 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 48 / 29 / 22<br>54 | 47 / 29 / 22<br>53 | 46 / 29 / 21<br>52 | 44 / 28 / 20<br>51 |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

**CE Marking of Thermally toughened glass - EN 12150-2:2004**
**CE Marking of Heat soaked Thermally toughened glass - EN 14179-2:2005**
**Declaration of performances**
**Stopsol Classic Clear Thermally toughened or Heat soaked thermally toughened**

CE

We

**AGC Glass Europe**
**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **STOPSOL CLASSIC CLEAR Thermally toughened or Heat soaked thermally toughened**, intended to be used in buildings and construction works, following **EN 12150-2:2004 / 14179-2:2005**

| | **Stopsol Classic Clear Thermally toughened or Heat soaked thermally toughened** characteristics in : | **AVCP Systems** | **4 mm** | **5 mm** | **6 mm** | **8 mm** |
|---|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | 1C3 | 1C3 | 1C2 | 1C2 |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | 200 K | 200 K | 200 K | 200 K |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 30 (-2;-4) | 30 (-1;-2) | 31 (-2;-3) | 32 (-1;-2) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | 5,8<br>0,89 | 5,8<br>0,89 | 5,7<br>0,89 | 5,7<br>0,89 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 38 / 34 / 27 | 38 / 34 / 27 | 38 / 34 / 27 | 37 / 34 / 26 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 48 / 29 / 22<br>54 | 47 / 29 / 22<br>53 | 46 / 29 / 21<br>52 | 44 / 28 / 20<br>51 |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

| | | |
|---|---|---|
| AGC | **CE Marking of Coated glass - EN 1096-4:2004**<br>**Declaration of performances**<br>**Stopsol Classic Bronze (annealed)** | CE |

We

**AGC Glass Europe**
**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **STOPSOL CLASSIC BRONZE**, intended to be used in buildings and construction works, following **EN 1096-4:2004**

| | **Stopsol Classic Bronze** characteristics in : | **AVCP Systems** | **4 mm** | **5 mm** | **6 mm** |
|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD | NPD | NPD |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | NPD | NPD | NPD |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 30 (-2;-4) | 30 (-1;-2) | 31 (-2;-3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | 5,8<br>0,89 | 5,8<br>0,89 | 5,7<br>0,89 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 26 / 34 / 15 | 24 / 34 / 13 | 22 / 34 / 12 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 35 / 28 / 14<br>44 | 32 / 28 / 12<br>42 | 29 / 28 / 10<br>39 |
| 14. | Durability | 3 | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

| | | |
|---|---|---|
| AGC | **CE Marking of Heat strengthened glass - EN 1863-2:2004**<br>**Declaration of performances**<br>**Stopsol Classic Bronze Heat strengthened** | CE |

We

**AGC Glass Europe**
**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **STOPSOL CLASSIC BRONZE Heat strengthened**, intended to be used in buildings and construction works, following **EN 1863-2:2004**

| | **Stopsol Classic Bronze Heat strengthened** characteristics in : | **AVCP Systems** | **4 mm** | **5 mm** | **6 mm** |
|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD | NPD | NPD |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | 100 K | 100 K | 100 K |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 30 (-2;-4) | 30 (-1;-2) | 31 (-2;-3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | 5,8<br>0,89 | 5,8<br>0,89 | 5,7<br>0,89 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 26 / 34 / 15 | 24 / 34 / 13 | 22 / 34 / 12 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 35 / 28 / 14<br>44 | 32 / 28 / 12<br>42 | 29 / 28 / 10<br>39 |
| 14. | Durability | 3 | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

**CE Marking of Thermally toughened glass - EN 12150-2:2004**
**CE Marking of Heat soaked Thermally toughened glass - EN 14179-2:2005**
**Declaration of performances**
**Stopsol Classic Bronze Thermally toughened or Heat soaked thermally toughened**

CE

We

**AGC Glass Europe**
**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **STOPSOL CLASSIC BRONZE Thermally toughened or Heat soaked thermally toughened**, intended to be used in buildings and construction works, following **EN 12150-2:2004 / 14179-2:2005**

| | **Stopsol Classic Bronze Thermally toughened or Heat soaked thermally toughened** characteristics in : | **AVCP Systems** | **4 mm** | **5 mm** | **6 mm** |
|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | 1C3 | 1C3 | 1C2 |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD | NPD | NPD |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | 200 K | 200 K | 200 K |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 30 (-2;-4) | 30 (-1;-2) | 31 (-2;-3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | 5,8<br>0,89 | 5,8<br>0,89 | 5,7<br>0,89 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 26 / 34 / 15 | 24 / 34 / 13 | 22 / 34 / 12 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 35 / 28 / 14<br>44 | 32 / 28 / 12<br>42 | 29 / 28 / 10<br>39 |
| 14. | Durability | 3 | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

| | | |
|---|---|---|
| AGC | **CE Marking of Coated glass - EN 1096-4:2004**<br>**Declaration of performances**<br>**Stopsol Classic Dark Blue (annealed)** | CE |

We

**AGC Glass Europe**
**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **STOPSOL CLASSIC DARK BLUE**, intended to be used in buildings and construction works, following **EN 1096-4:2004**

| | **Stopsol Classic Dark Blue** characteristics in : | **AVCP Systems** | **6 mm** | **8 mm** |
|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD | NPD |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | NPD | NPD |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 31 (-2;-3) | 32 (-1;-2) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | 5,7<br>0,89 | 5,7<br>0,89 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 24 / 34 / 14 | 20 / 28 / 10 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 21 / 34 / 12<br>32 | 15 / 28 / 8<br>29 |
| 14. | Durability | 3 | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

| | | |
|---|---|---|
| AGC | **CE Marking of Heat strengthened glass - EN 1863-2:2004**<br>**Declaration of performances**<br>**Stopsol Classic Dark Blue Heat strengthened** | CE |

We

**AGC Glass Europe**
**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **STOPSOL CLASSIC DARK BLUE Heat strengthened**, intended to be used in buildings and construction works, following **EN 1863-2:2004**

| | **Stopsol Classic Dark Blue Heat strengthened** characteristics in : | **AVCP Systems** | **6 mm** | **8 mm** |
|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD | NPD |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | 100 K | 100 K |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 31 (-2;-3) | 32 (-1;-2) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | 5,7<br>0,89 | 5,7<br>0,89 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 24 / 34 / 14 | 20 / 28 / 10 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 21 / 34 / 12<br>32 | 15 / 28 / 8<br>29 |
| 14. | Durability | 3 | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

**CE Marking of Thermally toughened glass - EN 12150-2:2004**
**CE Marking of Heat soaked Thermally toughened glass - EN 14179-2:2005**
**Declaration of performances**
**Stopsol Classic Dark Blue Thermally toughened or Heat soaked thermally toughened**

CE

We

**AGC Glass Europe**
**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **STOPSOL CLASSIC DARK BLUE Thermally toughened or Heat soaked thermally toughened**, intended to be used in buildings and construction works, following **EN 12150-2:2004 / 14179-2:2005**

| | **Stopsol Classic Dark Blue Thermally toughened or Heat soaked thermally toughened** characteristics in : | **AVCP Systems** | **6 mm** | **8 mm** |
|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | 1C2 | 1C2 |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | 200 K | 200 K |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 31 (-2;-3) | 32 (-1;-2) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | 5,7<br>0,89 | 5,7<br>0,89 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 24 / 34 / 14 | 20 / 28 / 10 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 21 / 34 / 12<br>32 | 15 / 28 / 8<br>29 |
| 14. | Durability | 3 | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

**CE Marking of Coated glass - EN 1096-4:2004**
**Declaration of performances**
**Stopsol Classic Green (annealed)**

CE

We

**AGC Glass Europe**
**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **STOPSOL CLASSIC GREEN**, intended to be used in buildings and construction works, following **EN 1096-4:2004**

| | **Stopsol Classic Green** characteristics in : | **AVCP Systems** | **4 mm** | **5 mm** | **6 mm** | **8 mm** |
|---|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD | NPD | NPD | NPD |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | NPD | NPD | NPD | NPD |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 30 (-2;-4) | 30 (-1;-2) | 31 (-2;-3) | 32 (-1;-2) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | 5,8<br>0,89 | 5,8<br>0,89 | 5,7<br>0,89 | 5,7<br>0,89 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 33 / 34 / 22 | 32 / 34 / 21 | 31 / 34 / 20 | 29 / 34 / 18 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 28 / 28 / 13<br>39 | 25 / 28 / 12<br>36 | 22 / 28 / 11<br>34 | 18 / 28 / 9<br>30 |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

| | | |
|---|---|---|
| AGC | **CE Marking of Heat strengthened glass - EN 1863-2:2004**<br>**Declaration of performances**<br>**Stopsol Classic Green Heat strengthened** | CE |

We

**AGC Glass Europe**
**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **STOPSOL CLASSIC GREEN Heat strengthened**, intended to be used in buildings and construction works, following **EN 1863-2:2004**

| | **Stopsol Classic Green Heat strengthened** characteristics in : | **AVCP Systems** | **4 mm** | **5 mm** | **6 mm** | **8 mm** |
|---|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD | NPD | NPD | NPD |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | 100 K | 100 K | 100 K | 100 K |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 30 (-2;-4) | 30 (-1;-2) | 31 (-2;-3) | 32 (-1;-2) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | 5,8<br>0,89 | 5,8<br>0,89 | 5,7<br>0,89 | 5,7<br>0,89 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 33 / 34 / 22 | 32 / 34 / 21 | 31 / 34 / 20 | 29 / 34 / 18 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 28 / 28 / 13<br>39 | 25 / 28 / 12<br>36 | 22 / 28 / 11<br>34 | 18 / 28 / 9<br>30 |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

**CE Marking of Thermally toughened glass - EN 12150-2:2004**
**CE Marking of Heat soaked Thermally toughened glass - EN 14179-2:2005**
**Declaration of performances**
**Stopsol Classic Green Thermally toughened or Heat soaked thermally toughened**

CE

We

**AGC Glass Europe**
**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **STOPSOL CLASSIC GREEN Thermally toughened or Heat soaked thermally toughened**, intended to be used in buildings and construction works, following **EN 12150-2:2004 / 14179-2:2005**

| | **Stopsol Classic Green Thermally toughened or Heat soaked thermally toughened** characteristics in : | **AVCP Systems** | **4 mm** | **5 mm** | **6 mm** | **8 mm** |
|---|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | 1C3 | 1C3 | 1C2 | 1C2 |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | 200 K | 200 K | 200 K | 200 K |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 30 (-2;-4) | 30 (-1;-2) | 31 (-2;-3) | 32 (-1;-2) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | 5,8<br>0,89 | 5,8<br>0,89 | 5,7<br>0,89 | 5,7<br>0,89 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 33 / 34 / 22 | 32 / 34 / 21 | 31 / 34 / 20 | 29 / 34 / 18 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 28 / 28 / 13<br>39 | 25 / 28 / 12<br>36 | 22 / 28 / 11<br>34 | 18 / 28 / 9<br>30 |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

| | | |
|---|---|---|
| AGC | **CE Marking of Coated glass - EN 1096-4:2004**<br>**Declaration of performances**<br>**Stopsol Classic Grey (annealed)** | CE |

We

**AGC Glass Europe**
**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **STOPSOL CLASSIC GREY**, intended to be used in buildings and construction works, following **EN 1096-4:2004**

| | **Stopsol Classic Grey** characteristics in : | **AVCP Systems** | **4 mm** | **5 mm** | **6 mm** |
|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD | NPD | NPD |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | NPD | NPD | NPD |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 30 (-2;-4) | 30 (-1;-2) | 31 (-2;-3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | 5,8<br>0,89 | 5,8<br>0,89 | 5,7<br>0,89 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 24 / 34 / 13 | 21 / 34 / 11 | 19 / 34 / 10 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 33 / 28 / 13<br>42 | 30 / 28 / 11<br>40 | 27 / 28 / 10<br>37 |
| 14. | Durability | 3 | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

| | | |
|---|---|---|
| AGC | **CE Marking of Heat strengthened glass - EN 1863-2:2004**<br>**Declaration of performances**<br>**Stopsol Classic Grey Heat strengthened** | CE |

We

**AGC Glass Europe**
**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **STOPSOL CLASSIC GREY Heat strengthened**, intended to be used in buildings and construction works, following **EN 1863-2:2004**

| | **Stopsol Classic Grey Heat strengthened** characteristics in : | **AVCP Systems** | **4 mm** | **5 mm** | **6 mm** |
|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD | NPD | NPD |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | 100 K | 100 K | 100 K |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 30 (-2;-4) | 30 (-1;-2) | 31 (-2;-3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | 5,8<br>0,89 | 5,8<br>0,89 | 5,7<br>0,89 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 24 / 34 / 13 | 21 / 34 / 11 | 19 / 34 / 10 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 33 / 28 / 13<br>42 | 30 / 28 / 11<br>40 | 27 / 28 / 10<br>37 |
| 14. | Durability | 3 | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

**CE Marking of Thermally toughened glass - EN 12150-2:2004**
**CE Marking of Heat soaked Thermally toughened glass - EN 14179-2:2005**
**Declaration of performances**
**Stopsol Classic Grey Thermally toughened or Heat soaked thermally toughened**

CE

We

**AGC Glass Europe**
**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **STOPSOL CLASSIC GREY Thermally toughened or Heat soaked thermally toughened**, intended to be used in buildings and construction works, following **EN 12150-2:2004 / 14179-2:2005**

| | **Stopsol Classic Grey Thermally toughened or Heat soaked thermally toughened** characteristics in : | **AVCP Systems** | **4 mm** | **5 mm** | **6 mm** |
|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | 1C3 | 1C3 | 1C2 |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | 200 K | 200 K | 200 K |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 30 (-2;-4) | 30 (-1;-2) | 31 (-2;-3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | 5,8<br>0,89 | 5,8<br>0,89 | 5,7<br>0,89 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 24 / 34 / 13 | 21 / 34 / 11 | 19 / 34 / 10 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 33 / 28 / 13<br>42 | 30 / 28 / 11<br>40 | 27 / 28 / 10<br>37 |
| 14. | Durability | 3 | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

| | | |
|---|---|---|
| AGC | **CE Marking of Coated glass - EN 1096-4:2004**<br>**Declaration of performances**<br>**Stopsol Phoenix Clear (annealed)** | CE |

We

**AGC Glass Europe**
**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **STOPSOL PHOENIX CLEAR**, intended to be used in buildings and construction works, following **EN 1096-4:2004**

| | **Stopsol Phoenix Clear** characteristics in : | **AVCP Systems** | **4 mm** | **6 mm** | **8 mm** |
|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD | NPD | NPD |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | NPD | NPD | NPD |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 30 (-2;-4) | 31 (-2;-3) | 31 (-2;-3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | 5.7<br>0,89 | 5.7<br>0,89 | 5.6<br>0,89 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 67 / 32 / 31 | 67 / 31 / 30 | 66 / 31 / 30 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 69 / 25 / 23<br>70 | 67 / 25 / 22<br>69 | 64 / 25 / 21<br>67 |
| 14. | Durability | 3 | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

**CE Marking of Heat strengthened glass - EN 1863-2:2004**
**Declaration of performances**
**Stopsol Phoenix Clear Heat strengthened**

CE

We

**AGC Glass Europe**
**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **STOPSOL PHOENIX CLEAR Heat strengthened**, intended to be used in buildings and construction works, following **EN 1863-2:2004**

| | **Stopsol Phoenix Clear Heat strengthened** characteristics in : | **AVCP Systems** | **4 mm** | **6 mm** | **8 mm** |
|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD | NPD | NPD |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | 100 K | 100 K | 100 K |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 30 (-2;-4) | 31 (-2;-3) | 31 (-2;-3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | 5.7<br>0,89 | 5.7<br>0,89 | 5.6<br>0,89 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 67 / 32 / 31 | 67 / 31 / 30 | 66 / 31 / 30 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 69 / 25 / 23<br>70 | 67 / 25 / 22<br>69 | 64 / 25 / 21<br>67 |
| 14. | Durability | 3 | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

**CE Marking of Thermally toughened glass - EN 12150-2:2004**
**CE Marking of Heat soaked Thermally toughened glass - EN 14179-2:2005**
**Declaration of performances**
**Stopsol Phoenix Clear Thermally toughened or Heat soaked thermally toughened**

CE

We

**AGC Glass Europe**
**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **STOPSOL PHOENIX CLEAR Thermally toughened or Heat soaked thermally toughened**, intended to be used in buildings and construction works, following **EN 12150-2:2004/14179-2**

| | **Stopsol Phoenix Clear Thermally toughened or Heat soaked thermally toughened** characteristics in : | **AVCP Systems** | **4 mm** | **6 mm** | **8 mm** |
|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | 1C3 | 1C2 | 1C2 |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | 200 K | 200 K | 200 K |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 30 (-2;-4) | 31 (-2;-3) | 31 (-2;-3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | 5.7<br>0,89 | 5.7<br>0,89 | 5.6<br>0,89 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 67 / 32 / 31 | 67 / 31 / 30 | 66 / 31 / 30 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 69 / 25 / 23<br>70 | 67 / 25 / 22<br>69 | 64 / 25 / 21<br>67 |
| 14. | Durability | 3 | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

| | | |
|---|---|---|
| AGC | **CE Marking of Coated glass - EN 1096-4:2004**<br>**Declaration of performances**<br>**Stopsol Phoenix Green (annealed)** | CE |

We

**AGC Glass Europe**
**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **STOPSOL PHOENIX GREEN**, intended to be used in buildings and construction works, following **EN 1096-4:2004**

| | **Stopsol Phoenix Green** characteristics in : | **AVCP Systems** | **6 mm** | **8 mm** |
|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD | NPD |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | NPD | NPD |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 31 (-2;-3) | 31 (-2;-3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | 5,7<br>0,89 | 5,6<br>0,89 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 54 / 31 / 22 | 50 / 31 / 20 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 34 / 23 / 12<br>34 | 28 / 23 / 11<br>30 |
| 14. | Durability | 3 | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

| | | |
|---|---|---|
| AGC | **CE Marking of Heat strengthened glass - EN 1863-2:2004**<br>**Declaration of performances**<br>**Stopsol Phoenix Green Heat strengthened** | CE |

We

**AGC Glass Europe**
**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **STOPSOL PHOENIX GREEN Heat strengthened**, intended to be used in buildings and construction works, following **EN 1863-2:2004**

| | **Stopsol Phoenix Green Heat strengthened** characteristics in : | **AVCP Systems** | **6 mm** | **8 mm** |
|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD | NPD |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | 100 K | 100 K |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 30 (-2;-4) | 31 (-2;-3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | 5,7<br>0,89 | 5,6<br>0,89 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 54 / 31 / 22 | 50 / 31 / 20 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 34 / 23 / 12<br>34 | 28 / 23 / 11<br>30 |
| 14. | Durability | 3 | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

**CE Marking of Thermally toughened glass - EN 12150-2:2004**
**CE Marking of Heat soaked Thermally toughened glass - EN 14179-2:2005**
**Declaration of performances**
**Stopsol Phoenix Green Thermally toughened or Heat soaked thermally toughened**

CE

We

**AGC Glass Europe**
**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **STOPSOL PHOENIX GREEN Thermally toughened or Heat soaked thermally toughened**, intended to be used in buildings and construction works, following **EN 12150-2:2004 / 14179-2:2005**

| | **Stopsol Phoenix Green Thermally toughened or Heat soaked thermally toughened** characteristics in : | **AVCP Systems** | **6 mm** | **8 mm** |
|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | 1C3 | 1C2 |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | 200 K | 200 K |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 30 (-2;-4) | 31 (-2;-3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | 5,7<br>0,89 | 5,6<br>0,89 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 54 / 31 / 22 | 50 / 31 / 20 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 34 / 23 / 12<br>34 | 28 / 23 / 11<br>30 |
| 14. | Durability | 3 | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

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|---|---|---|
| AGC | **CE Marking of Coated glass - EN 1096-4:2004**<br>**Declaration of performances**<br>**Stopsol Phoenix Grey (annealed)** | CE |

We

**AGC Glass Europe**
**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **STOPSOL PHOENIX GREY**, intended to be used in buildings and construction works, following **EN 1096-4:2004**

| | **Stopsol Phoenix Grey** characteristics in : | **AVCP Systems** | **6 mm** | **8 mm** |
|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD | NPD |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | NPD | NPD |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 31 (-2;-3) | 31 (-2;-3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | 5,7<br>0,89 | 5,6<br>0,89 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 33 / 30 / 11 | 26 / 30 / 8 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 38 / 23 / 10<br>47 | 30 / 23 / 8<br>41 |
| 14. | Durability | 3 | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

| | | |
|---|---|---|
| AGC | **CE Marking of Heat strengthened glass - EN 1863-2:2004**<br>**Declaration of performances**<br>**Stopsol Phoenix Grey Heat strengthened** | CE |

We

**AGC Glass Europe**
**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **STOPSOL PHOENIX GREY Heat strengthened**, intended to be used in buildings and construction works, following **EN 1863-2:2004**

| | **Stopsol Phoenix Grey Heat strengthened** characteristics in : | **AVCP Systems** | **6 mm** | **8 mm** |
|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD | NPD |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | 100 K | 100 K |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 30 (-2;-4) | 31 (-2;-3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | 5,7<br>0,89 | 5,6<br>0,89 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 33 / 30 / 11 | 26 / 30 / 8 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 38 / 23 / 10<br>47 | 30 / 23 / 8<br>41 |
| 14. | Durability | 3 | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

**CE Marking of Thermally toughened glass - EN 12150-2:2004**
**CE Marking of Heat soaked Thermally toughened glass - EN 14179-2:2005**
**Declaration of performances**
**Stopsol Phoenix Grey Thermally toughened or Heat soaked thermally toughened**

CE

We

**AGC Glass Europe**
**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **STOPSOL PHOENIX GREY Thermally toughened or Heat soaked thermally toughened**, intended to be used in buildings and construction works, following **EN 12150-2:2004 / 14179-2:2005**

| | **Stopsol Phoenix Grey Thermally toughened or Heat soaked thermally toughened** characteristics in : | **AVCP Systems** | **6 mm** | **8 mm** |
|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | 1C3 | 1C2 |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | 200 K | 200 K |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 30 (-2;-4) | 31 (-2;-3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | 5,7<br>0,89 | 5,6<br>0,89 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 33 / 30 / 11 | 26 / 30 / 8 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 38 / 23 / 10<br>47 | 30 / 23 / 8<br>41 |
| 14. | Durability | 3 | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

| | | |
|---|---|---|
| AGC | **CE Marking of Coated glass - EN 1096-4:2004**<br>**Declaration of performances**<br>**Stopsol Silverlight PrivaBlue (annealed)** | CE |

We

**AGC Glass Europe**
**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **STOPSOL SILVERLIGHT PRIVABLUE**, intended to be used in buildings and construction works, following **EN 1096-4:2004**

| | **Stopsol Silverlight PrivaBlue** characteristics in : | **AVCP Systems** | **6 mm** | **8 mm** |
|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD | NPD |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | NPD | NPD |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 31 (-2;-3) | 32 (-1;-2) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | 5,7<br>0,89 | 5,7<br>0,89 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 27 / 24 / 8 | 20 / 24 / 6 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 16 / 20 / 6<br>31 | 11 / 20 / 6<br>27 |
| 14. | Durability | 3 | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

| | | |
|---|---|---|
| AGC | **CE Marking of Heat strengthened glass - EN 1863-2:2004**<br>**Declaration of performances**<br>**Stopsol Silverlight PrivaBlue Heat strengthened** | CE |

We

**AGC Glass Europe**
**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **STOPSOL SILVERLIGHT PRIVABLUE Heat strengthened**, intended to be used in buildings and construction works, following **EN 1863-2:2004**

| | **Stopsol Silverlight PrivaBlue Heat strengthened** characteristics in : | **AVCP Systems** | **6 mm** | **8 mm** |
|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD | NPD |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | 100 K | 100 K |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 31 (-2;-3) | 32 (-1;-2) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | 5,7<br>0,89 | 5,7<br>0,89 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 27 / 24 / 8 | 20 / 24 / 6 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 16 / 20 / 6<br>31 | 11 / 20 / 6<br>27 |
| 14. | Durability | 3 | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

**CE Marking of Thermally toughened glass - EN 12150-2:2004**
**CE Marking of Heat soaked Thermally toughened glass - EN 14179-2:2005**
**Declaration of performances**
**Stopsol Silverlight PrivaBlue Thermally toughened or Heat soaked thermally toughened**

CE

We

**AGC Glass Europe**
**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **STOPSOL SILVERLIGHT PRIVABLUE Thermally toughened or Heat soaked thermally toughened**, intended to be used in buildings and construction works, following **EN 12150-2:2004 / 14179-2:2005**

| | **Stopsol Silverlight PrivaBlue Thermally toughened or Heat soaked thermally toughened** characteristics in : | | **6 mm** | **8 mm** |
|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | 1C2 | 1C2 |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | 200 K | 200 K |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 31 (-2;-3) | 32 (-1;-2) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | 5,7<br>0,89 | 5,7<br>0,89 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 27 / 24 / 8 | 20 / 24 / 6 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 16 / 20 / 6<br>31 | 11 / 20 / 6<br>27 |
| 14. | Durability | 3 | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

**CE Marking of Coated glass - EN 1096-4:2004**
**Declaration of performances**
**Stopsol Supersilver Clear (annealed)**

We

**AGC Glass Europe**
**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **STOPSOL SUPERSILVER CLEAR**, intended to be used in buildings and construction works, following **EN 1096-4:2004**

| | **Stopsol Supersilver Clear** characteristics in : | **AVCP Systems** | **4 mm** | **5 mm** | **6 mm** | **8 mm** | **10 mm** |
|---|---|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 | A1 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD | NPD | NPD | NPD | NPD |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | NPD | NPD | NPD | NPD | NPD |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 30 (-2;-4) | 30 (-1;-2) | 31 (-2;-3) | 32 (-1;-2) | 34 (-2;-3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | 5,8<br>0,89 | 5,8<br>0,89 | 5,7<br>0,89 | 5,7<br>0,89 | 5,6<br>0,89 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 64 / 35 / 35 | 64 / 35 / 34 | 63 / 35 / 34 | 62 / 35 / 34 | 62 / 35 / 33 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 66 / 28 / 25<br>68 | 65 / 28 / 25<br>67 | 64 / 27 / 24<br>66 | 62 / 27 / 23<br>64 | 59 / 27 / 22<br>63 |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

**CE Marking of Heat strengthened glass - EN 1863-2:2004**
**Declaration of performances**
**Stopsol Supersilver Clear Heat strengthened**

CE

We

**AGC Glass Europe**
**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **STOPSOL SUPERSILVER CLEAR Heat strengthened**, intended to be used in buildings and construction works, following **EN 1863-2:2004**

| | **Stopsol Supersilver Clear Heat strengthened** characteristics in : | **AVCP Systems** | **4 mm** | **5 mm** | **6 mm** | **8 mm** | **10 mm** |
|---|---|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 | A1 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD | NPD | NPD | NPD | NPD |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | 100 K | 100 K | 100 K | 100 K | 100 K |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 30 (-2;-4) | 30 (-1;-2) | 31 (-2;-3) | 32 (-1;-2) | 34 (-2;-3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | 5,8<br>0,89 | 5,8<br>0,89 | 5,7<br>0,89 | 5,7<br>0,89 | 5,6<br>0,89 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 64 / 35 / 35 | 64 / 35 / 34 | 63 / 35 / 34 | 62 / 35 / 34 | 62 / 35 / 33 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 66 / 28 / 25<br>68 | 65 / 28 / 25<br>67 | 64 / 27 / 24<br>66 | 62 / 27 / 23<br>64 | 59 / 27 / 22<br>63 |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

**CE Marking of Thermally toughened glass - EN 12150-2:2004**
**CE Marking of Heat soaked Thermally toughened glass - EN 14179-2:2005**
**Declaration of performances**
**Stopsol Supersilver Clear Thermally toughened or Heat soaked thermally toughened**

CE

We

**AGC Glass Europe**
**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **STOPSOL SUPERSILVER CLEAR Thermally toughened or Heat soaked thermally toughened**, intended to be used in buildings and construction works, following **EN 12150-2:2004 / 14179-2:2005**

| | **Stopsol Supersilver Clear Thermally toughened or Heat soaked thermally toughened** characteristics in : | **AVCP Systems** | **4 mm** | **5 mm** | **6 mm** | **8 mm** | **10 mm** |
|---|---|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 | A1 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | 1C3 | 1C3 | 1C2 | 1C2 | 1C1 |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | 200 K | 200 K | 200 K | 200 K | 200 K |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 30 (-2;-4) | 30 (-1;-2) | 31 (-2;-3) | 32 (-1;-2) | 34 (-2;-3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | 5,8<br>0,89 | 5,8<br>0,89 | 5,7<br>0,89 | 5,7<br>0,89 | 5,6<br>0,89 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 64 / 35 / 35 | 64 / 35 / 34 | 63 / 35 / 34 | 62 / 35 / 34 | 62 / 35 / 33 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 66 / 28 / 25<br>68 | 65 / 28 / 25<br>67 | 64 / 27 / 24<br>66 | 62 / 27 / 23<br>64 | 59 / 27 / 22<br>63 |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

| | | |
|---|---|---|
| AGC | **CE Marking of Coated glass - EN 1096-4:2004**<br>**Declaration of performances**<br>**Stopsol Supersilver Green (annealed)** | CE |

We

**AGC Glass Europe**
**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **STOPSOL SUPERSILVER GREEN**, intended to be used in buildings and construction works, following **EN 1096-4:2004**

| | **Stopsol Supersilver Green** characteristics in : | **AVCP Systems** | **6 mm** | **8 mm** |
|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD | NPD |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | NPD | NPD |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 31 (-2;-3) | 32 (-1;-2) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | 5,7<br>0,89 | 5,7<br>0,89 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 52 / 34 / 25 | 48 / 34 / 22 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 33 / 26 / 14<br>43 | 27 / 26 / 12<br>38 |
| 14. | Durability | 3 | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

| | | |
|---|---|---|
| AGC | **CE Marking of Heat strengthened glass - EN 1863-2:2004**<br>**Declaration of performances**<br>**Stopsol Supersilver Green Heat strengthened** | CE |

We

**AGC Glass Europe**
**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **STOPSOL SUPERSILVER GREEN Heat strengthened**, intended to be used in buildings and construction works, following **EN 1863-2:2004**

| | **Stopsol Supersilver Green Heat strengthened** characteristics in : | **AVCP Systems** | **6 mm** | **8 mm** |
|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD | NPD |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | 100 K | 100 K |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 31 (-2;-3) | 32 (-1;-2) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | 5,7<br>0,89 | 5,7<br>0,89 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 52 / 34 / 25 | 48 / 34 / 22 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 33 / 26 / 14<br>43 | 27 / 26 / 12<br>38 |
| 14. | Durability | 3 | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

**CE Marking of Thermally toughened glass - EN 12150-2:2004**
**CE Marking of Heat soaked Thermally toughened glass - EN 14179-2:2005**
**Declaration of performances**
**Stopsol Supersilver Green Thermally toughened or Heat soaked thermally toughened**

CE

We

**AGC Glass Europe**
**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **STOPSOL SUPERSILVER GREEN Thermally toughened or Heat soaked thermally toughened**, intended to be used in buildings and construction works, following **EN 12150-2:2004 / 14179-2:2005**

| | **Stopsol Supersilver Green Thermally toughened or Heat soaked thermally toughened** characteristics in : | **AVCP Systems** | **6 mm** | **8 mm** |
|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | 1C2 | 1C2 |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | 200 K | 200 K |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 31 (-2;-3) | 32 (-1;-2) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | 5,7<br>0,89 | 5,7<br>0,89 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 52 / 34 / 25 | 48 / 34 / 22 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 33 / 26 / 14<br>43 | 27 / 26 / 12<br>38 |
| 14. | Durability | 3 | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

| | | |
|---|---|---|
| AGC | **CE Marking of Coated glass - EN 1096-4:2004**<br>**Declaration of performances**<br>**Stopsol Supersilver Grey (annealed)** | CE |

We

**AGC Glass Europe**
**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **STOPSOL Supersilver Grey**, intended to be used in buildings and construction works, following **EN 1096-4:2004**

| | **Stopsol Supersilver Grey** characteristics in : | **AVCP Systems** | **5 mm** | **6 mm** | **8 mm** |
|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD | NPD | NPD |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | NPD | NPD | NPD |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 30 (-1;-2) | 31 (-2;-3) | 32 (-1;-2) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | 5,8<br>0,89 | 5,7<br>0,89 | 5,7<br>0,89 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 34 / 34 / 13 | 29 / 34 / 11 | 23 / 34 / 8 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 38 / 27 / 11<br>46 | 34 / 27 / 10<br>43 | 26 / 26 / 8<br>38 |
| 14. | Durability | 3 | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

| | | |
|---|---|---|
| AGC | **CE Marking of Heat strengthened glass - EN 1863-2:2004**<br>**Declaration of performances**<br>**Stopsol Supersilver Grey Heat strengthened** | CE |

We

**AGC Glass Europe**
**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **STOPSOL Supersilver Grey Heat strengthened**, intended to be used in buildings and construction works, following **EN 1863-2:2004**

| | **Stopsol Supersilver Grey Heat strengthened** characteristics in : | **AVCP Systems** | **5 mm** | **6 mm** | **8 mm** |
|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD | NPD | NPD |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | 100 K | 100 K | 100 K |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 30 (-1;-2) | 31 (-2;-3) | 32 (-1;-2) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | 5,8<br>0,89 | 5,7<br>0,89 | 5,7<br>0,89 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 34 / 34 / 13 | 29 / 34 / 11 | 23 / 34 / 8 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 38 / 27 / 11<br>46 | 34 / 27 / 10<br>43 | 26 / 26 / 8<br>38 |
| 14. | Durability | 3 | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

**CE Marking of Thermally toughened glass - EN 12150-2:2004**
**CE Marking of Heat soaked Thermally toughened glass - EN 14179-2:2005**
**Declaration of performances**
**Stopsol Supersilver Grey Thermally toughened or Heat soaked thermally toughened**

CE

We

**AGC Glass Europe**
**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **STOPSOL Supersilver Grey Thermally toughened or Heat soaked thermally toughened**, intended to be used in buildings and construction works, following **EN 12150-2:2004 / 14179-2:2005**

| | **Stopsol Supersilver Grey Thermally toughened or Heat soaked thermally toughened** characteristics in : | **AVCP Systems** | **5 mm** | **6 mm** | **8 mm** |
|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | 1C3 | 1C2 | 1C2 |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | 200 K | 200 K | 200 K |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 30 (-1;-2) | 31 (-2;-3) | 32 (-1;-2) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | 5,8<br>0,89 | 5,7<br>0,89 | 5,7<br>0,89 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 34 / 34 / 13 | 29 / 34 / 11 | 23 / 34 / 8 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 38 / 27 / 11<br>46 | 34 / 27 / 10<br>43 | 26 / 26 / 8<br>38 |
| 14. | Durability | 3 | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

| | | |
|---|---|---|
| AGC | **CE Marking of Coated glass - EN 1096-4:2004**<br>**Declaration of performances**<br>**Stopsol Supersilver Dark Blue (annealed)** | CE |

We

**AGC Glass Europe**
**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **STOPSOL SUPERSILVER DARK BLUE**, intended to be used in buildings and construction works, following **EN 1096-4:2004**

| | **Stopsol Supersilver Dark Blue** characteristics in : | **AVCP Systems** | **6 mm** | **8 mm** |
|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD | NPD |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | NPD | NPD |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 31 (-2;-3) | 32 (-1;-2) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | 5,7<br>0,89 | 5,7<br>0,89 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 41 / 34 / 17 | 35 / 34 / 14 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 30 / 26 / 12<br>40 | 24 / 26 / 10<br>36 |
| 14. | Durability | 3 | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

| | | |
|---|---|---|
| AGC | **CE Marking of Heat strengthened glass - EN 1863-2:2004**<br>**Declaration of performances**<br>**Stopsol Supersilver Dark Blue Heat strengthened** | CE |

We

**AGC Glass Europe**
**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **STOPSOL SUPERSILVER DARK BLUE Heat strengthened**, intended to be used in buildings and construction works, following **EN 1863-2:2004**

| | **Stopsol Supersilver Dark Blue Heat strengthened** characteristics in : | **AVCP Systems** | **6 mm** | **8 mm** |
|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD | NPD |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | 100 K | 100 K |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 31 (-2;-3) | 32 (-1;-2) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | 5,7<br>0,89 | 5,7<br>0,89 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 41 / 34 / 17 | 35 / 34 / 14 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 30 / 26 / 12<br>40 | 24 / 26 / 10<br>36 |
| 14. | Durability | 3 | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

**CE Marking of Thermally toughened glass - EN 12150-2:2004**
**CE Marking of Heat soaked Thermally toughened glass - EN 14179-2:2005**
**Declaration of performances**
**Stopsol Supersilver Dark Blue Thermally toughened or Heat soaked thermally toughened**

CE

We

**AGC Glass Europe**
**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **STOPSOL SUPERSILVER DARK BLUE Thermally toughened or Heat soaked thermally toughened**, intended to be used in buildings and construction works, following **EN 12150-2:2004 / 14179-2:2005**

| | **Stopsol Supersilver Dark Blue Thermally toughened or Heat soaked thermally toughened** characteristics in : | **AVCP Systems** | **6 mm** | **8 mm** |
|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | 1C2 | 1C2 |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | 200 K | 200 K |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 31 (-2;-3) | 32 (-1;-2) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | 5,7<br>0,89 | 5,7<br>0,89 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 41 / 34 / 17 | 35 / 34 / 14 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 30 / 26 / 12<br>40 | 24 / 26 / 10<br>36 |
| 14. | Durability | 3 | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

# Stratobel

| | | |
|---|---|---|
| AGC | **CE Marking of Laminated glass – EN 14449:2005**<br>**Declaration of performances**<br>**Stratobel clear (22.x, 33.x)** | CE |

We

**AGC Glass Europe**
**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **STRATOBEL**, intended to be used in buildings and construction works, following **EN 14449:2005**

| | **Stratobel** characteristics in : | **AVCP Systems** | **22.1** | **22.2** | **33.1** | **33.2** | **33.4** |
|---|---|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | NPD | NPD | NPD | NPD | NPD |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD | P1A-P2A | P3A-P4A |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | 2B2 | 1B1 | 2B2 | 1B1 | 1B1 |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | NPD | NPD | NPD | NPD | NPD |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | NPD | NPD | 32 (-1;-3) | 33 (-1;-4) | NPD |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | 5,7<br>0,89 | 5,7<br>0,89 | 5,7<br>0,89 | 5,6<br>0,89 | 5,5<br>0,89 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 90 / 8 / 8 | 90 / 8 / 8 | 89 / 8 / 8 | 89 / 8 / 8 | 89 / 8 / 8 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 79 / 7 / 7<br>82 | 77 / 7 / 7<br>81 | 76 / 7 / 7<br>80 | 74 / 7 / 7<br>79 | 72 / 7 / 7<br>77 |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

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|---|---|---|
| AGC | **CE Marking of Laminated glass – EN 14449:2005**<br>**Declaration of performances**<br>**Stratobel clear (44.x, 55.x)** | CE |

We

**AGC Glass Europe**
**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **STRATOBEL**, intended to be used in buildings and construction works, following **EN 14449:2005**

| | **Stratobel** characteristics in : | **AVCP Systems** | **44.1** | **44.2** | **44.4** | **44.6** | **55.1** | **55.2** | **55.4** |
|---|---|---|---|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | NPD | NPD | NPD | NPD | NPD | NPD | NPD |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | P1A-P2A | P3A-P4A | P5A | NPD | P1A-P2A | P3A-P4A |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | 2B2 | 1B1 | 1B1 | 1B1 | 1B1 | 1B1 | 1B1 |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | NPD | NPD | NPD | NPD | NPD | NPD | NPD |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 34 (-1;-2) | 35 (-1;-3) | NPD | 35 (-1;-3) | 35 (-1;-3) | NPD | 36 (-1;-4) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | 5,6<br>0,89 | 5,6<br>0,89 | 5,5<br>0,89 | 5,3<br>0,89 | 5,6<br>0,89 | 5,5<br>0,89 | 5,4<br>0,89 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 88 / 8 / 8 | 88 / 8 / 8 | 88 / 8 / 8 | 88 / 8 / 8 | 87 / 8 / 8 | 87 / 8 / 8 | 87 / 8 / 8 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 73 / 7 / 7<br>78 | 72 / 7 / 7<br>77 | 70 / 7 / 7<br>75 | 69 / 7 / 7<br>74 | 70 / 7 / 7<br>76 | 69 / 7 / 7<br>75 | 67 / 7 / 7<br>73 |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

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|---|---|---|
| AGC | **CE Marking of Laminated glass – EN 14449:2005**<br>**Declaration of performances**<br>**Stratobel clear (66.x)** | CE |

We

**AGC Glass Europe**
**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **STRATOBEL**, intended to be used in buildings and construction works, following **EN 14449:2005**

| | **Stratobel** characteristics in : | **AVCP Systems** | **66.1** | **66.2** | **66.4** | **66.6** |
|---|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | NPD | NPD | NPD | NPD |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | P1A-P2A | P3A-P4A | P5A |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | 1B1 | 1B1 | 1B1 | 1B1 |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | NPD | NPD | NPD | NPD |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | NPD | 36 (-1;-3) | 37 (-1;-4) | NPD |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | 5,5<br>0,89 | 5,4<br>0,89 | 5,3<br>0,89 | 5,2<br>0,89 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 86 / 8 /8 | 86 / 8 / 8 | 86 / 8 / 8 | 86 / 8 / 8 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 68 / 7 / 7<br>74 | 66 / 7 / 7<br>73 | 65 / 6 / 6<br>72 | 64 / 6 / 6<br>71 |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

| AGC | **CE Marking of Laminated glass – EN 14449:2005**<br>**Declaration of performances**<br>**Stratobel clear (88.x, 10 10.x)** | CE |
|---|---|---|

We

**AGC Glass Europe**
**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **STRATOBEL**, intended to be used in buildings and construction works, following **EN 14449:2005**

| | **Stratobel** characteristics in : | **AVCP Systems** | **88.1** | **88.2** | **88.4** | **10 10.2** | **10 10.4** |
|---|---|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | NPD | NPD | NPD | NPD | NPD |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | P1A-P2A | P3A-P4A | P1A-P2A | P3A-P4A |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | 1B1 | 1B1 | 1B1 | 1B1 | 1B1 |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | NPD | NPD | NPD | NPD | NPD |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | NPD | 39 (-1;-3) | NPD | NPD | NPD |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | 5,3<br>0,89 | 5,3<br>0,89 | 5,2<br>0,89 | 5,2<br>0,89 | 5,1<br>0,89 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 84 / 8 / 8 | 84 / 8 / 8 | 84 / 8 / 8 | 82 / 7 / 7 | 82 / 7 / 7 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 63 / 6 / 6<br>70 | 62 / 6 / 6<br>69 | 60 / 6 / 6<br>68 | 58 / 6 / 6<br>66 | 56 / 6 / 6<br>65 |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

| AGC | **CE Marking of Laminated glass – EN 14449:2005**<br>**Declaration of performances**<br>**Stratobel Linea Azzurra (88.x, 10 10.x)** | CE |
|---|---|---|

We

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Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **STRATOBEL LINEA AZZURRA**, intended to be used in buildings and construction works, following **EN 14449:2005**

| | **Stratobel Linea Azzurra** characteristics in : | **AVCP Systems** | **88.2** | **88.4** | **10 10.2** | **10 10.4** |
|---|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | NPD | NPD | NPD | NPD |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | P1A-P2A | P3A-P4A | P1A-P2A | P3A-P4A |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | 1B1 | 1B1 | 1B1 | 1B1 |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | NPD | NPD | NPD | NPD |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 39 (-1;-3) | NPD | NPD | NPD |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | 5,3<br>0,89 | 5,2<br>0,89 | 5,2<br>0,89 | 5,1<br>0,89 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 82 / 7 / 7 | 82 / 7 / 7 | 80 / 7 / 7 | 80 / 7 / 7 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 55 / 6 / 6<br>64 | 53 / 6 / 6<br>63 | 50 / 6 / 6<br>60 | 49 / 6 / 6<br>60 |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

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|---|---|---|
| AGC | **CE Marking of Laminated glass – EN 14449:2005**<br>**Declaration of performances**<br>**Stratobel Top N** | CE |

We

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**Building Division**
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Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **STRATOBEL TOP N**, intended to be used in buildings and construction works, following **EN 14449:2005**

| | **Stratobel Top N** characteristics in : | **AVCP Systems** | **33.1 Top N** | **33.2 Top N** | **44.1 Top N** | **44.2 Top N** | **66.1 Top N** | **66.2 Top N** |
|---|---|---|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | NPD | NPD | NPD | NPD | NPD | NPD |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | P1A-P2A | NPD | P1A-P2A | NPD | P1A-P2A |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | 2B2 | 1B1 | 2B2 | 1B1 | 1B1 | 1B1 |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | NPD | NPD | NPD | NPD | NPD | NPD |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 32 (-1;-3) | 33 (-1;-4) | 34 (-1;-2) | 35 (-1;-3) | NPD | 36 (-1;-3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | NPD<br>0,04 | NPD<br>0,04 | NPD<br>0,04 | NPD<br>0,04 | NPD<br>0,04 | NPD<br>0,04 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 86 / 6 / 8 | 86 / 6 / 8 | 85 / 6 / 8 | 85 / 6 / 8 | 84 / 6 / 8 | 83 / 6 / 8 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 60 / 25 / 18<br>NPD | 59 / 25 / 17<br>NPD | 58 / 25 / 17<br>NPD | 58 / 25 / 16<br>NPD | 56 /24 / 15<br>NPD | 56 / 24 / 14<br>NPD |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

| | | |
|---|---|---|
| AGC | **CE Marking of Laminated glass – EN 14449:2005**<br>**Declaration of performances**<br>**Stratobel Top N+** | CE |

We

**AGC Glass Europe**
**Building Division**
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Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **STRATOBEL TOP N+**, intended to be used in buildings and construction works, following **EN 14449:2005**

| | **Stratobel Top N+** characteristics in : | **AVCP Systems** | **22.1 Top N+** | **22.2 Top N+** | **33.1 Top N+** | **33.2 Top N+** |
|---|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | NPD | NPD | NPD | NPD |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD | P1A-P2A |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | 2B2 | 1B1 | 2B2 | 1B1 |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | NPD | NPD | NPD | NPD |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | NPD | NPD | 32 (-1;-3) | 33 (-1;-4) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | NPD<br>0,03 | NPD<br>0,03 | NPD<br>0,03 | NPD<br>0,03 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 87/6/8 | 87/6/8 | 86/6/7 | 86/6/7 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 57/29/22<br>NPD | 56/29/21<br>NPD | 55/29/20<br>NPD | 54/29/19<br>NPD |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

| | | |
|---|---|---|
| AGC | **CE Marking of Laminated glass – EN 14449:2005**<br>**Declaration of performances**<br>**Stratobel Top N+** | CE |

We

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**Building Division**
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Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **STRATOBEL TOP N+**, intended to be used in buildings and construction works, following **EN 14449:2005**

| | **Stratobel Top N+** characteristics in : | **AVCP Systems** | **44.1 Top N+** | **44.2 Top N+** | **66.1 Top N+** | **66.2 Top N+** |
|---|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | NPD | NPD | NPD | NPD |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | P1A-P2A | NPD | P1A-P2A |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | 2B2 | 1B1 | 1B1 | 1B1 |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | NPD | NPD | NPD | NPD |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 34 (-1;-2) | 35 (-1;-3) | NPD | 36 (-1;-3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | NPD<br>0,03 | NPD<br>0,03 | NPD<br>0,03 | NPD<br>0,03 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 85/6/7 | 85/6/7 | 83/6/7 | 83/6/7 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 53/29/18<br>NPD | 53/29/18<br>NPD | 50/29/16<br>NPD | 50/29/15<br>NPD |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

| | | |
|---|---|---|
| AGC | **CE Marking of Laminated glass – EN 14449:2005**<br>**Declaration of performances**<br>**Stratobel Tri** | CE |

We

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**Building Division**
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Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **STRATOBEL Tri**, intended to be used in buildings and construction works, following **EN 14449:2005**

| | **Stratobel Tri** characteristics in : | **AVCP Systems** | **22.1 Tri** | **22.2 Tri** | **33.1 Tri** | **33.2 Tri** |
|---|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | NPD | NPD | NPD | NPD |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD | P1A-P2A |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | 2B2 | 1B1 | 2B2 | 1B1 |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | NPD | NPD | NPD | NPD |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | NPD | NPD | 32 (-1;-3) | 33 (-1;-4) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | NPD<br>0,07 | NPD<br>0,07 | NPD<br>0,07 | NPD<br>0,07 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 88/7/8 | 88/7/8 | 87/7/8 | 87/7/8 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 68/17/13<br>NPD | 68/17/12<br>NPD | 66/17/12<br>NPD | 65/17/11<br>NPD |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

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|---|---|---|
| AGC | **CE Marking of Laminated glass – EN 14449:2005**<br>**Declaration of performances**<br>**Stratobel Tri** | CE |

We

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**Building Division**
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Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **STRATOBEL Tri**, intended to be used in buildings and construction works, following **EN 14449:2005**

| | **Stratobel Tri** characteristics in : | **AVCP Systems** | **44.1 Tri** | **44.2 Tri** | **55.2 Tri** | **66.2 Tri** |
|---|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | NPD | NPD | NPD | NPD |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | P1A-P2A | NPD | P1A-P2A |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | 2B2 | 1B1 | 1B1 | 1B1 |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | NPD | NPD | NPD | NPD |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 34 (-1;-2) | 35 (-1;-3) | NPD | 36 (-1;-3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | NPD<br>0,07 | NPD<br>0,07 | NPD<br>0,07 | NPD<br>0,07 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 86/7/8 | 86/6/8 | 84/6/8 | 84/6/8 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 64/16/11<br>NPD | 63/16/11<br>NPD | 60/16/10<br>NPD | 59/16/10<br>NPD |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

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|---|---|---|
| AGC | **CE Marking of Laminated glass – EN 14449:2005**<br>**Declaration of performances**<br>**Stratobel Top 1.0** | CE |

We

**AGC Glass Europe**
**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **STRATOBEL Top 1.0**, intended to be used in buildings and construction works, following **EN 14449:2005**

| | **Stratobel Top 1.0** characteristics in : | **AVCP Systems** | **33.1 Top 1.0** | **33.2 Top 1.0** | **44.1 Top 1.0** | **44.2 Top 1.0** | **66.1 Top 1.0** | **66.2 Top 1.0** |
|---|---|---|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | NPD | NPD | NPD | NPD | NPD | NPD |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | P1A-P2A | NPD | P1A-P2A | NPD | P1A-P2A |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | 2B2 | 1B1 | 2B2 | 1B1 | 1B1 | 1B1 |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | NPD | NPD | NPD | NPD | NPD | NPD |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 32 (-1;-3) | 33 (-1;-4) | 34 (-1;-2) | 35 (-1;-3) | NPD | 36 (-1;-3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | NPD<br>0,01 | NPD<br>0,01 | NPD<br>0,01 | NPD<br>0,01 | NPD<br>0,01 | NPD<br>0,01 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 76 / 15 / 17 | 76 / 15 / 17 | 75 / 15 / 17 | 75 / 15 / 17 | 74 / 14 / 16 | 74 / 14 / 16 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 45 / 42 / 30<br>NPD | 44 / 42 / 29<br>NPD | 44 / 42 / 28<br>NPD | 43 / 42 / 27<br>NPD | 42 / 42 / 24<br>NPD | 42 / 42 / 23<br>NPD |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

| | | |
|---|---|---|
| AGC | **CE Marking of Laminated glass – EN 14449:2005**<br>**Declaration of performances**<br>**Stratobel I-Top** | CE |

We

**AGC Glass Europe**
**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **STRATOBEL I-TOP**, intended to be used in buildings and construction works, following **EN 14449:2005**

| | **Stratobel I-Top** characteristics in : | **AVCP Systems** | **33.1 I-Top** | **33.2 I-Top** | **44.1 I-Top** | **44.2 I-Top** |
|---|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | NPD | NPD | NPD | NPD |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | P1A-P2A | NPD | P1A-P2A |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | 2B2 | 1B1 | 2B2 | 1B1 |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | NPD | NPD | NPD | NPD |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 32 (-1;-3) | 33 (-1;-4) | 34 (-1;-2) | 35 (-1;-3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | NPD<br>0,03 | NPD<br>0,03 | NPD<br>0,03 | NPD<br>0,03 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 86 / 6 / 7 | 86 / 6 / 7 | 85 / 5 / 7 | 85 / 5 / 7 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 54 / 28 / 19<br>NPD | 54 / 28 / 18<br>NPD | 52 / 28 / 17<br>NPD | 52 / 28 / 16<br>NPD |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

| | | |
|---|---|---|
| AGC | **CE Marking of Laminated glass – EN 14449:2005**<br>**Declaration of performances**<br>**Stratobel I-Top** | CE |

We

**AGC Glass Europe**
**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
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Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **STRATOBEL I-TOP**, intended to be used in buildings and construction works, following **EN 14449:2005**

| | **Stratobel I-Top** characteristics in : | **AVCP Systems** | **55.1 I-Top** | **55.2 I-Top** | **66.2 I-Top** |
|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | NPD | NPD | NPD |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | P1A-P2A | P1A-P2A |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | 1B1 | 1B1 | 1B1 |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | NPD | NPD | NPD |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 35 (-1;-3) | NPD | 36 (-1;-3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | NPD<br>0,03 | NPD<br>0,03 | NPD<br>0,03 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 84 / 5 / 7 | 84 / 5 / 7 | 83 / 5 / 7 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 51 / 28 / 15<br>NPD | 50 / 28 / 14<br>NPD | 48 / 28 / 13<br>NPD |
| 14. | Durability | 3 | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

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|---|---|---|
| AGC | **CE Marking of Laminated glass – EN 14449:2005**<br>**Declaration of performances**<br>**Stratobel Energy N** | CE |

We

**AGC Glass Europe**
**Division Raw Glass Products**
Chaussée de La Hulpe 166 - B 1170 Brussels
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Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **Stratobel Energy N**, intended to be used in buildings and construction works, following **EN 14449:2005**

| | **Stratobel Energy N** characteristics in : | **AVCP Systems** | **33.1 Energy N** | **33.2 Energy N** | **44.1 Energy N** | **44.2 Energy N** | **66.1 Energy N** | **66.2 Energy N** |
|---|---|---|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | NPD | NPD | NPD | NPD | NPD | NPD |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | P1A-P2A | NPD | P1A-P2A | NPD | P1A-P2A |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | 2B2 | 1B1 | 2B2 | 1B1 | 1B1 | 1B1 |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | NPD | NPD | NPD | NPD | NPD | NPD |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 32 (-1;-3) | 33 (-1;-4) | 34 (-1;-2) | 35 (-1;-3) | NPD | 36 (-1;-3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | NPD<br>0,01 | NPD<br>0,01 | NPD<br>0,01 | NPD<br>0,01 | NPD<br>0,01 | NPD<br>0,01 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 80 / 7 / 7 | 80 / 7 / 7 | 79 / 7 / 7 | 79 / 7 / 7 | 77 / 7 / 6 | 77 / 7 / 6 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 40 / 41 / 26<br>NPD | 40 / 41 / 25<br>NPD | 39 / 41 / 24<br>NPD | 39 / 41 / 23<br>NPD | 38 / 41 / 20<br>NPD | 37 / 41 / 19<br>NPD |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

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|---|---|---|
| AGC | **CE Marking of Laminated glass – EN 14449:2005**<br>**Declaration of performances**<br>**Stratobel Light** | CE |

We

**AGC Glass Europe**
**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
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Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **STRATOBEL LIGHT,** intended to be used in buildings and construction works, following **EN 14449:2005**

| | **Stratobel Light** characteristics in : | **AVCP Systems** | **33.1 Light** | **44.1 Light** |
|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | NPD | NPD |
| 3. | External fire performances | 3, 4 | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | 2B2 | 2B2 |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | NPD | NPD |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 32 (-1;-3) | 34 (-1;-2) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | NPD<br>0,01 | NPD<br>0,01 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 71/19/21 | 71/19/21 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 41/43/29<br>NPD | 40/43/26<br>NPD |
| 14. | Durability | 3 | PASS | PASS |

Brussels
14th of June 2013
Director, Building

E. Ceriani
Primary Sales & Strategic, Marketing

| | | |
|---|---|---|
| AGC | **CE Marking of Laminated glass – EN 14449:2005**<br>**Declaration of performances**<br>**Stratobel G** | CE |

We

**AGC Glass Europe**
**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **STRATOBEL G**, intended to be used in buildings and construction works, following **EN 14449:2005**

| | **Stratobel G**characteristics in : | **AVCP Systems** | **33.1 G** | **33.2 G** | **44.1 G** | **44.2 G** | **66.1 G** | **66.2 G** |
|---|---|---|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | NPD | NPD | NPD | NPD | NPD | NPD |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | P1A-P2A | NPD | P1A-P2A | NPD | P1A-P2A |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | 2B2 | 1B1 | 2B2 | 1B1 | 1B1 | 1B1 |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | NPD | NPD | NPD | NPD | NPD | NPD |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 32 (-1;-3) | 33 (-1;-4) | 34 (-1;-2) | 35 (-1;-3) | NPD | 36 (-1;-3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | 3,6<br>0,14 | 3,6<br>0,14 | 3,6<br>0,14 | 3,6<br>0,14 | 3,5<br>0,14 | 3,5<br>0,14 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 81 / 11 / 10 | 81 / 11 / 10 | 80 / 11 / 10 | 80 / 11 / 10 | 79 / 10 / 10 | 79 / 10 / 10 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 66 / 11 / 9<br>70 | 65 / 11 / 9<br>69 | 64 / 11 / 9<br>68 | 63 / 11 / 8<br>67 | 60 / 10 / 8<br>64 | 59 / 10 / 8<br>64 |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

| | | |
|---|---|---|
| AGC | **CE Marking of Laminated glass – EN 14449:2005**<br>**Declaration of performances**<br>**Stratobel (Burglar resistant)** | CE |

We

**AGC Glass Europe**
**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **STRATOBEL**, intended to be used in buildings and construction works, following **EN 14449:2005**

| | **Stratobel** characteristics in : | **AVCP Systems** | **303-3** | **402-3** | **502-1** | **502-2** | **802-2** | **803-5** | **905-8** |
|---|---|---|---|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | NPD | NPD | NPD | NPD | NPD | NPD | NPD |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | P7B | P5A | P6B | P6B | P6B | P8B | P8B |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | 1B1 | 1B1 | 1B1 | 1B1 | 1B1 | 1B1 | 1B1 |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | NPD | NPD | NPD | NPD | NPD | NPD | NPD |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | NPD | NPD | NPD | NPD | NPD | NPD | NPD |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | 5,0<br>0,89 | 5,2<br>0,89 | 5,1<br>0,89 | 5,1<br>0,89 | 5,1<br>0,89 | 4,8<br>0,89 | 4,3<br>0,89 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 82 / 7 / 7 | 84 / 8 / 8 | 84 / 8 / 8 | 84 / 8 / 8 | 82 / 7 / 7 | 78 / 7 / 7 | 69 / 7 / 7 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 55 / 6 / 6<br>64 | 64 / 6 / 6<br>71 | 63 / 6 / 6<br>70 | 63 / 6 / 6<br>70 | 60 / 6 / 6<br>68 | 51 / 6 / 6<br>61 | 38 / 5 / 5<br>NPD |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

| | | |
|---|---|---|
| AGC | **CE Marking of Laminated glass – EN 14449:2005**<br>**Declaration of performances**<br>**Stratobel (Bullet resistant)** | CE |

We

**AGC Glass Europe**
**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **STRATOBEL**, intended to be used in buildings and construction works, following **EN 14449:2005**

| | **Stratobel** characteristics in : | **AVCP Systems** | **003-2** | **003-5** | **004-3** |
|---|---|---|---|---|---|
| | **Notified Body / Certificate Number :** | | 0749 / 0749-CPD-143<br>0336 / 0336-CPD-9265C<br>0497 / 0497-CPD-4925-13 | 0749 / 0749-CPD-143<br>0336 / 0336-CPD-9265C<br>0497 / 0497-CPD-4925-13 | 0749 / 0749-CPD-143<br>0336 / 0336-CPD-9265C<br>0497 / 0497-CPD-4925-13 |
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | NPD | NPD | NPD |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | BR1 S | BR1 NS | BR3 S |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | P6B |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | 1B1 | 1B1 | 1B1 |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | NPD | NPD | NPD |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | NPD | NPD | NPD |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | 5,2<br>0,89 | 5,2<br>0,89 | 4,7<br>0,89 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 83 / 8 / 8 | 83 / 8 / 8 | 79 / 7 / 7 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 59 / 6 / 6<br>NPD | 59 / 6 / 6<br>NPD | 49 / 6 / 6<br>NPD |
| 14. | Durability | 3 | PASS | PASS | PASS |

Brussels
25th of July 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

| | | |
|---|---|---|
| AGC | **CE Marking of Laminated glass – EN 14449:2005**<br>**Declaration of performances**<br>**Stratobel (Bullet resistant)** | CE |

We

**AGC Glass Europe**
**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **STRATOBEL**, intended to be used in buildings and construction works, following **EN 14449:2005**

| | **Stratobel** characteristics in : | **AVCP Systems** | **103-3 (88-C)** | **104-1** | **402-1** |
|---|---|---|---|---|---|
| | **Notified Body / Certificate Number :** | | 0749 / 0749-CPD-143<br>0336 / 0336-CPD-9265C<br>0497 / 0497-CPD-4925-13 | 0749 / 0749-CPD-143<br>0336 / 0336-CPD-9265C | 0749 / 0749-CPD-143<br>0336 / 0336-CPD-9265C<br>0497 / 0497-CPD-4925-13 |
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | NPD | NPD | NPD |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | BR2 S | BR2 NS | BR1 S |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | P7B | P6B | P4A |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | 1B1 | 1B1 | 1B1 |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | NPD | NPD | NPD |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | NPD | NPD | NPD |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | 4,9<br>0,89 | 4,8<br>0,89 | 5,3<br>0,89 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 84 / 8 / 8 | 78 / 7 / 7 | 85 / 8 / 8 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 58 / 6 / 6<br>NPD | 49 / 6 / 6<br>59 | 66 / 6 / 6<br>72 |
| 14. | Durability | 3 | PASS | PASS | PASS |

Brussels
25th of July 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

| | | |
|---|---|---|
| AGC | **CE Marking of Laminated glass – EN 14449:2005**<br>**Declaration of performances**<br>**Stratobel (Bullet resistant)** | CE |

We

**AGC Glass Europe**
**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **STRATOBEL**, intended to be used in buildings and construction works, following **EN 14449:2005**

| | **Stratobel** characteristics in : | **AVCP Systems** | **403-3** | **504-4** | **603-1** |
|---|---|---|---|---|---|
| | **Notified Body / Certificate Number :** | | 0749 / 0749-CPD-143<br>0336 / 0336-CPD-9265C | 0749 / 0749-CPD-143<br>0336 / 0336-CPD-9265C | 0749 / 0749-CPD-143<br>0336 / 0336-CPD-9265C |
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | NPD | NPD | NPD |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | BR2 S | BR5 S/SG2 S | BR3S |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | P8B | P6B |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | 1B1 | 1B1 | 1B1 |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | NPD | NPD | NPD |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | NPD | NPD | NPD |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | 5,1<br>0,89 | 4,5<br>0,89 | 4,9<br>0,89 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 81 / 7 / 7 | 74 / 7 / 7 | 80 / 7 / 7 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 54 / 6 / 6<br>NPD | 45 / 5 / 5<br>58 | 52 / 6 / 6<br>62 |
| 14. | Durability | 3 | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

| | | |
|---|---|---|
| AGC | **CE Marking of Laminated glass – EN 14449:2005**<br>**Declaration of performances**<br>**Stratobel (Bullet resistant)** | CE |

We

**AGC Glass Europe**
**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **STRATOBEL**, intended to be used in buildings and construction works, following **EN 14449:2005**

| | **Stratobel** characteristics in : | **AVCP Systems** | **603-6** | **703-3** | **704-3** |
|---|---|---|---|---|---|
| | **Notified Body / Certificate Number :** | | 0749 / 0749-CPD-143<br>0336 / 0336-CPD-9265C | 0749 / 0749-CPD-143<br>0336 / 0336-CPD-9265C<br>0497 / 0497-CPD-4925-13 | 0749 / 0749-CPD-143<br>0336 / 0336-CPD-9265C |
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | NPD | NPD | NPD |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | BR1 S | BR2 S | BR3 NS |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | P3A | P6B |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | 1B1 | 1B1 | 1B1 |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | NPD | NPD | NPD |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | NPD | NPD | NPD |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | 5,1<br>0,89 | 5,1<br>0,89 | 4,6<br>0,89 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 80 / 7 / 7 | 80 / 7 / 7 | 74 / 7 / 7 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 53 / 6 / 6<br>NPD | 53 / 6 / 6<br>NPD | 45 / 5 / 5<br>NPD |
| 14. | Durability | 3 | PASS | PASS | PASS |

Brussels
25th of July 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

| | | |
|---|---|---|
| AGC | **CE Marking of Laminated glass – EN 14449:2005**<br>**Declaration of performances**<br>**Stratobel (Bullet resistant)** | CE |

We

**AGC Glass Europe**
**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **STRATOBEL**, intended to be used in buildings and construction works, following **EN 14449:2005**

| | **Stratobel** characteristics in : | **AVCP Systems** | **803-6** | **902-4** | **902-5** |
|---|---|---|---|---|---|
| | **Notified Body / Certificate Number :** | | 0749 / 0749-CPD-143<br>0336 / 0336-CPD-9265C<br>0497 / 0497-CPD-4925-13 | 0749 / 0749-CPD-143<br>0336 / 0336-CPD-9265C<br>0497 / 0497-CPD-4925-13 | 0749 / 0749-CPD-143<br>0336 / 0336-CPD-9265C<br>0497 / 0497-CPD-4925-13 |
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | NPD | NPD | NPD |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | BR2 S | BR1 S | BR1 S |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | P2A | P3A |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | 1B1 | 1B1 | 1B1 |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | NPD | NPD | NPD |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | NPD | NPD | NPD |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | 4,9<br>0,89 | 5,3<br>0,89 | 5,3<br>0,89 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 79 / 7 / 7 | 83 / 8 / 8 | 83 / 8 / 8 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 51 / 6 / 6<br>NPD | 60 / 6/ 6<br>NPD | 60 / 6 / 6<br>NPD |
| 14. | Durability | 3 | PASS | PASS | PASS |

Brussels
25th of July 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

| AGC | **CE Marking of Laminated glass – EN 14449:2005**<br>**Declaration of performances**<br>**Stratobel (Bullet resistant)** | CE |
|---|---|---|

We

**AGC Glass Europe**
**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **STRATOBEL**, intended to be used in buildings and construction works, following **EN 14449:2005**

| | **Stratobel** characteristics in : | **AVCP Systems** | **003-1** | **009-1** | **304-6** |
|---|---|---|---|---|---|
| | **Notified Body / Certificate Number :** | | 0749 / 0749-CPD-143<br>0336 / 0336-CPD-9265C | 0336 / 0336-CPD-9265C | 0749 / 0749-CPD-143<br>0336 / 0336-CPD-9265C |
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | NPD | NPD | NPD |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | BR2 S | BR7 NS | BR4 S / SG1 S |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | P2A | P8B | P6B |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | 1B1 | 1B1 | 1B1 |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | NPD | NPD | NPD |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | NPD | NPD | NPD |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | 5,1<br>0,89 | 3,6<br>0,89 | 4,6<br>0,89 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 83 / 8 / 8 | 62 / 6 / 6 | 78 / 7 / 7 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 58 / 6 / 6<br>66 | 27 / 5 / 5<br>NPD | 48 / 6 / 6<br>59 |
| 14. | Durability | 3 | PASS | PASS | PASS |

Brussels
25th of July 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

| | | |
|---|---|---|
| AGC | **CE Marking of Laminated glass – EN 14449:2005**<br>**Declaration of performances**<br>**Stratobel (Bullet resistant)** | CE |

We

**AGC Glass Europe**
**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **STRATOBEL**, intended to be used in buildings and construction works, following **EN 14449:2005**

| | **Stratobel** characteristics in : | **AVCP Systems** | **408-1** | **802-5** | **806-2** |
|---|---|---|---|---|---|
| | **Notified Body / Certificate Number :** | | 0336 / 0336-CPD-9265C | 0749 / 0749-CPD-143<br>0336 / 0336-CPD-9265C | 0336 / 0336-CPD-9265C |
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | NPD | NPD | NPD |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | BR6 NS | BR1 NS | BR5 NS |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | P8B | P2A | P7B |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | 1B1 | 1B1 | 1B1 |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | NPD | NPD | NPD |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | NPD | NPD | NPD |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | 3,9<br>0,89 | 5,2<br>0,89 | 4,3<br>0,89 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 61 / 6 / 6 | 84 / 8 / 8 | 69 / 7 / 7 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 28 / 5 / 5<br>44 | 60 / 6 / 6<br>68 | 36 / 5 / 5<br>48 |
| 14. | Durability | 3 | PASS | PASS | PASS |

Brussels
25th of July 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

| | | |
|---|---|---|
| AGC | **CE Marking of Double Glazing Unit – EN 1279-5**<br>**Declaration of performances**<br>**Stratobel (Bullet resistant) in DGU** | CE |

We

**AGC Glass Europe**
**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **STRATOBEL**, intended to be used in buildings and construction works, following **EN 1279-5**

| | **Stratobel** characteristics in : | **AVCP Systems** | **1207-1** | **3209-1** | **4207-1** |
|---|---|---|---|---|---|
| | **Notified Body / Certificate Number :** | | 0336 / 0336-CPD-9265C | 0336 / 0336-CPD-9265C | 0336 / 0336-CPD-9265C |
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | NPD | NPD | NPD |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | BR4 NS / BR6 S | BR6 NS | BR5 NS |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | P4A | P6B | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | 1B1 / 1B1 | 1B1 / 1B1 | 1B1 / 1B1 |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | NPD | NPD | NPD |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | NPD | NPD | NPD |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | 2,6<br>NPD | 2,4<br>NPD | 2,5<br>NPD |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 65 / 12 / 12 | 58 / 11 / 11 | 65 / 12 / 12 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 34 / 8 / 8<br>NPD | 27 / 7 / 7<br>NPD | 33 / 8 / 8<br>NPD |
| 14. | Durability | 3 | PASS | PASS | PASS |

Brussels
25th of July 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

| | | |
|---|---|---|
| AGC | **CE Marking of Double Glazing Unit – EN 1279-5**<br>**Declaration of performances**<br>**Stratobel (Bullet resistant) in DGU** | CE |

We

**AGC Glass Europe**
**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **STRATOBEL**, intended to be used in buildings and construction works, following **EN 1279-5**

| | **Stratobel** characteristics in : | **AVCP Systems** | **6208-1** | **8209-1** | **9207-1** |
|---|---|---|---|---|---|
| | **Notified Body / Certificate Number :** | | 0336 / 0336-CPD-9265C | 0336 / 0336-CPD-9265C | 0336 / 0336-CPD-9265C |
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | NPD | NPD | NPD |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | BR7 S | BR7 NS | SG1 NS |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | P8B | P8B | P4A |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | 1B1 / 1B1 | 1B1 / 1B1 | 1B1 / 1B1 |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | NPD | NPD | NPD |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | NPD | NPD | NPD |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | 2,4<br>NPD | 2,3<br>NPD | 2,5<br>NPD |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 61 / 11 / 11 | 57 / 11 / 11 | 62 / 12 / 12 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 29 / 8 / 8<br>NPD | 25 / 7 / 7<br>NPD | 31 / 8 / 8<br>NPD |
| 14. | Durability | 3 | PASS | PASS | PASS |

Brussels
25th of July 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

| | | |
|---|---|---|
| AGC | **CE Marking of Double Glazing Unit – EN 1279-5**<br>**Declaration of performances**<br>**Stratobel (Bullet resistant) in DGU** | CE |

We

**AGC Glass Europe**
**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **STRATOBEL**, intended to be used in buildings and construction works, following **EN 1279-5**

| | **Stratobel** characteristics in : | **AVCP Systems** | **9208-1** |
|---|---|---|---|
| | **Notified Body / Certificate Number :** | | 0336 / 0336-CPD-9265C |
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | NPD |
| 3. | External fire performances | 3, 4 | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | SG2 NS |
| 5. | Explosion resistance (EN 13541) | 1 | NPD |
| 6. | Burglar resistance (EN 356) | 3 | P8B |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | 1B1 / 1B1 |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | NPD |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | NPD |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | 2,3<br>NPD |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 61 / 11 / 11 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 28 / 7 / 7<br>NPD |
| 14. | Durability | 3 | PASS |

Brussels
25th of July 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

| | | |
|---|---|---|
| AGC | **CE Marking of Laminated glass – EN 14449:2005**<br>**Declaration of performances**<br>**Stratobel (Blast resistant)** | CE |

We

**AGC Glass Europe**
**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **STRATOBEL**, intended to be used in buildings and construction works, following **EN 13541**

| | **Stratobel** characteristics in : | **AVCP Systems** | **002-2** | **902-2** |
|---|---|---|---|---|
| | **Certificate Number:**<br>**Notified Body :** | | 0749 / 0749-CPD-143<br>0336 / 0336-CPD-9265C<br>0497 / 0497-CPD-4925-13 | 0749 / 0749-CPD-143<br>0336 / 0336-CPD-9265C<br>0497 / 0497-CPD-4925-13 |
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | NPD | NPD |
| 3. | External fire performances | 3, 4 | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | ER1 S | ER2 S |
| 6. | Burglar resistance (EN 356) | 3 | P5A | P6B |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | 1B1 | 1B1 |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | NPD | NPD |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 35 (-1;-3) | NPD |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | 5,4<br>0,89 | 5,0<br>0,89 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 86 / 8 / 8 | 84 / 8 / 8 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 69 / 7 / 7<br>74 | 59 / 6 / 6<br>NPD |
| 14. | Durability | 3 | PASS | PASS |

Brussels
25th of July 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

| | | |
|---|---|---|
| AGC | **CE Marking of Laminated glass – EN 14449:2005**<br>**Declaration of performances**<br>**Stratobel Color Standard** | CE |

We

**AGC Glass Europe**
**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **STRATOBEL COLOR STANDARD**, intended to be used in buildings and construction works, following **EN 14449:2005**

| | **Stratobel color standard** characteristics in : | **AVCP Systems** | **33.1 Blue green 3773** | **33.1 Bronze 6542** | **33.1 French Bronze 5538** | **33.1 Medium bronze 3628** | **33.1 Grey 6544** |
|---|---|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | NPD | NPD | NPD | NPD | NPD |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | 2B2 | 2B2 | 2B2 | 2B2 | 2B2 |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | NPD | NPD | NPD | NPD | NPD |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 32 (-1;-3) | 32 (-1;-3) | 32 (-1;-3) | 32 (-1;-3) | 32 (-1;-3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | 5,7<br>0,89 | 5,7<br>0,89 | 5,7<br>0,89 | 5,7<br>0,89 | 5,7<br>0,89 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 73 / 7 / 7 | 54 / 6 / 6 | 58 / 6 / 6 | 29 / 5 / 5 | 42 / 5 / 5 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 68 / 6 / 6<br>NPD | 53 / 6 / 6<br>NPD | 57 / 6 / 6<br>NPD | 32 / 5 / 5<br>NPD | 48 / 5 / 5<br>NPD |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

| | | |
|---|---|---|
| AGC | **CE Marking of Laminated glass – EN 14449:2005**<br>**Declaration of performances**<br>**Stratobel Color Standard** | CE |

We

**AGC Glass Europe**
**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **STRATOBEL COLOR STANDARD**, intended to be used in buildings and construction works, following **EN 14449:2005**

| | **Stratobel color standard** characteristics in : | **AVCP Systems** | **33.1 Mat 2165** | **33.2 Mat 2165** | **44.1 Mat 2165** | **44.2 Mat 2165** |
|---|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | NPD | NPD | NPD | NPD |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | P1A–P2A | NPD | P1A–P2A |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | 2B2 | 1B1 | 2B2 | 1B1 |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | NPD | NPD | NPD | NPD |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 32 (-1;-3) | 33 (-1;-4) | 34 (-1;-2) | 35 (-1;-3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | 5,7<br>0,89 | 5,6<br>0,89 | 5,6<br>0,89 | 5,5<br>0,89 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 67 / 12 / 12 | 68 / 12 / 12 | 66 / 12 / 12 | 67 / 12 / 12 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 61 / 10 / 10<br>NPD | 61 / 10 / 10<br>NPD | 59 / 10 / 10<br>NPD | 59 / 10 / 10<br>NPD |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

| | | |
|---|---|---|
| AGC | **CE Marking of Laminated glass – EN 14449:2005**<br>**Declaration of performances**<br>**Stratobel Color Rainnbow** | CE |

We

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Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **STRATOBEL COLOR RAINBOW**, intended to be used in buildings and construction works, following **EN 14449:2005**

| | **Stratobel color rainbow** characteristics in : | **AVCP Systems** | **33.1 Vanceva 1 Coral Rose** | **33.1 Vanceva 2 Aquamarine** | **33.1 Vanceva 3 Smoke Grey** | **33.1 Vanceva 4 Sahara Sun** | **33.1 Vanceva 5 Ruby Red** |
|---|---|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | NPD | NPD | NPD | NPD | NPD |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | 2B2 | 2B2 | 2B2 | 2B2 | 2B2 |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | NPD | NPD | NPD | NPD | NPD |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 32 (-1;-3) | 32 (-1;-3) | 32 (-1;-3) | 32 (-1;-3) | 32 (-1;-3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | 5,7<br>0,89 | 5,7<br>0,89 | 5,7<br>0,89 | 5,7<br>0,89 | 5,7<br>0,89 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 77 / 7 / 7 | 79 / 7 / 7 | 78 / 7 / 7 | 77 / 7 / 7 | 48 / 6 / 6 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 73 / 7 / 7<br>NPD | 71 / 7 / 7<br>NPD | 69 / 7 / 7<br>NPD | 62 / 6 / 6<br>NPD | 63 / 6 / 6<br>NPD |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

| | | |
|---|---|---|
| AGC | **CE Marking of Laminated glass – EN 14449:2005**<br>**Declaration of performances**<br>**Stratobel Color Rainbow** | CE |

We

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Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **STRATOBEL COLOR RAINBOW**, intended to be used in buildings and construction works, following **EN 14449:2005**

| | **Stratobel color rainbow** characteristics in : | **AVCP Systems** | **33.1 Vanceva 6 Sapphire** | **33.1 Vanceva 7 Midnight** | **33.1 Vanceva 8 Golden light** | **33.1 Vanceva 9 Artic Snow** | **44.1 Vanceva 9 Artic Snow** |
|---|---|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | NPD | NPD | NPD | NPD | NPD |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | 2B2 | 2B2 | 2B2 | 2B2 | 2B2 |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | NPD | NPD | NPD | NPD | NPD |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 32 (-1;-3) | 32 (-1;-3) | 32 (-1;-3) | 32 (-1;-3) | 34 (-1;-2) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | 5,7<br>0,89 | 5,7<br>0,89 | 5,7<br>0,89 | 5,7<br>0,89 | 5,7<br>0,89 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 52 / 6 / 6 | 50 / 5 / 5 | 86 / 8 / 8 | 67 / 12 / 12 | 66 / 12 / 12 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 57 / 6 / 6<br>NPD | 48 / 5 / 5<br>NPD | 70 / 7 / 7<br>NPD | 61 / 10 / 10<br>NPD | 59 / 10 / 10<br>NPD |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

| | | |
|---|---|---|
| AGC | **CE Marking of Laminated glass – EN 14449:2005**<br>**Declaration of performances**<br>**Stratobel Color Rainbow** | CE |

We

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Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **STRATOBEL COLOR RAINBOW**, intended to be used in buildings and construction works, following **EN 14449:2005**

| | **Stratobel color rainbow** characteristics in : | **AVCP Systems** | **33.1 Vanceva A Cool White** | **44.1 Vanceva A Cool White** | **33.2 Vanceva C003 Pure White** | **33.1 Vanceva C Deep Red** | **33.1 Vanceva D True Blue** |
|---|---|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | NPD | NPD | NPD | NPD | NPD |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | P1A–P2A | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | 2B2 | 2B2 | 1B1 | 2B2 | 2B2 |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | NPD | NPD | NPD | NPD | NPD |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 32 (-1;-3) | 34 (-1;-2) | NPD | 32 (-1;-3) | 32 (-1;-3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | 5,7<br>0,89 | 5,7<br>0,89 | 5,7<br>0,89 | 5,7<br>0,89 | 5,7<br>0,89 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 83 / 9 / 9 | 82 / 9 / 9 | 8 / 63 / 63 | 16 / 5 / 5 | 14 / 4 / 4 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 72 / 8 / 8<br>NPD | 70 / 8 / 8<br>NPD | 8 / 47 / 47<br>NPD | 35 / 5 / 5<br>NPD | 41 / 5 / 5<br>NPD |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

# Stratobel EVA

| | | |
|---|---|---|
| AGC | **CE Marking of Laminated glass – EN 14449:2005**<br>**Declaration of performances**<br>**Stratobel EVA** | CE |

We

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**Building Division**
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Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **STRATOBEL EVA**, intended to be used in buildings and construction works, following **EN 14449:2005**

| | **Stratobel EVA** characteristics with tempered components: | **AVCP Systems** | **55.2T** | **66.2T** | **68.2T** | **88.2T** | **10 10.3T** | **12 12.3T** | **15 15.4T** |
|---|---|---|---|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | NPD | NPD | NPD | NPD | NPD | NPD | NPD |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD | NPD | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | 1B1 | 1B1 | 1B1 | 1B1 | 1B1 | 1B1 | 1B1 |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | NPD | NPD | NPD | NPD | NPD | NPD | NPD |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | NPD | NPD | NPD | NPD | NPD | NPD | NPD |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | 5,5<br>0,89 | 5,4<br>0,89 | 5,4<br>0,89 | 5,3<br>0,89 | 5,2<br>0,89 | 5,1<br>0,89 | 4,9<br>0,89 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 86 / 8 / 8 | 85 / 8 / 8 | 84 / 8 / 8 | 83 / 8 / 8 | 81 / 7 / 7 | 80 / 7 / 7 | 77 / 7 / 7 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 67 / 7 / 7<br>NPD | 65 / 6 / 6<br>NPD | 63 / 6 / 6<br>NPD | 61 / 6 / 6<br>NPD | 55 / 6 / 6<br>NPD | 52 / 6 / 6<br>NPD | 47 / 6 / 6<br>NPD |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

# Stratobel Impression

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|---|---|---|
| AGC | **CE Marking of Laminated glass – EN 14449:2005**<br>**Declaration of performances**<br>**Stratobel Impression** | CE |

We

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**Building Division**
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Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **STRATOBEL Impression**, intended to be used in buildings and construction works, following **EN 14449:2005**

| | **Stratobel Impression** characteristics: | **AVCP Systems** | **33.3** | **44.3** | **55.3** | **66.3** | **88.3** | **10 10.3** |
|---|---|---|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | NPD | NPD | NPD | NPD | NPD | NPD |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | 1B1 | 1B1 | 1B1 | 1B1 | 1B1 | 1B1 |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | NPD | NPD | NPD | NPD | NPD | NPD |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | NPD | NPD | NPD | NPD | NPD | NPD |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | NPD<br>NPD | NPD<br>NPD | NPD<br>NPD | NPD<br>NPD | NPD<br>NPD | NPD<br>NPD |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | NPD | NPD | NPD | NPD | NPD | NPD |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | NPD<br>NPD | NPD<br>NPD | NPD<br>NPD | NPD<br>NPD | NPD<br>NPD | NPD<br>NPD |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

# Stratobel PC

| | | |
|---|---|---|
| AGC | **CE Marking of Laminated glass – EN 14449:2005**<br>**Declaration of performances**<br>**Stratobel PC (Burglar resistant)** | CE |

We

**AGC Glass Europe**
**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
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Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **STRATOBEL PC**, intended to be used in buildings and construction works, following **EN 14449:2005**

| | **Stratobel PC** characteristics in : | **AVCP Systems** | **214.541** | **216.541** | **219.841** |
|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | NPD | NPD | NPD |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | P6B | P7B | P8B |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | 1(B)1 | 1(B)1 | 1(B)1 |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | NPD | NPD | NPD |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | NPD | NPD | NPD |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | 5,3<br>0,89 | 5,3<br>0,89 | 5,1<br>0,89 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 85 / 8 / 8 | 84 / 8 / 8 | 83 / 8 / 8 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 67 / 7 / 7<br>73 | 65 / 7 / 7<br>72 | 64 / 6 / 6<br>71 |
| 14. | Durability | 3 | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

| | | |
|---|---|---|
| AGC | **CE Marking of Laminated glass – EN 14449:2005**<br>**Declaration of performances**<br>**Stratobel PC (Bullet resistant)** | CE |

We

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Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **STRATOBEL PC**, intended to be used in buildings and construction works, following **EN 14449:2005**

| | **Stratobel PC** characteristics in : | **AVCP Systems** | **810.361** | **815.051** | **819.070** | **823.860** |
|---|---|---|---|---|---|---|
| | **Certificate Number:**<br>**Notified Body :** | | 0336-CPD-9265C<br>0336 | 0336-CPD-9265C<br>0336 | 0336-CPD-9265C<br>0336 | 0336-CPD-9265C<br>0336 |
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | NPD | NPD | NPD | NPD |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | BR1 NS | BR2 NS | BR3 NS | BR4 NS / SG1 NS |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | ER3 NS |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | 1(B)1 | 1(B)1 | 1(B)1 | 1(B)1 |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | NPD | NPD | NPD | NPD |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | NPD | NPD | NPD | NPD |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | 5,3<br>0,89 | 5,3<br>0,89 | 5,2<br>0,89 | 5,0<br>0,89 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 85 / 8 / 8 | 85 / 8 / 8 | 83 / 8 / 8 | 80 / 7 / 7 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 66 / 6 / 6<br>72 | 65 / 6 / 6<br>72 | 60 / 6 / 6<br>68 | 54 / 6 / 6<br>63 |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

| | | |
|---|---|---|
| AGC | **CE Marking of Laminated glass – EN 14449:2005**<br>**Declaration of performances**<br>**Stratobel PC (Bullet resistant)** | CE |

We

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Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **STRATOBEL PC**, intended to be used in buildings and construction works, following **EN 14449:2005**

| | **Stratobel PC** characteristics in : | **AVCP Systems** | **835.800** | **841.370** | **869.600** |
|---|---|---|---|---|---|
| | **Certificate Number:**<br>**Notified Body :** | | 0336-CPD-9265C<br>0336 | 0336-CPD-9265C<br>0336 | 0336-CPD-9265C<br>0336 |
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | NPD | NPD | NPD |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | BR5 NS / SG2 NS | BR6 NS | BR7 NS |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | 1(B)1 | 1(B)1 | 1(B)1 |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | NPD | NPD | NPD |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | NPD | NPD | NPD |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | 4,7<br>0,89 | 4,5<br>0,89 | 3,6<br>0,89 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 76 / 7 / 7 | 74 / 7 / 7 | 58 / 6 / 6 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 46 / 6 / 6<br>58 | 43 / 5 / 5<br>55 | 25 / 5 / 5<br>41 |
| 14. | Durability | 3 | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

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|---|---|---|
| AGC | **CE Marking of Double Glazing Unit – EN 1279-5**<br>**Declaration of performances**<br>**Stratobel PC (Bullet resistant) in DGU** | CE |

We

**AGC Glass Europe**
**Building Division**
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Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **STRATOBEL PC**, intended to be used in buildings and construction works, following **EN 1279-5**

| | **Stratobel PC** characteristics in : | **AVCP Systems** | **848i560** | **890i100** |
|---|---|---|---|---|
| | **Certificate Number:**<br>**Notified Body :** | | 0749-CPD-143<br>0749 | 0749-CPD-143<br>0749 |
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | NPD | NPD |
| 3. | External fire performances | 3, 4 | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | BR6 NS | BR7 NS |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | 1B1 / 1B1 | 1B1 / 1B1 |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | NPD | NPD |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | NPD | NPD |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | 2,6<br>NPD | 2,3<br>NPD |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 70 / 13 / 13 | 56 / 11 / 11 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 42 / 10 / 10<br>NPD | 26 / 7 / 7<br>NPD |
| 14. | Durability | 3 | PASS | PASS |

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14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

# Stratobel – Other products

| | | |
|---|---|---|
| AGC | **CE Marking of Laminated glass – EN 14449:2005**<br>**Declaration of performances**<br>**Stratobel – Other products (level 3)** | CE |

We

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Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **STRATOBEL**, intended to be used in buildings and construction works, following **EN 14449:2005**

| | **Stratobel (level 3 products)** characteristics in : | **AVCP Systems** | |
|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | **For 13 characteristics, see www.YourGlass.com\ce** |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | |
| 3. | External fire performances | 3, 4 | |
| 4. | Bullet resistance (EN 1063) | 1 | |
| 5. | Explosion resistance (EN 13541) | 1 | |
| 6. | Burglar resistance (EN 356) | 3 | |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | |
| 14. | Durability | 3 | PASS |

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E. Ceriani
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| | | |
|---|---|---|
| AGC | **CE Marking of Laminated glass – EN 14449:2005**<br>**Declaration of performances**<br>**Stratobel – Other products (level 1)** | CE |

We

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Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **STRATOBEL**, intended to be used in buildings and construction works, following **EN 14449:2005**

| | **Stratobel (level 1 products)** characteristics in : | **AVCP Systems** | |
|---|---|---|---|
| | **Certificate Number:**<br>**Notified Body :** | | 0336-CPD-9265C<br>0336 |
| 1. | Resistance to fire (EN 13501-2) | 1 | **For 13 characteristics, see www.YourGlass.com\ce** |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | |
| 3. | External fire performances | 3, 4 | |
| 4. | Bullet resistance (EN 1063) | 1 | |
| 5. | Explosion resistance (EN 13541) | 1 | |
| 6. | Burglar resistance (EN 356) | 3 | |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | |
| 14. | Durability | 3 | PASS |

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E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

| | | |
|---|---|---|
| AGC | **CE Marking of Laminated glass – EN 14449:2005**<br>**Declaration of performances**<br>**Stratobel – Other products (level 3)** | CE |

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Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **STRATOBEL**, intended to be used in buildings and construction works, following **EN 14449:2005**

| | **Stratobel (level 3 products)** characteristics in : | **AVCP Systems** | |
|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | **For 13 characteristics, see www.YourGlass.com\ce** |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | |
| 3. | External fire performances | 3, 4 | |
| 4. | Bullet resistance (EN 1063) | 1 | |
| 5. | Explosion resistance (EN 13541) | 1 | |
| 6. | Burglar resistance (EN 356) | 3 | |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | |
| 14. | Durability | 3 | PASS |

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E. Ceriani
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| | | |
|---|---|---|
| AGC | **CE Marking of Laminated glass – EN 14449:2005**<br>**Declaration of performances**<br>**Stratobel – Other products (level 1)** | CE |

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| | **Stratobel (level 1 products)** characteristics in : | **AVCP Systems** | |
|---|---|---|---|
| | **Certificate Number:**<br>**Notified Body :** | | 0749-CPD-143<br>0749 |
| 1. | Resistance to fire (EN 13501-2) | 1 | **For 13 characteristics, see www.YourGlass.com\ce** |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | |
| 3. | External fire performances | 3, 4 | |
| 4. | Bullet resistance (EN 1063) | 1 | |
| 5. | Explosion resistance (EN 13541) | 1 | |
| 6. | Burglar resistance (EN 356) | 3 | |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | |
| 14. | Durability | 3 | PASS |

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14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

# Stratophone

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|---|---|---|
| AGC | **CE Marking of Laminated glass – EN 14449:2005**<br>**Declaration of performances**<br>**Stratophone clear (22.x, 33.x)** | CE |

We

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Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **STRATOPHONE**, intended to be used in buildings and construction works, following **EN 14449:2005**

| | **Stratophone** characteristics in : | **AVCP Systems** | **22.1** | **22.2** | **33.1** | **33.2** |
|---|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | NPD | NPD | NPD | NPD |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD | P1A-P2A |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | 1B1 | 1B1 | 1B1 | 1B1 |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | NPD | NPD | NPD | NPD |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 33 (-1;-5) | 33 (-1;-4) | 35 (-1;-3) | 36 (0;-3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | 5,7<br>0,89 | 5,7<br>0,89 | 5,7<br>0,89 | 5,6<br>0,89 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 90 / 8 / 8 | 90 / 8 / 8 | 89 / 8 / 8 | 89 / 8 / 8 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 79 / 7 / 7<br>82 | 77 / 7 / 7<br>81 | 76 / 7 / 7<br>80 | 74 / 7 / 7<br>79 |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

| | | |
|---|---|---|
| AGC | **CE Marking of Laminated glass – EN 14449:2005**<br>**Declaration of performances**<br>**Stratophone clear (44.x)** | CE |

We

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Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **STRATOPHONE**, intended to be used in buildings and construction works, following **EN 14449:2005**

| | **Stratophone** characteristics in : | **AVCP Systems** | **44.1** | **44.2** | **44.4** | **44.6** |
|---|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | NPD | NPD | NPD | NPD |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | P1A-P2A | P3A-P4A | P5A |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | 1B1 | 1B1 | 1B1 | 1B1 |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | NPD | NPD | NPD | NPD |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 37 (-0, -3) | 37 (0;-3) | 37 (0;-3) | 38 (-1;-3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | 5,6<br>0,89 | 5,6<br>0,89 | 5,5<br>0,89 | 5,3<br>0,89 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 88 / 8 / 8 | 88 / 8 / 8 | 88 / 8 / 8 | 88 / 8 / 8 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 73 / 7 / 7<br>78 | 72 / 7 / 7<br>77 | 70 / 7 / 7<br>75 | 69 / 7 / 7<br>74 |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS |

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14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

| | | |
|---|---|---|
| AGC | **CE Marking of Laminated glass – EN 14449:2005**<br>**Declaration of performances**<br>**Stratophone clear (55.x, 66.x, 88.x)** | CE |

We

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| | **Stratophone** characteristics in : | **AVCP Systems** | **55.1** | **55.2** | **66.1** | **66.2** | **88.2** |
|---|---|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | NPD | NPD | NPD | NPD | NPD |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | P1A-P2A | NPD | P1A-P2A | P1A-P2A |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | 1B1 | 1B1 | 1B1 | 1B1 | 1B1 |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | NPD | NPD | NPD | NPD | NPD |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 38 (-1;-3) | 39 (-1;-3) | 40 (-1;-3) | 40 (-1;-3) | 41 (-1;-2) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | 5,6<br>0,89 | 5,5<br>0,89 | 5,5<br>0,89 | 5,4<br>0,89 | 5,3<br>0,89 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 87 / 8 / 8 | 87 / 8 / 8 | 86 / 8 /8 | 86 / 8 / 8 | 84 / 8 / 8 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 70 / 7 / 7<br>76 | 69 / 7 / 7<br>75 | 68 / 7 / 7<br>74 | 66 / 7 / 7<br>73 | 62 / 6 / 6<br>69 |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

| | | |
|---|---|---|
| AGC | **CE Marking of Laminated glass – EN 14449:2005**<br>**Declaration of performances**<br>**Stratophone Top N** | CE |

We

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Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **STRATOPHONE Top N**, intended to be used in buildings and construction works, following **EN 14449:2005**

| | **Stratophone Top N** characteristics in : | **AVCP Systems** | **33.1 Top N** | **33.2 Top N** | **44.1 Top N** | **44.2 Top N** | **66.1 Top N** | **66.2 Top N** |
|---|---|---|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | NPD | NPD | NPD | NPD | NPD | NPD |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | P1A-P2A | NPD | P1A-P2A | NPD | P1A-P2A |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | 1B1 | 1B1 | 1B1 | 1B1 | 1B1 | 1B1 |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | NPD | NPD | NPD | NPD | NPD | NPD |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 35 (-1;-3) | 36 (0;-3) | 37 (-0, -3) | 37 (0;-3) | 40 (-1;-3) | 40 (-1;-3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | NPD<br>0,04 | NPD<br>0,04 | NPD<br>0,04 | NPD<br>0,04 | NPD<br>0,04 | NPD<br>0,04 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 86 / 6 / 8 | 86 / 6 / 8 | 85 / 6 / 8 | 85 / 6 / 8 | 84 / 6 / 8 | 83 / 6 / 8 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 60 / 25 / 18<br>NPD | 59 / 25 / 17<br>NPD | 58 / 25 / 17<br>NPD | 58 / 25 / 16<br>NPD | 56 /24 / 15<br>NPD | 56 / 24 / 14<br>NPD |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

| | | |
|---|---|---|
| AGC | **CE Marking of Laminated glass – EN 14449:2005**<br>**Declaration of performances**<br>**Stratophone Top N+** | CE |

We

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Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **STRATOPHONE Top N+**, intended to be used in buildings and construction works, following **EN 14449:2005**

| | **Stratophone Top N+** characteristics in : | **AVCP Systems** | **33.1 Top N+** | **33.2 Top N+** | **44.1 Top N+** | **44.2 Top N+** | **66.1 Top N+** | **66.2 Top N+** |
|---|---|---|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | NPD | NPD | NPD | NPD | NPD | NPD |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | P1A-P2A | NPD | P1A-P2A | NPD | P1A-P2A |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | 1B1 | 1B1 | 1B1 | 1B1 | 1B1 | 1B1 |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | NPD | NPD | NPD | NPD | NPD | NPD |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 35 (-1;-3) | 36 (0;-3) | 37 (-0, -3) | 37 (0;-3) | 40 (-1;-3) | 40 (-1;-3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | NPD<br>0,03 | NPD<br>0,03 | NPD<br>0,03 | NPD<br>0,03 | NPD<br>0,03 | NPD<br>0,03 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 86 / 6 / 7 | 86 / 6 / 7 | 85 / 6 / 7 | 85 / 6 / 7 | 83 / 6 / 7 | 83 / 6 / 7 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 55 / 29 / 20<br>NPD | 54 / 29 / 19<br>NPD | 53 / 29 / 18<br>NPD | 53 / 29 / 18<br>NPD | 50 /29 / 16<br>NPD | 50 / 29 / 15<br>NPD |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

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|---|---|---|
| AGC | **CE Marking of Laminated glass – EN 14449:2005**<br>**Declaration of performances**<br>**Stratophone Tri** | CE |

We

**AGC Glass Europe**
**Building Division**
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Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **STRATOPHONE Tri**, intended to be used in buildings and construction works, following **EN 14449:2005**

| | **Stratophone Tri** characteristics in : | **AVCP Systems** | **33.1 Tri** | **33.2 Tri** | **44.1 Tri** | **44.2 Tri** | **55.2 Tri** | **66.2 Tri** |
|---|---|---|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | NPD | NPD | NPD | NPD | NPD | NPD |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | P1A-P2A | NPD | P1A-P2A | NPD | P1A-P2A |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | 1B1 | 1B1 | 1B1 | 1B1 | 1B1 | 1B1 |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | NPD | NPD | NPD | NPD | NPD | NPD |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 35 (-1;-3) | 36 (0;-3) | 37 (-0, -3) | 37 (0;-3) | 40 (-1;-3) | 40 (-1;-3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | NPD<br>0,07 | NPD<br>0,07 | NPD<br>0,07 | NPD<br>0,07 | NPD<br>0,07 | NPD<br>0,07 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 87 / 7 / 8 | 87 / 7 / 8 | 86 / 7 / 8 | 86 / 6 / 8 | 84 / 6 / 8 | 84 / 6 / 8 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 66 / 17 / 12<br>NPD | 65 / 17 / 11<br>NPD | 64 / 16 / 11<br>NPD | 63 / 16 / 11<br>NPD | 60 / 16 / 10<br>NPD | 59 / 16 / 10<br>NPD |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

| | | |
|---|---|---|
| AGC | **CE Marking of Laminated glass – EN 14449:2005**<br>**Declaration of performances**<br>**Stratophone I-Top** | CE |

We

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Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **STRATOPHONE I-TOP**, intended to be used in buildings and construction works, following **EN 14449:2005**

| | **Stratophone I-Top** characteristics in : | **AVCP Systems** | **33.1 I-Top** | **44.1 I-Top** | **44.2 I-Top** |
|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | NPD | NPD | NPD |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | P1A-P2A |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | 1B1 | 1B1 | 1B1 |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | NPD | NPD | NPD |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 35 (-1;-3) | 37 (-0, -3) | 37 (0;-3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | NPD<br>0,03 | NPD<br>0,03 | NPD<br>0,03 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 86 / 6 / 7 | 85 / 5 / 7 | 85 / 5 / 7 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 54 / 28 / 19<br>NPD | 52 / 28 / 17<br>NPD | 52 / 28 / 16<br>NPD |
| 14. | Durability | 3 | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

| | | |
|---|---|---|
| AGC | **CE Marking of Laminated glass – EN 14449:2005**<br>**Declaration of performances**<br>**Stratophone Top 1.0** | CE |

We

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**Building Division**
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Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **STRATOPHONE Top 1.0**, intended to be used in buildings and construction works, following **EN 14449:2005**

| | **Stratophone Top 1.0** characteristics in : | **AVCP Systems** | **33.1 Top 1.0** | **33.2 Top 1.0** | **44.1 Top 1.0** | **44.2 Top 1.0** | **66.1 Top 1.0** | **66.2 Top 1.0** |
|---|---|---|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | NPD | NPD | NPD | NPD | NPD | NPD |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | P1A-P2A | NPD | P1A-P2A | NPD | P1A-P2A |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | 1B1 | 1B1 | 1B1 | 1B1 | 1B1 | 1B1 |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | NPD | NPD | NPD | NPD | NPD | NPD |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 35 (-1;-3) | 36 (0;-3) | 37 (-0, -3) | 37 (0;-3) | 40 (-1;-3) | 40 (-1;-3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | NPD<br>0,01 | NPD<br>0,01 | NPD<br>0,01 | NPD<br>0,01 | NPD<br>0,01 | NPD<br>0,01 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 76 / 15 / 17 | 76 / 15 / 17 | 75 / 15 / 17 | 75 / 15 / 17 | 74 / 14 / 16 | 74 / 14 / 16 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 45 / 42 / 30<br>NPD | 44 / 42 / 29<br>NPD | 44 / 42 / 28<br>NPD | 43 / 42 / 27<br>NPD | 42 / 42 / 24<br>NPD | 42 / 42 / 23<br>NPD |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

**CE Marking of Laminated glass – EN 14449:2005**
**Declaration of performances**
**Stratophone Energy N**

We

**AGC Glass Europe**
**Division Raw Glass Products**
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Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **Stratophone Energy N**, intended to be used in buildings and construction works, following **EN 14449:2005**

| | **Stratophone Energy N** characteristics in : | **AVCP Systems** | **33.1 Energy N** | **33.2 Energy N** | **44.1 Energy N** | **44.2 Energy N** | **66.1 Energy N** | **66.2 Energy N** |
|---|---|---|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | NPD | NPD | NPD | NPD | NPD | NPD |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | P1A-P2A | NPD | P1A-P2A | NPD | P1A-P2A |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | 1B1 | 1B1 | 1B1 | 1B1 | 1B1 | 1B1 |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | NPD | NPD | NPD | NPD | NPD | NPD |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 35 (-1;-3) | 36 (0;-3) | 37 (0;-3) | 37 (0;-3) | 40 (-1;-3) | 40 (-1;-3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | NPD<br>0,01 | NPD<br>0,01 | NPD<br>0,01 | NPD<br>0,01 | NPD<br>0,01 | NPD<br>0,01 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 80 / 7 / 7 | 80 / 7 / 7 | 79 / 7 / 7 | 79 / 7 / 7 | 77 / 7 / 6 | 77 / 7 / 6 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 40 / 41 / 26<br>NPD | 40 / 41 / 25<br>NPD | 39 / 41 / 24<br>NPD | 39 / 41 / 23<br>NPD | 38 / 41 / 20<br>NPD | 37 / 41 / 19<br>NPD |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

| | | |
|---|---|---|
| AGC | **CE Marking of Laminated glass – EN 14449:2005**<br>**Declaration of performances**<br>**Stratophone Light** | CE |

We

**AGC Glass Europe**
**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
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Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **STRATOPHONE Ligth**, intended to be used in buildings and construction works, following **EN 14449:2005**

| | **Stratophone Light** characteristics in : | **AVCP Systems** | **33.1 Light** | **44.1 Light** |
|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | NPD | NPD |
| 3. | External fire performances | 3, 4 | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | 1B1 | 1B1 |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | NPD | NPD |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 35 (-1;-3) | 37 (-0, -3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | NPD<br>0,01 | NPD<br>0,01 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 71/19/21 | 71/19/21 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 41/43/29<br>NPD | 40/43/26<br>NPD |
| 14. | Durability | 3 | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

# Sunergy

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|---|---|---|
| AGC | **CE Marking of Coated glass - EN 1096-4:2004**<br>**Declaration of performances**<br>**Sunergy Clear (annealed)** | CE |

We

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Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **SUNERGY CLEAR**, intended to be used in buildings and construction works, following **EN 1096-4:2004**

| | **Sunergy Clear** characteristics in : | **AVCP Systems** | **3 mm** | **4 mm** | **6 mm** | **8 mm** | **10 mm** |
|---|---|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 | A1 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD | NPD | NPD | NPD | NPD |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | NPD | NPD | NPD | NPD | NPD |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 29 (-2;-5) | 30 (-2;-4) | 31 (-2;-3) | 32 (-1;-2) | 34 (-2;-3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | NPD<br>0,28 | NPD<br>0,28 | NPD<br>0,28 | NPD<br>0,28 | NPD<br>0,28 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 69 / 10 / 9 | 69 / 10 / 9 | 68 / 10 / 9 | 67 / 10 / 8 | 66 / 10 / 8 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 56 / 10 / 10<br>62 | 56 / 10 / 10<br>61 | 54 / 10 / 9<br>60 | 52 / 10 / 9<br>59 | 50 / 10 / 9<br>57 |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

**CE Marking of Heat strengthened glass - EN 1863-2:2004**
**Declaration of performances**
**Sunergy Clear Heat strengthened**

CE

We

**AGC Glass Europe**
**Building Division**
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Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **SUNERGY CLEAR Heat strengthened**, intended to be used in buildings and construction works, following **EN 1863-2:2004**

| | **Sunergy Clear Heat strengthened** characteristics in : | **AVCP Systems** | **4 mm** | **6 mm** | **8 mm** | **10 mm** |
|---|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD | NPD | NPD | NPD |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | 100 K | 100 K | 100 K | 100 K |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 30 (-2;-4) | 31 (-2;-3) | 32 (-1;-2) | 34 (-2;-3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | NPD<br>0,28 | NPD<br>0,28 | NPD<br>0,28 | NPD<br>0,28 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 69 / 10 / 9 | 68 / 10 / 9 | 67 / 10 / 8 | 66 / 10 / 8 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 56 / 10 / 10<br>61 | 54 / 10 / 9<br>60 | 52 / 10 / 9<br>59 | 50 / 10 / 9<br>57 |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

**CE Marking of Thermally toughened glass - EN 12150-2:2004**
**CE Marking of Heat soaked Thermally toughened glass - EN 14179-2:2005**
**Declaration of performances**
**Sunergy Clear Thermally toughened or Heat soaked thermally toughened**

CE

We

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**Building Division**
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Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **SUNERGY CLEAR Thermally toughened or Heat soaked thermally toughened**, intended to be used in buildings and construction works, following **EN 12150-2:2004 / 14179-2:2005**

| | **Sunergy Clear Thermally toughened or Heat soaked thermally toughened** characteristics in : | **AVCP Systems** | **4 mm** | **6 mm** | **8 mm** | **10 mm** |
|---|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | 1C3 | 1C2 | 1C2 | 1C1 |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | 200 K | 200 K | 200 K | 200 K |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 30 (-2;-4) | 31 (-2;-3) | 32 (-1;-2) | 34 (-2;-3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | NPD<br>0,28 | NPD<br>0,28 | NPD<br>0,28 | NPD<br>0,28 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 69 / 10 / 9 | 68 / 10 / 9 | 67 / 10 / 8 | 66 / 10 / 8 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 56 / 10 / 10<br>61 | 54 / 10 / 9<br>60 | 52 / 10 / 9<br>59 | 50 / 10 / 9<br>57 |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

| | | |
|---|---|---|
| AGC | **CE Marking of Coated glass - EN 1096-4:2004**<br>**Declaration of performances**<br>**Sunergy Azur (annealed)** | CE |

We

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Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **SUNERGY AZUR**, intended to be used in buildings and construction works, following **EN 1096-4:2004**

| | **Sunergy Azur** characteristics in : | **AVCP Systems** | **4 mm** | **6 mm** | **8 mm** | **10 mm** |
|---|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD | NPD | NPD | NPD |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | NPD | NPD | NPD | NPD |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 30 (-2;-4) | 31 (-2;-3) | 32 (-1;-2) | 34 (-2;-3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | NPD<br>0,28 | NPD<br>0,28 | NPD<br>0,28 | NPD<br>0,28 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 60 / 10 / 8 | 56 / 10 / 7 | 52 / 9 / 7 | 48 / 9 / 6 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 40 / 10 / 7<br>49 | 34 / 10 / 6<br>44 | 29 / 9 / 6<br>40 | 26 / 9 / 6<br>37 |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

| | | |
|---|---|---|
| AGC | **CE Marking of Heat strengthened glass - EN 1863-2:2004**<br>**Declaration of performances**<br>**Sunergy Azur Heat strengthened** | CE |

We

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Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **SUNERGY AZUR Heat strengthened**, intended to be used in buildings and construction works, following **EN 1863-2:2004**

| | **Sunergy Azur Heat strengthened** characteristics in : | **AVCP Systems** | **6 mm** | **8 mm** | **10 mm** |
|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD | NPD | NPD |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | 100 K | 100 K | 100 K |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 31 (-2;-3) | 32 (-1;-2) | 34 (-2;-3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | NPD<br>0,28 | NPD<br>0,28 | NPD<br>0,28 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 56 / 10 / 7 | 52 / 9 / 7 | 48 / 9 / 6 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 34 / 10 / 6<br>44 | 29 / 9 / 6<br>40 | 26 / 9 / 6<br>37 |
| 14. | Durability | 3 | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

**CE Marking of Thermally toughened glass - EN 12150-2:2004**
**CE Marking of Heat soaked Thermally toughened glass - EN 14179-2:2005**
**Declaration of performances**
**Sunergy Azur Thermally toughened or Heat soaked thermally toughened**

CE

We

**AGC Glass Europe**
**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **SUNERGY AZUR Thermally toughened or Heat soaked thermally toughened**, intended to be used in buildings and construction works, following **EN 12150-2:2004 / 14179-2:2005**

| | **Sunergy Azur Thermally toughened or Heat soaked thermally toughened** characteristics in : | **AVCP Systems** | **6 mm** | **8 mm** | **10 mm** |
|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | 1C2 | 1C2 | 1C1 |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | 200 K | 200 K | 200 K |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 31 (-2;-3) | 32 (-1;-2) | 34 (-2;-3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | NPD<br>0,28 | NPD<br>0,28 | NPD<br>0,28 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 56 / 10 / 7 | 52 / 9 / 7 | 48 / 9 / 6 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 34 / 10 / 6<br>44 | 29 / 9 / 6<br>40 | 26 / 9 / 6<br>37 |
| 14. | Durability | 3 | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

**CE Marking of Coated glass - EN 1096-4:2004**
**Declaration of performances**
**Sunergy Dark Blue (annealed)**

We

**AGC Glass Europe**
**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **SUNERGY Dark blue**, intended to be used in buildings and construction works, following **EN 1096-4:2004**

| | **Sunergy Dark Blue** characteristics in : | **AVCP Systems** | **6 mm** | **8 mm** |
|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD | NPD |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | NPD | NPD |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 31 (-2;-3) | 32 (-1;-2) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | 4,1<br>0,28 | 4,1<br>0,28 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 40 / 9 / 6 | 35 / 9 / 6 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 26 / 9 / 6<br>37 | 21 / 9 / 5<br>33 |
| 14. | Durability | 3 | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

| | | |
|---|---|---|
| AGC | **CE Marking of Heat strengthened glass - EN 1863-2:2004**<br>**Declaration of performances**<br>**Sunergy Dark Blue Heat strengthened** | CE |

We

**AGC Glass Europe**
**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **SUNERGY DARK BLUE Heat strengthened**, intended to be used in buildings and construction works, following **EN 1863-2:2004**

| | **Sunergy Dark Blue Heat strengthened** characteristics in : | **AVCP Systems** | **6 mm** | **8 mm** |
|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD | NPD |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | 100 K | 100 K |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 31 (-2;-3) | 32 (-1;-2) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | 4,1<br>0,28 | 4,1<br>0,28 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 40 / 9 / 6 | 35 / 9 / 6 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 26 / 9 / 6<br>37 | 21 / 9 / 5<br>33 |
| 14. | Durability | 3 | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

| | | |
|---|---|---|
| AGC | **CE Marking of Thermally toughened glass - EN 12150-2:2004**<br>**CE Marking of Heat soaked Thermally toughened glass - EN 14179-2:2005**<br>**Declaration of performances**<br>**Sunergy Dark Blue Thermally toughened or Heat soaked thermally toughened** | CE |

We

**AGC Glass Europe**
**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **SUNERGY Dark Blue Thermally toughened or Heat soaked thermally toughened**, intended to be used in buildings and construction works, following **EN 12150-2:2004 / 14179-2:2005**

| | **Sunergy Dark Blue Thermally toughened or Heat soaked thermally toughened** characteristics in | **AVCP Systems** | **6 mm** | **8 mm** |
|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | 1C2 | 1C2 |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | 200 K | 200 K |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 31 (-2;-3) | 32 (-1;-2) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | 4,1<br>0,28 | 4,1<br>0,28 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 40 / 9 / 6 | 35 / 9 / 6 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 26 / 9 / 6<br>37 | 21 / 9 / 5<br>33 |
| 14. | Durability | 3 | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

| | | |
|---|---|---|
| AGC | **CE Marking of Coated glass - EN 1096-4:2004**<br>**Declaration of performances**<br>**Sunergy Green (annealed)** | CE |

We

**AGC Glass Europe**
**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **SUNERGY GREEN**, intended to be used in buildings and construction works, following **EN 1096-4:2004**

| | **Sunergy Green** characteristics in : | **AVCP Systems** | **6 mm** | **8 mm** | **10 mm** |
|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD | NPD | NPD |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | NPD | NPD | NPD |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 31 (-2;-3) | 32 (-1;-2) | 34 (-2;-3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | 4,1<br>0,28 | 4,1<br>0,28 | 4,0<br>0,28 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 56 / 10 / 7 | 52 / 9 / 7 | 48 / 9 / 6 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 31 / 9 / 6<br>41 | 26 / 9 / 6<br>38 | 22 / 9 / 5<br>38 |
| 14. | Durability | 3 | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

| | | |
|---|---|---|
| AGC | **CE Marking of Heat strengthened glass - EN 1863-2:2004**<br>**Declaration of performances**<br>**Sunergy Green Heat strengthened** | CE |

We

**AGC Glass Europe**
**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **SUNERGY GREEN Heat strengthened**, intended to be used in buildings and construction works, following **EN 1863-2:2004**

| | **Sunergy Green Heat strengthened** characteristics in : | **AVCP Systems** | **6 mm** | **8 mm** | **10 mm** |
|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD | NPD | NPD |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | 100 K | 100 K | 100 K |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 31 (-2;-3) | 32 (-1;-2) | 34 (-2;-3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | 4,1<br>0,28 | 4,1<br>0,28 | 4,0<br>0,28 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 56 / 10 / 7 | 52 / 9 / 7 | 48 / 9 / 6 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 31 / 9 / 6<br>41 | 26 / 9 / 6<br>38 | 22 / 9 / 5<br>38 |
| 14. | Durability | 3 | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

| | | |
|---|---|---|
| AGC | **CE Marking of Thermally toughened glass - EN 12150-2:2004**<br>**CE Marking of Heat soaked Thermally toughened glass - EN 14179-2:2005**<br>**Declaration of performances**<br>**Sunergy Green Thermally toughened or Heat soaked thermally toughened** | CE |

We

**AGC Glass Europe**
**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **SUNERGY GREEN Thermally toughened or Heat soaked thermally toughened**, intended to be used in buildings and construction works, following **EN 12150-2:2004 / 14179-2:2005**

| | **Sunergy Green Thermally toughened or Heat soaked thermally toughened** characteristics in : | **AVCP Systems** | **6 mm** | **8 mm** | **10 mm** |
|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | 1C2 | 1C2 | 1C1 |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | 200 K | 200 K | 200 K |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 31 (-2;-3) | 32 (-1;-2) | 34 (-2;-3) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | 4,1<br>0,28 | 4,1<br>0,28 | 4,0<br>0,28 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 56 / 10 / 7 | 52 / 9 / 7 | 48 / 9 / 6 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 31 / 9 / 6<br>41 | 26 / 9 / 6<br>38 | 22 / 9 / 5<br>38 |
| 14. | Durability | 3 | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

| | | |
|---|---|---|
| AGC | **CE Marking of Coated glass - EN 1096-4:2004**<br>**Declaration of performances**<br>**Sunergy Grey (annealed)** | CE |

We

**AGC Glass Europe**
**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **SUNERGY GREY**, intended to be used in buildings and construction works, following **EN 1096-4:2004**

| | **Sunergy Grey** characteristics in : | **AVCP Systems** | **6 mm** | **8 mm** |
|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD | NPD |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | NPD | NPD |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 31 (-2;-3) | 32 (-1;-2) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | 4,1<br>0,28 | 4,1<br>0,28 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 34 / 9 / 5 | 26 / 8 / 5 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 30 / 9 / 6<br>41 | 24 / 9 / 6<br>36 |
| 14. | Durability | 3 | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

| | | |
|---|---|---|
| AGC | **CE Marking of Heat strengthened glass - EN 1863-2:2004**<br>**Declaration of performances**<br>**Sunergy Grey Heat strengthened** | CE |

We

**AGC Glass Europe**
**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **SUNERGY GREY Heat strengthened**, intended to be used in buildings and construction works, following **EN 1863-2:2004**

| | **Sunergy Grey Heat strengthened** characteristics in : | **AVCP Systems** | **6 mm** | **8 mm** |
|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD | NPD |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | 100 K | 100 K |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 31 (-2;-3) | 32 (-1;-2) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | 4,1<br>0,28 | 4,1<br>0,28 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 34 / 9 / 5 | 26 / 8 / 5 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 30 / 9 / 6<br>41 | 24 / 9 / 6<br>36 |
| 14. | Durability | 3 | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

| | | |
|---|---|---|
| AGC | **CE Marking of Thermally toughened glass - EN 12150-2:2004**<br>**CE Marking of Heat soaked Thermally toughened glass - EN 14179-2:2005**<br>**Declaration of performances**<br>**Sunergy Grey Thermally toughened or Heat soaked thermally toughened** | CE |

We

**AGC Glass Europe**
**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **SUNERGY GREY Thermally toughened or Heat soaked thermally toughened**, intended to be used in buildings and construction works, following **EN 12150-2:2004 / 14179-2:2005**

| | **Sunergy Grey Thermally toughened or Heat soaked thermally toughened** characteristics in : | **AVCP Systems** | **6 mm** | **8 mm** |
|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | A1 | A1 |
| 3. | External fire performances | 3, 4 | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | 1C2 | NPD |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | 200 K | 200 K |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | 31 (-2;-3) | 32 (-1;-2) |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | 4,1<br>0,28 | 4,1<br>0,28 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 34 / 9 / 5 | 26 / 8 / 5 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 30 / 9 / 6<br>41 | 24 / 9 / 6<br>36 |
| 14. | Durability | 3 | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

# SunEwat

**CE Marking of Laminated glass – EN 14449:2005**
**Declaration of performances**
**SunEwat L 44.4 heat stengthened**

CE

We

**AGC Glass Europe**
**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **SunEwat L**, intended to be used in buildings and construction works, following **EN 14449:2005**

| | | | **Surface covered by solar celles regarding to the surface of the glass** | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | **44.4 SunEwat L** characteristics in : | **AVCP Systems** | **0 %** | **10 %** | **20 %** | **30 %** | **40 %** | **50 %** | **60 %** | **70 %** | **80 %** | **90 %** | **100 %** |
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD | NPD | NPD | NPD | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | NPD | NPD | NPD | NPD | NPD | NPD | NPD | NPD | NPD | NPD | NPD |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD | NPD | NPD | NPD | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD | NPD | NPD | NPD | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD | NPD | NPD | NPD | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD | NPD | NPD | NPD | NPD | NPD | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | 1B1 | 1B1 | 1B1 | 1B1 | 1B1 | 1B1 | 1B1 | 1B1 | 1B1 | 1B1 | 1B1 |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | 100 K | 100 K | 100 K | 100 K | 100 K | 100 K | 100 K | 100 K | 100 K | 100 K | 100 K |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD | NPD | NPD | NPD | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | NPD | NPD | NPD | NPD | NPD | NPD | NPD | NPD | NPD | NPD | NPD |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | 5,6<br>0,89 | 5,6<br>0,89 | 5,6<br>0,89 | 5,6<br>0,89 | 5,6<br>0,89 | 5,6<br>0,89 | 5,6<br>0,89 | 5,6<br>0,89 | 5,6<br>0,89 | 5,6<br>0,89 | 5,6<br>0,89 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 88/8/8 | 79/8/11 | 70/8/13 | 62/8/16 | 53/8/18 | 44/9/21 | 35/9/23 | 26/9/26 | 18/9/28 | 9/9/31 | 0/9/33 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 75/7/7<br>NPD | 68/9/9<br>NPD | 60/9/11<br>NPD | 53/10/13<br>NPD | 45/11/15<br>NPD | 38/12/17<br>NPD | 30/12/19<br>NPD | 23/13/21<br>NPD | 15/14/23<br>NPD | 8/15/25<br>NPD | 0/16/27<br>NPD |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS | PASS | PASS | PASS | PASS | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

| | | |
|---|---|---|
| AGC | **CE Marking of Laminated glass – EN 14449:2005**<br>**Declaration of performances**<br>**SunEwat L 44.4 thermally toughened** | CE |

We

**AGC Glass Europe**
**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **SunEwat L**, intended to be used in buildings and construction works, following **EN 14449:2005**

| | | **AVCP Systems** | **Surface covered by solar celles regarding to the surface of the glass** | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | **44.4 SunEwat L** characteristics in : | | **0 %** | **10 %** | **20 %** | **30 %** | **40 %** | **50 %** | **60 %** | **70 %** | **80 %** | **90 %** | **100 %** |
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD | NPD | NPD | NPD | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | NPD | NPD | NPD | NPD | NPD | NPD | NPD | NPD | NPD | NPD | NPD |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD | NPD | NPD | NPD | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD | NPD | NPD | NPD | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD | NPD | NPD | NPD | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD | NPD | NPD | NPD | NPD | NPD | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | 1B1 | 1B1 | 1B1 | 1B1 | 1B1 | 1B1 | 1B1 | 1B1 | 1B1 | 1B1 | 1B1 |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | 200 K | 200 K | 200 K | 200 K | 200 K | 200 K | 200 K | 200 K | 200 K | 200 K | 200 K |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD | NPD | NPD | NPD | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | NPD | NPD | NPD | NPD | NPD | NPD | NPD | NPD | NPD | NPD | NPD |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | 5,6<br>0,89 | 5,6<br>0,89 | 5,6<br>0,89 | 5,6<br>0,89 | 5,6<br>0,89 | 5,6<br>0,89 | 5,6<br>0,89 | 5,6<br>0,89 | 5,6<br>0,89 | 5,6<br>0,89 | 5,6<br>0,89 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 88/8/8 | 79/8/11 | 70/8/13 | 62/8/16 | 53/8/18 | 44/9/21 | 35/9/23 | 26/9/26 | 18/9/28 | 9/9/31 | 0/9/33 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 75/7/7<br>NPD | 68/9/9<br>NPD | 60/9/11<br>NPD | 53/10/13<br>NPD | 45/11/15<br>NPD | 38/12/17<br>NPD | 30/12/19<br>NPD | 23/13/21<br>NPD | 15/14/23<br>NPD | 8/15/25<br>NPD | 0/16/27<br>NPD |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS | PASS | PASS | PASS | PASS | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

# CE Marking of Laminated glass – EN 14449:2005
# Declaration of performances
# SunEwat XL 55.6 thermally toughened

CE

We

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Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **SunEwat XL**, intended to be used in buildings and construction works, following **EN 14449:2005**

| | | **AVCP Systems** | **Surface covered by solar celles regarding to the surface of the glass** | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | **55.6 SunXEwat L** characteristics in : | | **0 %** | **10 %** | **20 %** | **30 %** | **40 %** | **50 %** | **60 %** | **70 %** | **80 %** | **90 %** | **100 %** |
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD | NPD | NPD | NPD | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | NPD | NPD | NPD | NPD | NPD | NPD | NPD | NPD | NPD | NPD | NPD |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD | NPD | NPD | NPD | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD | NPD | NPD | NPD | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD | NPD | NPD | NPD | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD | NPD | NPD | NPD | NPD | NPD | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | 1B1 | 1B1 | 1B1 | 1B1 | 1B1 | 1B1 | 1B1 | 1B1 | 1B1 | 1B1 | 1B1 |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | 200 K | 200 K | 200 K | 200 K | 200 K | 200 K | 200 K | 200 K | 200 K | 200 K | 200 K |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD | NPD | NPD | NPD | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | NPD | NPD | NPD | NPD | NPD | NPD | NPD | NPD | NPD | NPD | NPD |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | 5,3<br>0,89 | 5,3<br>0,89 | 5,3<br>0,89 | 5,3<br>0,89 | 5,3<br>0,89 | 5,3<br>0,89 | 5,3<br>0,89 | 5,3<br>0,89 | 5,3<br>0,89 | 5,3<br>0,89 | 5,3<br>0,89 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 87/8/8 | 78<br>/8/9 | 70/8/9 | 61/8/10 | 52/8/11 | 44/8/12 | 35/7/12 | 26/7/13 | 17/7/14 | 9/7/14 | 0/8/15 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 66/7/7<br>NPD | 60/7/8<br>NPD | 53/8/9<br>NPD | 46/8/9<br>NPD | 40/8/10<br>NPD | 33/9/11<br>NPD | 26/9/12<br>NPD | 20/9/13<br>NPD | 13/9/13<br>NPD | 7/10/14<br>NPD | 0/10/15<br>NPD |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS | PASS | PASS | PASS | PASS | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

| AGC | **CE Marking of Laminated glass – EN 14449:2005**<br>**Declaration of performances**<br>**SunEwat XL 66.6 thermally toughened** | CE |
|---|---|---|

We

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**Building Division**
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Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **SunEwat XL**, intended to be used in buildings and construction works, following **EN 14449:2005**

| | | **AVCP Systems** | **Surface covered by solar celles regarding to the surface of the glass** | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | **66.6 SunEwat XL** characteristics in : | | **0 %** | **10 %** | **20 %** | **30 %** | **40 %** | **50 %** | **60 %** | **70 %** | **80 %** | **90 %** | **100 %** |
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD | NPD | NPD | NPD | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | NPD | NPD | NPD | NPD | NPD | NPD | NPD | NPD | NPD | NPD | NPD |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD | NPD | NPD | NPD | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD | NPD | NPD | NPD | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD | NPD | NPD | NPD | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD | NPD | NPD | NPD | NPD | NPD | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | 1B1 | 1B1 | 1B1 | 1B1 | 1B1 | 1B1 | 1B1 | 1B1 | 1B1 | 1B1 | 1B1 |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | 200 K | 200 K | 200 K | 200 K | 200 K | 200 K | 200 K | 200 K | 200 K | 200 K | 200 K |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD | NPD | NPD | NPD | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | NPD | NPD | NPD | NPD | NPD | NPD | NPD | NPD | NPD | NPD | NPD |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | 5,2<br>0,89 | 5,2<br>0,89 | 5,2<br>0,89 | 5,2<br>0,89 | 5,2<br>0,89 | 5,2<br>0,89 | 5,2<br>0,89 | 5,2<br>0,89 | 5,2<br>0,89 | 5,2<br>0,89 | 5,2<br>0,89 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 87/8/8 | 77/8/9 | 69/8/9 | 60/8/10 | 52/8/11 | 43/8/12 | 34/7/12 | 26/7/13 | 17/7/14 | 9/7/14 | 0/8/15 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 64/6/6<br>NPD | 58/6/7<br>NPD | 51/7/8<br>NPD | 45/7/9<br>NPD | 39/8/10<br>NPD | 32/8/11<br>NPD | 26/8/11<br>NPD | 19/9/12<br>NPD | 13/9/13<br>NPD | 6/10/14<br>NPD | 0/10/15<br>NPD |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS | PASS | PASS | PASS | PASS | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

| | | |
|---|---|---|
| AGC | **CE Marking of Laminated glass – EN 14449:2005**<br>**Declaration of performances**<br>**SunEwat XL 88.6 thermally toughened** | CE |

We

**AGC Glass Europe**
**Building Division**
Chaussée de La Hulpe 166 - B 1170 Brussels
Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **SunEwat XL**, intended to be used in buildings and construction works, following **EN 14449:2005**

| | | **AVCP Systems** | **Surface covered by solar celles regarding to the surface of the glass** | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | **88.6 SunEwat XL** characteristics in : | | **0 %** | **10 %** | **20 %** | **30 %** | **40 %** | **50 %** | **60 %** | **70 %** | **80 %** | **90 %** | **100%** |
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD | NPD | NPD | NPD | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | NPD | NPD | NPD | NPD | NPD | NPD | NPD | NPD | NPD | NPD | NPD |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD | NPD | NPD | NPD | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD | NPD | NPD | NPD | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD | NPD | NPD | NPD | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD | NPD | NPD | NPD | NPD | NPD | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | 1B1 | 1B1 | 1B1 | 1B1 | 1B1 | 1B1 | 1B1 | 1B1 | 1B1 | 1B1 | 1B1 |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | 200 K | 200 K | 200 K | 200 K | 200 K | 200 K | 200 K | 200 K | 200 K | 200 K | 200 K |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD | NPD | NPD | NPD | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | NPD | NPD | NPD | NPD | NPD | NPD | NPD | NPD | NPD | NPD | NPD |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | 5,2<br>0,89 | 5,2<br>0,89 | 5,2<br>0,89 | 5,2<br>0,89 | 5,2<br>0,89 | 5,2<br>0,89 | 5,2<br>0,89 | 5,2<br>0,89 | 5,2<br>0,89 | 5,2<br>0,89 | 5,2<br>0,89 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 86/7/7 | 76/7/8 | 68/7/8 | 59/7/9 | 51/7/9 | 42/7/10 | 34/6/11 | 25/6/11 | 17/6/12 | 8/6/13 | 0/7/13 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 62/5/5<br>NPD | 56/5/6<br>NPD | 50/6/7<br>NPD | 44/6/7<br>NPD | 37/7/8<br>NPD | 31/7/9<br>NPD | 25/7/10<br>NPD | 19/8/11<br>NPD | 12/8/11<br>NPD | 6/8/12<br>NPD | 0/9/13<br>NPD |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS | PASS | PASS | PASS | PASS | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

| | | |
|---|---|---|
| AGC | **CE Marking of Laminated glass – EN 14449:2005**<br>**Declaration of performances**<br>**SunEwat XL 10 10.6 thermally toughened** | CE |

We

**AGC Glass Europe**
**Building Division**
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Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **SunEwat XL**, intended to be used in buildings and construction works, following **EN 14449:2005**

| | | **AVCP Systems** | **Surface covered by solar celles regarding to the surface of the glass** | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | **10 10.6 SunEwat XL** characteristics in : | | **0 %** | **10 %** | **20 %** | **30 %** | **40 %** | **50 %** | **60 %** | **70 %** | **80 %** | **90 %** | **100%** |
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD | NPD | NPD | NPD | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | NPD | NPD | NPD | NPD | NPD | NPD | NPD | NPD | NPD | NPD | NPD |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD | NPD | NPD | NPD | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD | NPD | NPD | NPD | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD | NPD | NPD | NPD | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD | NPD | NPD | NPD | NPD | NPD | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | 1B1 | 1B1 | 1B1 | 1B1 | 1B1 | 1B1 | 1B1 | 1B1 | 1B1 | 1B1 | 1B1 |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | 200 K | 200 K | 200 K | 200 K | 200 K | 200 K | 200 K | 200 K | 200 K | 200 K | 200 K |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD | NPD | NPD | NPD | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | NPD | NPD | NPD | NPD | NPD | NPD | NPD | NPD | NPD | NPD | NPD |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | 5,0<br>0,89 | 5,0<br>0,89 | 5,0<br>0,89 | 5,0<br>0,89 | 5,0<br>0,89 | 5,0<br>0,89 | 5,0<br>0,89 | 5,0<br>0,89 | 5,0<br>0,89 | 5,0<br>0,89 | 5,0<br>0,89 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | 85/7/7 | 74/7/8 | 66/7/8 | 58/7/9 | 49/7/9 | 41/7/10 | 33/6/11 | 25/6/11 | 16/6/12 | 8/6/13 | 0/7/13 |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | 59/5/5<br>NPD | 53/5/6<br>NPD | 47/6/7<br>NPD | 41/6/7<br>NPD | 35/7/8<br>NPD | 29/7/9<br>NPD | 23/7/10<br>NPD | 18/8/11<br>NPD | 12/8/11<br>NPD | 6/8/12<br>NPD | 0/9/13<br>NPD |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS | PASS | PASS | PASS | PASS | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

# Thermally toughened glass for Shower enclosure

| | | |
|---|---|---|
| AGC | **CE Marking of Thermally toughened glass for Shower enclosure**<br>**EN 14428**<br>Planibel Thermally toughened for shower enclosure | CE |

We

**AGC Glass Europe**
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Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **PLANIBEL Thermally toughened**, intended to be used in Shower enclosure, following **EN 14428**

| **Planibel Thermally toughened** characteristics in : | **3 mm** | **4 mm** | **5 mm** | **6 mm** | **8 mm** |
|---|---|---|---|---|---|
| Cleanability | Pass | | | | |
| Impact resistance / Shatter properties | Pass | | | | |
| Durability | Pass | | | | |

Brussels
04th of December 2008

A. Jardinet
Vice-President, Commercial and Business Model, Building division

# Thermobel

| | | |
|---|---|---|
| AGC | **CE Marking of Insulating glass unit - EN 1279-5**<br>**Declaration of performances**<br>**Thermobel (level 3 products)** | CE |

We

**AGC Glass Europe**
**Building Division**
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Tel.: + 32 - (0) 2 674.31.11 - Fax: + 32 - (0) 2 674.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **THERMOBEL**, intended to be used in buildings and construction works, following **EN 1279-5**

| | **Thermobel (level 3 products)** characteristics in : | **AVCP Systems** | |
|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | **For 13 characteristics, see www.YourGlass.com\ce** |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | |
| 3. | External fire performances | 3, 4 | |
| 4. | Bullet resistance (EN 1063) | 1 | |
| 5. | Explosion resistance (EN 13541) | 1 | |
| 6. | Burglar resistance (EN 356) | 3 | |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | |
| 14. | Durability | 3 | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

| | | |
|---|---|---|
| AGC | **CE Marking of Insulating glass unit - EN 1279-5**<br>**Declaration of performances**<br>**Thermobel (level 1 products)** | CE |

We

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Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **THERMOBEL**, intended to be used in buildings and construction works, following **EN 1279-5**

| | **Thermobel (level 1 products)** characteristics in : | **AVCP Systems** | |
|---|---|---|---|
| | **Certificate Number:**<br>**Notified Body :** | | 0749-CPD-143<br>0749 |
| 1. | Resistance to fire (EN 13501-2) | 1 | **For 13 characteristics, see www.YourGlass.com\ce** |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | |
| 3. | External fire performances | 3, 4 | |
| 4. | Bullet resistance (EN 1063) | 1 | |
| 5. | Explosion resistance (EN 13541) | 1 | |
| 6. | Burglar resistance (EN 356) | 3 | |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | |
| 11. | - U-value (EN 673)<br>- Normal emissivity $\varepsilon_n$ coated side (EN 12898) | 3 | |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | |
| 14. | Durability | 3 | PASS |

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14th of June 2013

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# Thermobel VIP

| | | |
|---|---|---|
| AGC | **CE Marking of Insulating glass unit - EN 1279-5**<br>**Declaration of performances**<br>**Thermobel VIP** | CE |

We

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Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **Thermobel VIP**, intended to be used in buildings and construction works, following **EN 1279-5**

| | **Thermobel VIP** characteristics in : | **AVCP Systems** | **4-16-4 (VIP 14 mm)** | **4-20-4 (VIP 18 mm)** | **4-22-4 (VIP 20 mm)** | **6-16-4 (VIP 14 mm)** | **6-20-4 (VIP 18 mm)** | **6-22-4 (VIP 20 mm)** |
|---|---|---|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | NPD | NPD | NPD | NPD | NPD | NPD |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD | NPD | NPD | NPD | NPD | NPD |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | NPD | NPD | NPD | NPD | NPD | NPD |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | NPD | NPD | NPD | NPD | NPD | NPD |
| 11. | U-value (EN 673) | 3 | 0,4 | 0,3 | 0,3 | 0,4 | 0,3 | 0,3 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | NPD | NPD | NPD | NPD | NPD | NPD |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | NPD<br>NPD | NPD<br>NPD | NPD<br>NPD | NPD<br>NPD | NPD<br>NPD | NPD<br>NPD |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS | PASS | PASS |

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14th of June 2013

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| | | |
|---|---|---|
| AGC | **CE Marking of Insulating glass unit - EN 1279-5**<br>**Declaration of performances**<br>**Thermobel VIP** | CE |

We

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| | **Thermobel VIP** characteristics in : | **AVCP Systems** | **6-16-6 (VIP 14 mm)** | **6-20-6 (VIP 18 mm)** | **6-22-6 (VIP 20 mm)** | **6-42-6 (VIP 40 mm)** |
|---|---|---|---|---|---|---|
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | NPD | NPD | NPD | NPD |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD | NPD | NPD | NPD |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | NPD | NPD | NPD | NPD |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | NPD | NPD | 35 (-1;-3) | NPD |
| 11. | U-value (EN 673) | 3 | 0,4 | 0,3 | 0,3 | 0,15 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | NPD | NPD | NPD | NPD |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | NPD<br>NPD | NPD<br>NPD | NPD<br>NPD | NPD<br>NPD |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS |

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14th of June 2013

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**CE Marking of Insulating glass unit - EN 1279-5**
**Declaration of performances**
**Thermobel VIP**

We

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| | **Thermobel VIP** characteristics in : | **AVCP Systems** | **4-16-4* (VIP 14 mm)** | **4-20-4* (VIP 18 mm)** | **4-22-4* (VIP 20 mm)** | **6-16-4* (VIP 14 mm)** | **6-20-4* (VIP 18 mm)** | **6-22-4* (VIP 20 mm)** |
|---|---|---|---|---|---|---|---|---|
| | | | * glass glued with a steel plate of 0,75 mm | | | | | |
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | NPD | NPD | NPD | NPD | NPD | NPD |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD | NPD | NPD | NPD | NPD | NPD |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | NPD | NPD | NPD | NPD | NPD | NPD |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | NPD | NPD | NPD | NPD | NPD | 38 (-2;-5) |
| 11. | U-value (EN 673) | 3 | 0,4 | 0,3 | 0,3 | 0,4 | 0,3 | 0,3 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | NPD | NPD | NPD | NPD | NPD | NPD |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | NPD<br>NPD | NPD<br>NPD | NPD<br>NPD | NPD<br>NPD | NPD<br>NPD | NPD<br>NPD |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS | PASS | PASS |

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14th of June 2013

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**CE Marking of Insulating glass unit - EN 1279-5**
**Declaration of performances**
**Thermobel VIP**

We

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| | **Thermobel VIP** characteristics in : | **AVCP Systems** | **4*-16-4* (VIP 14 mm)** | **4*-20-4* (VIP 18 mm)** | **4*-22-4* (VIP 20 mm)** | **6-16-6** (VIP 14 mm)** | **6-20-6** (VIP 16 mm)** | **6-22-6** (VIP 14 mm)** |
|---|---|---|---|---|---|---|---|---|
| | | | * glass glued with a steel plate of 0,75 mm / ** glass glued with a steel plate of 2 mm | | | | | |
| 1. | Resistance to fire (EN 13501-2) | 1 | NPD | NPD | NPD | NPD | NPD | NPD |
| 2. | Reaction to fire (EN 13501-1) | 3, 4 | NPD | NPD | NPD | NPD | NPD | NPD |
| 3. | External fire performances | 3, 4 | NPD | NPD | NPD | NPD | NPD | NPD |
| 4. | Bullet resistance (EN 1063) | 1 | NPD | NPD | NPD | NPD | NPD | NPD |
| 5. | Explosion resistance (EN 13541) | 1 | NPD | NPD | NPD | NPD | NPD | NPD |
| 6. | Burglar resistance (EN 356) | 3 | NPD | NPD | NPD | NPD | NPD | NPD |
| 7. | Pendulum body impact resistance (EN 12600) | 3 | NPD | NPD | NPD | NPD | NPD | NPD |
| 8. | Resistance against sudden temperature change and temperature differentials | 4 | NPD | NPD | NPD | NPD | NPD | NPD |
| 9. | Wind, snow, permanent and imposed load resistance | 4 | NPD | NPD | NPD | NPD | NPD | NPD |
| 10. | Direct airborne sound reduction (EN 12758): Rw (C;Ctr) | 3 | NPD | NPD | NPD | NPD | NPD | 42 (-2;-5) |
| 11. | U-value (EN 673) | 3 | 0,4 | 0,3 | 0,3 | 0,4 | 0,3 | 0,3 |
| 12. | Light transmission/reflection (EN 410): $\tau_v$ / $\rho_v$ / $\rho'_v$ | 3 | NPD | NPD | NPD | NPD | NPD | NPD |
| 13. | - Solar transmission/reflection/factor (EN 410): $\tau_e$ / $\rho_e$ / $\rho'_e$<br>- Solar factor: g | 3 | NPD<br>NPD | NPD<br>NPD | NPD<br>NPD | NPD<br>NPD | NPD<br>NPD | NPD<br>NPD |
| 14. | Durability | 3 | PASS | PASS | PASS | PASS | PASS | PASS |

Brussels
14th of June 2013

E. Ceriani
Primary Sales & Strategic, Marketing Director, Building

# Translations

## English → Bulgarian (български)

| | |
|---|---|
| **CE Marking** | CE маркировка |
| **Characteristics** | Характеристики |
| Resistance to fire | Пожароустойчивост |
| Reaction to fire | Реакция към огън |
| External fire performance | Външна пожароустойчивост |
| Bullet resistance | Куршумоустойчивост |
| Explosion resistance | Взривоустойчивост |
| Burglar resistance | Устойчивост на вандализъм |
| Pendulum body impact resistance | Устойчивост на удар от двежещи се тела |
| Resistance against sudden temperature changes and temperature differentials | Устойчивост на резки температурни промени и температурни разлики |
| Wind, snow, permanent and imposed load resistance | Устойчивост на вятър, сняг, постоянно или временно натоварване |
| Direct airborne sound insulation | Редукция на звуци, предавани директно по въздух |
| Thermal properties | Термални характеристики |
| Emissivity | Емисивитет |
| U-value | U-фактор |
| Radiation properties | Радиационни характеристики |
| Light transmission | Светлопреминаване |
| Light teflection | Отразяване на светлина |
| Solar energy transmission | Прминаване на слънчева енергия |
| Solar energy reflection | Отразяване на слънчева енергия |

| | |
|---|---|
| Basic soda lime silicate float glass | Флоатно стъкло |
| Basic soda lime silicate patterned glass | Орнаментно стъкло |
| Basic soda lime silicate wired patterned glass | Орнаментно армирано стъло |
| Coated glass | Стъкло с покритие |
| Thermally toughened soda lime silicate safety glass | Термично закалено флоатно безопасно стъкло |
| Heat soaked Thermally toughened soda lime silicate safety glass | Термично закалено флоатно стъкло с "heat soak" тест |
| Heat strengthened soda lime silicate glass | Топлинно заздравено флоатно стъкло |
| Insulating glass units | Изолиращи елементи |
| Laminated glass and laminated safety glass | Ламинирано стъкло и ламинирано безопасно стъкло |
| Fire resistant glass | Пожароустойчиво стъкло |

## English → čeština

| **CE Marking** | **CE značení** |
|---|---|
| **Characteristics** | **Vlastnosti** |
| Resistance to fire | Odolnost proti požáru |
| Reaction to fire | Reakce na požár |
| External fire performance | Vlastnosti při konfrontaci s požárem |
| Bullet resistance | Odolnost proti průstřelu |
| Explosion resistance | Odolnost proti explozi |
| Burglar resistance | Odolnost proti vloupání |
| Pendulum body impact resistance | Odolnost proti nárazu vyvolaného lidským tělem |
| Resistance against sudden temperature changes and temperature differentials | Odolnost proti náhlým změnám teplot a teplotním rozdílům |
| Wind, snow, permanent and imposed load resistance | Odolnost proti zátěži-vítr, sníh- trvalému a užitnému zatížení |
| Direct airborne sound insulation | Izolace proti přímému hluku z letecké dopravy |
| Thermal properties | Termické vlastnosti |
| Emissivity | Emisivita |
| U-value | Koeficient U |
| Radiation properties | Vlastnosti záření |
| Light transmission | Prostup světla |
| Light teflection | Světelná reflexe |
| Solar energy transmission | Propustnost slunečního záření |
| Solar energy reflection | Reflexe slunečního záření |

| | |
|---|---|
| Basic soda lime silicate float glass | Základní sodnovápenatokřemičité float sklo |
| Basic soda lime silicate patterned glass | Základní sodnovápenatokřemičité ornamentní sklo |
| Basic soda lime silicate wired patterned glass | Základní sodnovápenatokřemičité ornamentní sklo s drátěnou vložkou |
| Coated glass | Sklo s povlakem |
| Thermally toughened soda lime silicate safety glass | Tepelně tvrzené sodnovápenatokřemičité bezpečnostní sklo |
| Heat soaked Thermally toughened soda lime silicate safety glass | Sodnovápenatokřemičité bezpečnostní tvrzené sklo- s HST |
| Heat strengthened soda lime silicate glass | Tepelně zpevněné sodnovápenatokřemičité sklo |
| Insulating glass units | Izolační skla |
| Laminated glass and laminated safety glass | Vrstvená skla a vrstvená bezpečnostní skla |
| Fire resistant glass | Protipožární sklo |

## English → Dansk

| **CE Marking** | **CE mærkning** |
|---|---|
| **Characteristics** | **Karakteristik** |
| Resistance to fire | Modstand mod brand |
| Reaction to fire | Reaktion ved brand |
| External fire performance | Ekstern brandmodstand |
| Bullet resistance | Modstand mod skud |
| Explosion resistance | Modstand mod eksplosion |
| Burglar resistance | Modstand mod indbrud |
| Pendulum body impact resistance | Pendultest (personsikkerhed) |
| Resistance against sudden temperature changes and temperature differentials | Modstand mod pludselige temperatursvingninger og temperaturgradienter |
| Wind, snow, permanent and imposed load resistance | Vind-, sne- og langtidslast |
| Direct airborne sound insulation | Direkte luftbåren Lydreduktion |
| Thermal properties | Varmeisolering |
| Emissivity | Emissivitet |
| U-value | U-værdi |
| Radiation properties | Strålingsegenskaber |
| Light transmission | Sollystransmittans |
| Light reflection | Sollysreflektans |
| Solar energy transmission | Solenergitransmittans |
| Solar energy reflection | Solenergireflektans |

| | |
|---|---|
| Basic soda lime silicate float glass | Kalk-soda-silikat floatglas |
| Basic soda lime silicate patterned glass | Kalk-soda-silikat ornament glas |
| Basic soda lime silicate wired patterned glass | Kalk-soda-silikat ornament trådglas |
| Coated glass | Belagt glas |
| Thermally toughened soda lime silicate safety glass | Termisk hærdet glas |
| Heat soaked Thermally toughened soda lime silicate safety glass | Heat soaked termisk hærdet kalk-soda-silikat glas |
| Heat strengthened soda lime silicate glass | Varmeforstærket glas |
| Insulating glass units | Termoruder |
| Laminated glass and laminated safety glass | Lamineret glas og lamineret sikkerhedsglas |
| Fire resistant glass | Brandbeskyttende glas |

## English → Deutsch

| | |
|---|---|
| **CE Marking** | CE Kennzeichnung |
| **Characteristics** | Eigenschaften |
| Resistance to fire | Feuerwiderstand |
| Reaction to fire | Brandverhalten |
| External fire performance | Verhalten bei Beanspruchungdurch Feuer von außen |
| Bullet resistance | Durchschusshemmung |
| Explosion resistance | Sprengwirkungshemmung |
| Burglar resistance | Einbruchhemmung |
| Pendulum body impact resistance | Pendelschlagwiderstand |
| Resistance against sudden temperature changes and temperature differentials | Beständigkeit gegen plötzlicheTemperaturwechsel und Temperaturunterschiede |
| Wind, snow, permanent and imposed load resistance | Widerstand gegen Schnee-, Wind-, Dauerlasten bzw. sonstige Lasten |
| Direct airborne sound insulation | Direkte Luftschalldämmung |
| Thermal properties | Thermische Eigenschaften |
| Emissivity | Emissivität |
| U-value | U-Wert |
| Radiation properties | Strahlungsphysikalische Eigenschaften |
| Light transmission | Lichttransmission |
| Light reflection | Lichtreflexion |
| Solar energy transmission | Energietransmission |
| Solar energy reflection | Energiereflexion |

| | |
|---|---|
| Basic soda lime silicate float glass | Gefloatetes Natronkalk-Silicatglas |
| Basic soda lime silicate patterned glass | Ornamentglas aus Natronkalk-Silicatglas |
| Basic soda lime silicate wired patterned glass | Drahtornamentglas aus Natronkalk-Silicatglas |
| Coated glass | Beschichtetes Glas |
| Thermally toughened soda lime silicate safety glass | Thermisch vorgespanntes Kalknatron-Einscheibensicherheitsglas |
| Heat soaked Thermally toughened soda lime silicate safety glass | Heißgelagertes thermisch vorgespanntes Kalknatron-Einscheibensicherheitsglas |
| Heat strengthened soda lime silicate glass | Teilvorgespanntes Kalknatronglas |
| Insulating glass units | Isolierglas |
| Laminated glass and laminated safety glass | Verbundglas und Verbundsicherheitsglas |
| Fire resistant glass | Feuerbeständiges Glas |

## English → eesti keel

| **CE Marking** | **CE märgistus** |
|---|---|
| **Characteristics** | **Omadused** |
| Resistance to fire | Tulekindlus |
| Reaction to fire | Põlevus |
| External fire performance | Vastupidavus välisele tulele |
| Bullet resistance | Kuulikindlus |
| Explosion resistance | Plahvatuskindlus |
| Burglar resistance | Vandalismikindlus |
| Pendulum body impact resistance | Vastupidavus pehme keha löögile (pendeltest) |
| Resistance against sudden temperature changes and temperature differentials | Vastupidavus järskudele temperatuurimuutustele ja temperatuuri erinevustele |
| Wind, snow, permanent and imposed load resistance | Vastupidavus tuule-, lume-, püsi- ja kasuskoormusele |
| Direct airborne sound insulation | Otsene õhuheli isolatsioon |
| Thermal properties | Soojuslikud omadused |
| Emissivity | Emissiivsus |
| U-value | U-väärtus |
| Radiation properties | Kiirguslikud omadused |
| Light transmission | Valguse läbivus |
| Light reflection | Valguse peegeldus |
| Solar energy transmission | Päikeseenergia läbivus |
| Solar energy reflection | Päikeseenergia peegeldus |

| | |
|---|---|
| Basic soda lime silicate float glass | Lubi-liiv-floatklaas |
| Basic soda lime silicate patterned glass | Lubi-liiv-ornamentklaas |
| Basic soda lime silicate wired patterned glass | Sarrustatud Lubi-liiv-ornamentklaas |
| Coated glass | Pindkattega klaas |
| Thermally toughened soda lime silicate safety glass | Termiliselt karastatud lubi-liiv-turvaklaas |
| Heat soaked Thermally toughened soda lime silicate safety glass | Heat soaked termiliselt karastatud lubi-liiv-turvaklaas |
| Heat strengthened soda lime silicate glass | Termiliselt tugevdatud lubiliivklaas |
| Insulating glass units | Klaaspakett |
| Laminated glass and laminated safety glass | Lamineeritud klaas ja lamineeritud turvaklaas |
| Fire resistant glass | Tuletõkkeklaas |

## English → ελληνικα

| **CE Marking** | **Σημα CE** |
|---|---|
| **Characteristics** | **Χαρακτηριστικα** |
| Resistance to fire | Αντσταση στην φωτια |
| Reaction to fire | Αντιδραση στην φωτια |
| External fire performance | Επιδοση σε εξωτερικη φωτια |
| Bullet resistance | Αντισταση σε σφαιρα |
| Explosion resistance | Αντισταση σε εκρηξη |
| Burglar resistance | Αντισταση σε διαρρηξη |
| Pendulum body impact resistance | Αντισταση σε κρουση εκκρεμων αντικειμενων |
| Resistance against sudden temperature changes and temperature differentials | Αντισταση κατα ξαφνικων αλλαγων θερμοκρασιας και διαφορων θερμοκρασιων |
| Wind, snow, permanent and imposed load resistance | Μονιμη και επιβαλλομενη αντισταση σε ανεμοπιεση και πιεση χιονιου |
| Direct airborne sound insulation | Μονωση κατα απευθειας αερομεταφερομενου θορυβου |
| Thermal properties | θερμικες ιδιοτητες |
| Emissivity | Εκπομπη |
| U-value | Συντελεστης θερμοαγωγιμοτητας |
| Radiation properties | Ιδιοτητες ακτινοβολιας |
| Light transmission | Μεταδοση φωτως |
| Light reflection | Ανταανακλαση φωτως |
| Solar energy transmission | Μεταδοση ηλιακης ενεργειας |
| Solar energy reflection | Ανταανακλαση ηλιακης ενεργειας |

| | |
|---|---|
| Basic soda lime silicate float glass | Βασικο γυαλι σοδας |
| Basic soda lime silicate patterned glass | Βασικο εκτυπωμενο γυαλι σοδας (διαμαντε) |
| Basic soda lime silicate wired patterned glass | Βασικο εκτυπωμενο γυαλι σοδας με συρμα |
| Coated glass | Επιστρωμενος υαλοπινακας |
| Thermally toughened soda lime silicate safety glass | Θερμικα σκληρημενο βασικο γυαλι σοδας ασφαλειας |
| Heat soaked Thermally toughened soda lime silicate safety glass | Θερμικα εμποτισμενου σκληρημενου βασικου γυαλιου σοδας ασφαλειας |
| Heat strengthened soda lime silicate glass | Θερμικα ενισχυμενο βασικο γυαλι σοδας |
| Insulating glass units | Διπλοι μονωτικοι υαλοπινακες |
| Laminated glass and laminated safety glass | Λαμιναρισμενος υαλοπινακας και λαμιναρισμενος υαλοπινακας ασφαλειας |
| Fire resistant glass | Πυραντοχος υαλοπινακας |

## English → español

| CE Marking | Marcado CE |
|---|---|
| **Characteristics** | **Características** |
| Resistance to fire | Resistencia al fuego |
| Reaction to fire | Reacción al fuego |
| External fire performance | Prestaciones de comportamiento frente a fuego exterior |
| Bullet resistance | Resistencia a las balas |
| Explosion resistance | Resistencia a las explosiones |
| Burglar resistance | Resistencia a la agresión |
| Pendulum body impact resistance | Resistencia al impacto de cuerpo pendular |
| Resistance against sudden temperature changes and temperature differentials | Resistencia a variaciones bruscos de temperatura y a temperaturas diferenciales |
| Wind, snow, permanent and imposed load resistance | Reistencia a las cargas de viento y nieve, y a las cargas permanentes e impuestas |
| Direct airborne sound insulation | Aislamiento al ruido aereo directo |
| Thermal properties | Propiedades térmicas |
| Emissivity | Emisividad |
| U-value | Valor U |
| Radiation properties | Propiedades ante la radiación |
| Light transmission | Transmisión luminosa |
| Light reflection | Reflexión  luminosa |
| Solar energy transmission | Transmisión de la energía solar |
| Solar energy reflection | Reflexión de la energía solar |

| | |
|---|---|
| Basic soda lime silicate float glass | Vidrio flotado de base silicato sodo-cálcico |
| Basic soda lime silicate patterned glass | Vidrio impreso de base silicato sodo-cálcico |
| Basic soda lime silicate wired patterned glass | Vidrio impreso armado de base silicato sodo-cálcico |
| Coated glass | Vidrio de capa |
| Thermally toughened soda lime silicate safety glass | Vidrio de silicato sodo-cálcico de seguridad templado térmicamente |
| Heat soaked Thermally toughened soda lime silicate safety glass | Vidrio de silicato sodo-cálcico de seguridad templado y con tratamiento Heat Soak |
| Heat strengthened soda lime silicate glass | Vidrio de silicato sodo-cálcico de seguridad termoendurecido |
| Insulating glass units | Unidad de vidrio aislante |
| Laminated glass and laminated safety glass | Vidrio laminado y vidrio laminado de seguridad |
| Fire resistant glass | Vidrio resistente al fuego |

## English → français

| **CE Marking** | **Marquage CE** |
|---|---|
| **Characteristics** | **Caractéristiques** |
| Resistance to fire | Résistance au feu |
| Reaction to fire | Réaction au feu |
| External fire performance | Performances de comportement vis-à-vis d'un feu extérieur |
| Bullet resistance | Résistance aux balles |
| Explosion resistance | Résistances aux explosions |
| Burglar resistance | Résistance aux effractions |
| Pendulum body impact resistance | Résistance à l'impact d'un pendule |
| Resistance against sudden temperature changes and temperature differentials | Résistances aux variations brutales de température et aux températures différentielles |
| Wind, snow, permanent and imposed load resistance | Résistance aux charges dues au vent et à la neige, aux charges permanentes et imposées |
| Direct airborne sound insulation | Isolation au bruit aérien direct |
| Thermal properties | Propriétés thermiques |
| Emissivity | Emissivité |
| U-value | Coefficient U |
| Radiation properties | Propriétés de rayonnement |
| Light transmission | Transmission lumineuse |
| Light reflection | Réflexion lumineuse |
| Solar energy transmission | Transmission du rayonnement solaire |
| Solar energy reflection | Reflexion du rayonnement solaire |

| | |
|---|---|
| Basic soda lime silicate float glass | Verre float de silicate sodo-calcique de base |
| Basic soda lime silicate patterned glass | Verre imprimé de silicate sodo-calcique de base |
| Basic soda lime silicate wired patterned glass | Verre imprimé armé de silicate sodo-calcique de base |
| Coated glass | Verre à couche |
| Thermally toughened soda lime silicate safety glass | Verre de silicate sodo-calcique de sécurité trempé thermiquement |
| Heat soaked Thermally toughened soda lime silicate safety glass | Verre de silicate sodo-calcique de sécurité trempé et traité Heat Soak |
| Heat strengthened soda lime silicate glass | Verre de silicate sodo-calcique durci thermiquement |
| Insulating glass units | Vitrage isolant préfabriqué scellé |
| Laminated glass and laminated safety glass | Verre feuilleté et verre feuilleté de sécurité |
| Fire resistant glass | Verre résistant au feu |

## English → Italiano

| **CE Marking** | **Marcatura CE** |
|---|---|
| **Characteristics** | **Caratteristiche** |
| Resistance to fire | Resistenza al fuoco |
| Reaction to fire | Reazione al fuoco |
| External fire performance | Resistenza al fuoco proveniente dall'esterno |
| Bullet resistance | Resistenza ai proiettile |
| Explosion resistance | Resistenza all' esplosione |
| Burglar resistance | Resistenza agli attacchi manuali |
| Pendulum body impact resistance | Resistenza agli urti (Prova del pendolo) |
| Resistance against sudden temperature changes and temperature differentials | Resistenza agli sbalzi improvvisi di temperatura e alle differenze di temperatura |
| Wind, snow, permanent and imposed load resistance | Resistenza a carichi di vento, neve e ai carichi permanti |
| Direct airborne sound insulation | Isolamento al rumore aereo diretto |
| Thermal properties | Proprietà termiche |
| Emissivity | Emissività |
| U-value | Valore U |
| Radiation properties | Proprietà di irraggiamento |
| Light transmission | Trasmissione luminosa |
| Light reflection | Riflessione luminosa |
| Solar energy transmission | Trasmissione energetica diretta |
| Solar energy reflection | Riflessione energetica |

| | |
|---|---|
| Basic soda lime silicate float glass | Prodotti di base di vetro di silicato sodo-calcico Vetro float |
| Basic soda lime silicate patterned glass | Prodotti di base di vetro di silicato sodo-calcico Vetro stampato |
| Basic soda lime silicate wired patterned glass | Prodotti di base di vetro di silicato sodo-calcico Vetro stampato armato |
| Coated glass | Vetri rivestiti |
| Thermally toughened soda lime silicate safety glass | Vetro di silicato sodo-calcico di sicurezza temprato termicamente |
| Heat soaked Thermally toughened soda lime silicate safety glass | Vetro di silicato sodo-calcico di sicurezza temprato e trattato Heat Soak |
| Heat strengthened soda lime silicate glass | Vetro di silicato sodo-calcico di indurito termicamente |
| Insulating glass units | Vetrate isolanti |
| Laminated glass and laminated safety glass | Vetro stratificato e vetro stratificato di sicurezza |
| Fire resistant glass | Vetro resistente al fuoco |

## English → latviešu valoda

| CE Marking | Eiropas Padomes(EP) Marķējums |
|---|---|
| **Characteristics** | **Raksturīgās īpašības** |
| Resistance to fire | Ugunsizturīgs |
| Reaction to fire | Reaģē ar uguni |
| External fire performance | Ārējās uguns veiktspēja(izolācijas spēja) |
| Bullet resistance | Ložu necaurlaidīgs |
| Explosion resistance | Izturīgs pret eksploziju |
| Burglar resistance | Izturīgs pret ielaušanos un huligānismu |
| Pendulum body impact resistance | Izturīgs pret krītošu ķermeņu triecienu |
| Resistance against sudden temperature changes and temperature differentials | Izturīgs pret krasām temperatūras svārstībām un temperatūras atšķirībām |
| Wind, snow, permanent and imposed load resistance | Iztur vēja, sniega, pastāvīgas un īslaicīgas(pēkšņas) slodzes. |
| Direct airborne sound insulation | Tiešu aviācijas trokšņu izolācija |
| Thermal properties | Termiskās īpašības |
| Emissivity | Caurstarojums |
| U-value | Siltumcaurlaidības koeficienta U vērtība. |
| Radiation properties | Starojuma īpašības |
| Light transmission | Gaismas caurlaidība |
| Light teflection | Gaismas atstarošana |
| Solar energy transmission | Saules enerģijas caurlaidība |
| Solar energy reflection | Saules enerģijas atstarošana |

| | |
|---|---|
| Basic soda lime silicate float glass | Nātrija-kalcija silikātu float stikls |
| Basic soda lime silicate patterned glass | Nātrija-kalcija silikātu dekoratīvais stikls |
| Basic soda lime silicate wired patterned glass | Nātrija-kalcija silikātu dekoratīvais stikls ar stiegrojumu |
| Coated glass | Pārklāts stikls |
| Thermally toughened soda lime silicate safety glass | Termiski rūdīts nātrija-kalcija silikātu drošības stikls |
| Heat soaked Thermally toughened soda lime silicate safety glass | Karstumā testēts (Heat-Soak test) termiski rūdīts nātrija-kalcija silikātu drošības stikls |
| Heat strengthened soda lime silicate glass | Termiski stiprināts nātrija-kalcija silikātu drošības stikls |
| Insulating glass units | Stikla pakete |
| Laminated glass and laminated safety glass | Laminēts stikls un laminēts aizsargstikls |
| Fire resistant glass | Ugunsizturīgs stikls |

## English → lietuviu kalba

| **CE Marking** | **CE žymejimas** |
|---|---|
| **Characteristics** | **Charakteristikos** |
| Resistance to fire | Atsparumas ugniai |
| Reaction to fire | Sąveika su ugnimi |
| External fire performance | Išorinės ugnies charakteristikos |
| Bullet resistance | Atsparumas šūviams |
| Explosion resistance | Atsparumas sprogimams |
| Burglar resistance | Atsparumas įsilaužimams |
| Pendulum body impact resistance | Atsparumas kintančiam kūnų poveikiui |
| Resistance against sudden temperature changes and temperature differentials | Atsparumas staigiam temperatūrų pasikeitimui ir temperatūrų skirtumams |
| Wind, snow, permanent and imposed load resistance | Atsparumas vėjo, sniego, pastovioms ir staigioms apkrovoms |
| Direct airborne sound insulation | Oru sklindančio garso izoliacija |
| Thermal properties | Šiluminės savybės |
| Emissivity | Emisija |
| U-value | U-reikšmė, šiluminio pralaidumo koeficientas |
| Radiation properties | Radiacinės savybės |
| Light transmission | Šviesos pralaidumas |
| Light reflection | Šviesos atspindėjimas |
| Solar energy transmission | Saulės energijos perdavimas |
| Solar energy reflection | Saulės energijos atspindėjimas |

| | |
|---|---|
| Basic soda lime silicate float glass | Plokščias kalcio natrio silikatinis stiklas |
| Basic soda lime silicate patterned glass | Raštuotas kalcio natrio silikatinis stiklas |
| Basic soda lime silicate wired patterned glass | Armuotas raštuotas kalcio natrio silikatinis stiklas |
| Coated glass | Stiklas su danga |
| Thermally toughened soda lime silicate safety glass | Termiškai grūdintas kalcio natrio silikatinis stiklas |
| Heat soaked Thermally toughened soda lime silicate safety glass | Termiškai grūdintas ir karščiu (HST) testuotas sagus kalcio natrio silikatinis stiklas |
| Heat strengthened soda lime silicate glass | Karščiu sustiprintas kalcio natrio silikatinis stiklas |
| Insulating glass units | Stiklo paketas |
| Laminated glass and laminated safety glass | Laminuotas stiklas ir saugus laminuotas stiklas |
| Fire resistant glass | Ugniai atsparus stiklas |

## English → Magyar

| **CE Marking** | **CE-jelölés** |
|---|---|
| **Characteristics** | **tulajdonságok** |
| Resistance to fire | tűzállóság |
| Reaction to fire | éghetőség |
| External fire performance | jellemzők kültéri tűz esetén |
| Bullet resistance | golyóállóság |
| Explosion resistance | robbanás-ellenállás |
| Burglar resistance | betörés- ellenállás |
| Pendulum body impact resistance | ingaütés-ellenás |
| Resistance against sudden temperature changes and temperature differentials | ellenállás a hirtelen hőmérsékletváltozásnak és nagy mértékű hőmérésklet különbségnek |
| Wind, snow, permanent and imposed load resistance | szél, hó, folytonos és ráhelyezett teherbírás |
| Direct airborne sound insulation | direkt léghanggátlás |
| Thermal properties | thermikus tulajdonságok |
| Emissivity | emisszivitás |
| U-value | U-érték |
| Radiation properties | sugárzás |
| Light transmission | fényáteresztés |
| Light teflection | fényvisszaverés |
| Solar energy transmission | energia áteresztés |
| Solar energy reflection | energia visszaverés |
| g-value | g-érték |

| | |
|---|---|
| Basic soda lime silicate float glass | float üveg |
| Basic soda lime silicate patterned glass | katedrál üveg |
| Basic soda lime silicate wired patterned glass | drót üveg |
| Coated glass | bevonatos üveg |
| Thermally toughened soda lime silicate safety glass | edzett üveg |
| Heat soaked Thermally toughened soda lime silicate safety glass | "heat-soak" teszttel edzett biztonsági üveg |
| Heat strengthened soda lime silicate glass | előfeszített üveg |
| Insulating glass units | hőszigetelő üveg |
| Laminated glass and laminated safety glass | ragasztott és ragasztott biztonsági üveg |
| Fire resistant glass | tűzálló üveg |

## English → Nederlands

| | |
|---|---|
| **CE Marking** | CE markering |
| **Characteristics** | Karakteristieken |
| Resistance to fire | Brandwering |
| Reaction to fire | Reactie op brand |
| External fire performance | Gedrag ten opzichte van uitwendige vuurhaard |
| Bullet resistance | Kogelwering |
| Explosion resistance | Explosiewering |
| Burglar resistance | Inbraakwering |
| Pendulum body impact resistance | Slingerproefweerstand |
| Resistance against sudden temperature changes and temperature differentials | Weerstand tegen plotse temperatuursverandering en temperatuursverschillen |
| Wind, snow, permanent and imposed load resistance | Weerstand tegen wind-, sneeuw- en permanente belasting |
| Direct airborne sound insulation | Directe luchtgeluidisolatie |
| Thermal properties | Thermische eigenschappen |
| Emissivity | Emissiviteit |
| U-value | U-waarde |
| Radiation properties | Stralingseigenschappen |
| Light transmission | Lichttransmissie |
| Light reflection | Lichtreflectie |
| Solar energy transmission | Zontoetreding |
| Solar energy reflection | Zonreflectie |

| | |
|---|---|
| Basic soda lime silicate float glass | Basisnatronkalk floatglas |
| Basic soda lime silicate patterned glass | Basisnatronkalk figuurglas |
| Basic soda lime silicate wired patterned glass | Basisnatronkalk figuurdraadglas |
| Coated glass | Gecoat glas |
| Thermally toughened soda lime silicate safety glass | Thermisch gehard natronkalkveiligheidsglas |
| Heat soaked Thermally toughened soda lime silicate safety glass | Thermisch gehard natronkalk veiligheidsglas met heat soak test |
| Heat strengthened soda lime silicate glass | Thermisch versterkt natronkalkglas |
| Insulating glass units | Isolerend dubbel  glas (IDG) |
| Laminated glass and laminated safety glass | Gelaagd glas en gelaagd veiligheidsglas |
| Fire resistant glass | Brandwerend glas |

## English → Norks

| **CE Marking** | **CE merking** |
|---|---|
| **Characteristics** | **Betegnende** |
| Resistance to fire | Brannhemmende |
| Reaction to fire | Reaksjon mot brann |
| External fire performance | Ekstern brannmotstand |
| Bullet resistance | Skuddhemmende |
| Explosion resistance | Eksplosjonshemmende |
| Burglar resistance | Innbruddshemmende |
| Pendulum body impact resistance | Pendultest(personsikkerhet) |
| Resistance against sudden temperature changes and temperature differentials | Motstand mot plutselige tempratursvingninger og tempraturforskjeller |
| Wind, snow, permanent and imposed load resistance | Vind-,Snø- og varig ilagt belastningsmotstand |
| Direct airborne sound insulation | Direkte luftbåren lydisolasjon |
| Thermal properties | Isoleringsegenskaper |
| Emissivity | Emissivitet |
| U-value | U-Verdi |
| Radiation properties | Strålingsegenskaper |
| Light transmission | Sollys transmisjon |
| Light reflection | Sollys refleksjon |
| Solar energy transmission | Solenergi transmisjon |
| Solar energy reflection | Solenergi refleksjon |

| | |
|---|---|
| Basic soda lime silicate float glass | Kalk-soda-silikat floatglass |
| Basic soda lime silicate patterned glass | Kalk-soda-silikat ornament glass |
| Basic soda lime silicate wired patterned glass | Kalk-soda-silikat ornament trådglass |
| Coated glass | Belagt glass |
| Thermally toughened soda lime silicate safety glass | Termisk herdet glass |
| Heat soaked Thermally toughened soda lime silicate safety glass | Heat soaked termisk herdet kalk-soda-silikat glass |
| Heat strengthened soda lime silicate glass | Varmeforsterket glass |
| Insulating glass units | Isoler glass |
| Laminated glass and laminated safety glass | Laminert glass og laminert sikkerhetsglass |
| Fire resistant glass | Brannbeskyttende glass |

## English → polski

| | |
|---|---|
| **CE Marking** | **Oznakowanie CE** |
| **Characteristics** | **Właściwości** |
| Resistance to fire | Odporność na ogień |
| Reaction to fire | Reakcja na ogień |
| External fire performance | Zachowanie w przypadku pożaru |
| Bullet resistance | Odporność na uderzenie pocisku |
| Explosion resistance | Odporność na siłę eksplozji |
| Burglar resistance | Odporność na włamanie |
| Pendulum body impact resistance | Odporność na uderzenie wahadłem |
| Resistance against sudden temperature changes and temperature differentials | Odpoprność na nagłe zmiany temperatury oraz różnice temperatur |
| Wind, snow, permanent and imposed load resistance | Odporność na siłę wiatru, napór śniegu oraz stałe i przyłożone obciążenia |
| Direct airborne sound insulation | Izolacja akustyczna |
| Thermal properties | Właściwości termiczne |
| Emissivity | Emisyjność |
| U-value | Współczynnik U |
| Radiation properties | Właściwości w zakresie promieniowania |
| Light transmission | Przepuszczalność światła |
| Light reflection | Odbicie światła |
| Solar energy transmission | Przepuszczalność energii promieniowania słonecznego |
| Solar energy reflection | Odbicie energii promieniowania słonecznego |

| | |
|---|---|
| Basic soda lime silicate float glass | Podstawowe wyroby ze szkła float sodowo-wapniowo-krzemianowego |
| Basic soda lime silicate patterned glass | Podstawowe wyroby ze szkła wzorzystego walcowanego sodowo-wapniowo-krzemianowego |
| Basic soda lime silicate wired patterned glass | Podstawowe wyroby ze szkła wzorzystego zbrojonego sodowo-wapniowo-krzemianowego |
| Coated glass | Szkło powlekane |
| Thermally toughened soda lime silicate safety glass | Termicznie hartowane bezpieczne szkło sodowo-wapniowo-krzemianowe |
| Heat soaked Thermally toughened soda lime silicate safety glass | Wygrzewane termicznie hartowane bezpieczne szkło sodowo-wapniowo-krzemianowe |
| Heat strengthened soda lime silicate glass | Cieplnie wzmocnione szkło sodowo-wapniowo-krzemianowe |
| Insulating glass units | Szyby zespolone izolacyjne |
| Laminated glass and laminated safety glass | Szkło warstwowe i bezpieczne szkło warstwowe |
| Fire resistant glass | Szkło ognioodporne |

## English → Romanian

| | |
|---|---|
| **CE Marking** | marcaj CE |
| **Characteristics** | caracteristici |
| Resistance to fire | rezistenta la foc |
| Reaction to fire | reactia la foc |
| External fire performance | comportare la un foc exterior |
| Bullet resistance | rezistenta la glont |
| Explosion resistance | rezistenta la explozie |
| Burglar resistance | rezistenta la efractie |
| Pendulum body impact resistance | rezistenta la impactul cu un pendul |
| Resistance against sudden temperature changes and temperature differentials | rezistenta la variatii bruste de temperatura si la diferente de temperatura |
| Wind, snow, permanent and imposed load resistance | rezistenta la incarcari datorate vantului si zapezii si la incarcari permanente si impuse |
| Direct airborne sound insulation | atenuare fonica - izolare la zgomot aerian |
| Thermal properties | proprietati termice |
| Emissivity | emisivitate |
| U-value | valoare U |
| Radiation properties | proprietati de radiatie |
| Light transmission | transmisia luminii |
| Light reflection | reflexia luminii |
| Solar energy transmission | transmisia energiei solare |
| Solar energy reflection | reflexia energiei solare |

| | |
|---|---|
| Basic soda lime silicate float glass | sticla float calco-sodica |
| Basic soda lime silicate patterned glass | sticla ornament calco-sodica |
| Basic soda lime silicate wired patterned glass | sticla armata calco-sodica |
| Coated glass | sticla cu pelicula |
| Thermally toughened soda lime silicate safety glass | sticla calco-sodica,de siguranta, securizata |
| Heat soaked Thermally toughened soda lime silicate safety glass | sticla calco-sodica, de siguranta, securizata, cu efectuarea testului de depistare a sulfurii de nichel |
| Heat strengthened soda lime silicate glass | sticla calco-sodica, calita (semi-securizata) |
| Insulating glass units | vitraj izolant |
| Laminated glass and laminated safety glass | sticla stratificata, sticla stratificata de siguranta |
| Fire resistant glass | sticla rezistenta la foc |

## English → português

| | |
|---|---|
| **CE Marking** | |
| **Characteristics** | |
| Resistance to fire | Resistência ao fogo |
| Reaction to fire | Reacção ao fogo |
| External fire performance | Prestações de comportamento frente ao fogo exterior |
| Bullet resistance | Resistência a bala |
| Explosion resistance | Resistência a explosão |
| Burglar resistance | Resistência a agressão |
| Pendulum body impact resistance | Resistência ao impacto do corpo pendular |
| Resistance against sudden temperature changes and temperature differentials | Resistência as variações bruscas de temperatura e diferenciais termicos |
| Wind, snow, permanent and imposed load resistance | Resistência á pressão do vento e neve e ás cargas permanentes impostas |
| Direct airborne sound insulation | Isolamento ao ruído aéreo directo |
| Thermal properties | Propriedades térmicas |
| U-value | Coeficiente Ug |
| Light transmission | Transmissão luminosa |
| Light reflection | Reflexão luminosa |
| Solar energy transmission | Transmissão da energia solar |
| Solar energy reflection | Reflexão da energia solar |

| | |
|---|---|
| Basic soda lime silicate float glass | Vidro á base de silico-sódico calcio |
| Coated glass | Vidro de capa |
| Thermally toughened soda lime silicate safety glass | Vidro de segurança temperado |
| Heat soaked Thermally toughened soda lime silicate safety glass | Vidro de segurança temperado e com tratamento Heat Soak Test |
| Heat strengthened soda lime silicate glass | Vidro termo-endurecido |
| Insulating glass units | Unidade de vidro duplo |
| Laminated glass and laminated safety glass | Vidro laminado e vidro laminado de segurança |

## English → slovenčina

| **CE Marking** | **Označenie CE** |
|---|---|
| **Characteristics** | **Vlastnosti** |
| Resistance to fire | Odolnosť voči ohňu |
| Reaction to fire | Reakcia na oheň |
| External fire performance | Správanie sa voči vonkajšiemu ohňu |
| Bullet resistance | Nepriestrelnosť |
| Explosion resistance | Odolnosť voči výbuchu |
| Burglar resistance | Odolnosť voči vlámaniu |
| Pendulum body impact resistance | Odolnosť voči nárazu kyvadla |
| Resistance against sudden temperature changes and temperature differentials | Odolnosť voči náhlym teplotným zmenám a teplotným rozdielom |
| Wind, snow, permanent and imposed load resistance | Odolnosť voči vetru, snehu a trvalému a náhodilému zaťaženiu |
| Direct airborne sound insulation | Priama vzduchová nepriezvučnosť |
| Thermal properties | Tepelné vlastnosti |
| Emissivity | Emisivita |
| U-value | K-hodnota |
| Radiation properties | Vlastnosti ohľadom žiarenia |
| Light transmission | Prestup svetla |
| Light reflection | Odraz svetla |
| Solar energy transmission | Prestup slnečného žiarenia |
| Solar energy reflection | Odraz slnečného žiarenia |

| | |
|---|---|
| Basic soda lime silicate float glass | Základné plavené sodnovápenatokremičité sklo |
| Basic soda lime silicate patterned glass | Základné sodnovápenatokremičité vzorované sklo |
| Basic soda lime silicate wired patterned glass | Základné sodnovápenatokremičité vzorované sklo s drôtenou vložkou |
| Coated glass | Sklo s povlakom |
| Thermally toughened soda lime silicate safety glass | Tepelne tvrdené sodnovápenatokremičité bezpečnostné sklo |
| Heat soaked Thermally toughened soda lime silicate safety glass | Prehrievané tepelne tvrdené sodnovápenatokremičité bezpečnostné sklo |
| Heat strengthened soda lime silicate glass | Tepelne spevnené sodnovápenatokremičité sklo |
| Insulating glass units | Jednotky izolačného skla |
| Laminated glass and laminated safety glass | Laminované sklo a laminované bezpečnostné sklo |
| Fire resistant glass | Protipožiarne sklo |

## English → slovenščina

| CE Marking | CE označevanje |
|---|---|
| **Characteristics** | **Lastnosti** |
| Resistance to fire | Ognjeeodpornost |
| Reaction to fire | Obnašanje med požarom |
| External fire performance | Obnašanje med zunanjim požarom |
| Bullet resistance | Odpornost pred streli |
| Explosion resistance | Odpornost pred eksplozijo |
| Burglar resistance | Odpornost na vlome |
| Pendulum body impact resistance | Odpornost na preiskus z nihalom |
| Resistance against sudden temperature changes and temperature differentials | Odpornost na nenadne temperaturne spremembe in na razlike v temperaturah |
| Wind, snow, permanent and imposed load resistance | Odpornost na nenadne temperaturne spremembe in na razlike v temperaturah |
| Direct airborne sound insulation | Direktna zvočna izolirnost |
| Thermal properties | Toplotne lastnosti |
| Emissivity | Sevanje |
| U-value | U - vrednost |
| Radiation properties | Sevalno tehnične lastnosti |
| Light transmission | Prepustnost svetlobe |
| Light teflection | Odbojnost svetlobe |
| Solar energy transmission | Prepustnost energije |
| Solar energy reflection | odbojnost energije |
| g-value | g-vrednost |

| | |
|---|---|
| Basic soda lime silicate float glass | Ravno steklo iz natrijsilikatnega stekla |
| Basic soda lime silicate patterned glass | Vzorčasto steklo iz natrijsilikatnega stekla |
| Basic soda lime silicate wired patterned glass | Žično vzorčasto steklo iz natrijsilikatnega stekla |
| Coated glass | Steklo z nanosi |
| Thermally toughened soda lime silicate safety glass | Kaljeno steklo iz natrij-kalcij silikatnega stekla |
| Heat soaked Thermally toughened soda lime silicate safety glass | Kaljeno steklo s toplotnim preiskusom iz natrij-kalcij silikatnega stekla |
| Heat strengthened soda lime silicate glass | Toplotno utrjeno steklo iz natrij-kalcij silikatnega stekla |
| Insulating glass units | Izolacijski stekleni elementi |
| Laminated glass and laminated safety glass | Lepljeno in varnostno lepljeno steklo |
| Fire resistant glass | Ognjeodporno steklo za uporabo v gradbeništvu |

## English → suomi

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|---|---|
| **CE Marking** | **CE-merkintä** |
| **Characteristics** | **Erityistuntomerkit** |
| Resistance to fire | Palon kestävä |
| Reaction to fire | Paloa pidättävä |
| External fire performance | Paloa hidastava |
| Bullet resistance | Luodinuojaus |
| Explosion resistance | Räjähdyksensuojaus |
| Burglar resistance | Murronsuojaus |
| Pendulum body impact resistance | Suojaus henkilön törmäystä vastaan |
| Resistance against sudden temperature changes and temperature differentials | Suojaus äkillistä lämpötilanmuutosta ja lämpötilagradientteja vastaan |
| Wind, snow, permanent and imposed load resistance | Suojaus tuulikuormaa, lumikuormaa, pysyvää kuormaa jahyötyuormaa vastaan |
| Direct airborne sound insulation | Suoran ilmaääneen eristys |
| Thermal properties | Lämmöneristys |
| Emissivity | Emissiivisyys |
| U-value | U-arvo |
| Radiation properties | Säteilyn suojaus |
| Light transmission | Valonläpäisy |
| Light reflection | Valonheijastus |
| Solar energy transmission | Auringon lämpösäteilyn kokonaisläpäisy |
| Solar energy reflection | Auringon lämpösäteilyn heijastus |

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|---|---|
| Basic soda lime silicate float glass | Natronkalkkisilikaattitasolasi |
| Basic soda lime silicate patterned glass | Natronkalkkisilikaatti koristelasi |
| Basic soda lime silicate wired patterned glass | Kuvioitu natronkalkkisilikaattirautalankalasi |
| Coated glass | Pinnoitelasi |
| Thermally toughened soda lime silicate safety glass | Lämpökarkaistu natronkalkkisilikaattiturvalasi |
| Heat soaked Thermally toughened soda lime silicate safety glass | Heat soak testattu karkaistu natronkalkkisilikaattiturvalasi |
| Heat strengthened soda lime silicate glass | Lämpölujitettu natronkalkkisilikaattiturvalasi |
| Insulating glass units | Eristyslasiyksiköt |
| Laminated glass and laminated safety glass | Laminoitu lasi ja laminoitu turvalasi |
| Fire resistant glass | Palonsuojalasi |

## English → svenska

| | |
|---|---|
| **CE Marking** | **CE-märkning** |
| **Characteristics** | **Karaktäristik** |
| Resistance to fire | Motstånd mot brand |
| Reaction to fire | Reaktion vid brand |
| External fire performance | Externt brandmotstånd |
| Bullet resistance | Motstånd mot projektiler |
| Explosion resistance | Säkerhet vid explosion |
| Burglar resistance | Motstånd mot inbrott |
| Pendulum body impact resistance | Pendelprov (personsäkerhet) |
| Resistance against sudden temperature changes and temperature differentials | Motstånd mot plötsliga temperatursvängningar och temperaturgradienter |
| Wind, snow, permanent and imposed load resistance | Vind-, snö-, permanent/tillfällig belastning. |
| Direct airborne sound insulation | Ljudisolering |
| Thermal properties | Värmeisolering |
| Emissivity | Emissivitet |
| U-value | U-värde |
| Radiation properties | Strålningsegenskaper |
| Light transmission | Ljustransmission |
| Light reflection | Ljusreflektion |
| Solar energy transmission | Solenergi transmission |
| Solar energy reflection | Solenergi reflektion |

| | |
|---|---|
| Basic soda lime silicate float glass | Kalk-sodasilikatglas,floatglas |
| Basic soda lime silicate patterned glass | Kalk-sodasilikatglas, mönstrat glas |
| Basic soda lime silicate wired patterned glass | Kalk-sodasilikatglas, mönstrat trådglas |
| Coated glass | Belagt glas |
| Thermally toughened soda lime silicate safety glass | Termiskt härdat glas |
| Heat soaked Thermally toughened soda lime silicate safety glass | Heat soak testat termiskt härdat kalk-sodasilikatglas |
| Heat strengthened soda lime silicate glass | Värmeförstärkt kalk-sodasilikatglas |
| Insulating glass units | Isolerglas |
| Laminated glass and laminated safety glass | Suédois |
| Fire resistant glass | Brandskyddsglas |