

**TEST REPORT N° 2009B COU 7315**

Including 4 pages + 1 annex  
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Mons, June 12<sup>th</sup>, 2009

**REQUESTED BY :** **AGC Flat Glass Europe - R&D Centre**  
2 rue de l'Aurore  
B-6040 Jumet  
Belgium

**REFERENCE OF THE REQUEST :** Order 45973589

**CONCERNED MANUFACTURER:** **AGC Flat Glass Europe - R&D Centre**  
2 rue de l'Aurore  
B-6040 Jumet  
Belgium

**NUMBER OF SAMPLES AND IDENTIFICATION :** **Stopsol Phoenix**  
See page 2

**PURPOSE OF THE REQUESTED :** **Initial Type Test**  
Determination of the photo-energetic properties  
according to EN 1096-1.\*

**SAMPLES RECEIVED ON :** 08/06/2009

**TESTING DATE :** 11/06/2009

**REMARKS :** \* Test under accreditation



**Notified body (Id.N°1174)**

according to ART.18 of the « Construction Products Directive » CPD 89/106/EEC

## DESCRIPTION OF THE SAMPLES

|                                                   |                                                                                                 |
|---------------------------------------------------|-------------------------------------------------------------------------------------------------|
| Concerned manufacturer                            | : <b>AGC Flat Glass Europe - R&amp;D Centre</b><br>2 rue de l'Aurore<br>B-6040 Jumet<br>Belgium |
| Production site                                   | : <b>KLIN</b>                                                                                   |
| Commercial name of the product                    | : <b>Stopsol Phoenix</b>                                                                        |
| Customer's references                             | : <b>code AGC 49069</b>                                                                         |
| Internal reference                                | : CCOU 7315                                                                                     |
| Sampling                                          | : Under responsibility of the applicant                                                         |
| Sampling information                              | : Traceability of the samples is under responsibility of the manufacturer.                      |
| Class of Coating                                  | : B                                                                                             |
| Coating position                                  | : 2 and 3                                                                                       |
| Low emissivity                                    | : No                                                                                            |
| Glass Substrate                                   | : Clear Float Glass                                                                             |
| Normal emissivity of clear glass ( $\epsilon_n$ ) | : 0.89                                                                                          |
| Samples                                           | :                                                                                               |
| Number of samples                                 | : 1 (100 * 100 mm)                                                                              |
| Nominal Thickness                                 | : 6 mm                                                                                          |

# PHOTO-ENERGETIC PROPERTIES - EN 1096-1\*

|                                |                               |                              |
|--------------------------------|-------------------------------|------------------------------|
| <b>Instruments Description</b> | For emissivity                | For optical properties       |
| Spectrophotometer              | PerkinElmer SPECTRUM 100      | PerkinElmer LAMDA 19         |
| Type                           | Single Beam (FTIR)            | Double Beam                  |
| Reflectance accessory          | PerkinElmer                   |                              |
| Type of references             | SnO <sub>2</sub> Coated Glass | Primary surface Ag Mirrors   |
|                                | Gold Mirror                   | Secondary surface Ag Mirrors |
| Measurement Responsible        | DL                            | DL                           |

Notes : Uncertainty calculated on emissivity measurement is  $\pm 0.01$

Reproducibility on emissivity measurement is estimated to  $\pm 0.005$

|                                                              |                |
|--------------------------------------------------------------|----------------|
| <b>Considered parameters for the calculation of g and Ug</b> |                |
| Composition of the insulating glass                          | : 5.85/15/5.85 |
| Position of the coating                                      | : 2            |
| Filling up                                                   | : 90% Ar       |

**7315 : 5.85 mm**

|                                                      | COATED GLASS (EN 1096-1) | IGU (EN 673)             |
|------------------------------------------------------|--------------------------|--------------------------|
| <b>U.V. range (280 – 380 nm)</b>                     |                          |                          |
| • Transmission $\tau_{uv}$                           | 41.1 %                   | 28.5 %                   |
| <b>Visible range (380 – 780 nm) – Ill D65/obs 2°</b> |                          |                          |
| • Transmission $\tau_v$                              | 66.6 %                   | 61.0 %                   |
| • Reflection coated side $\rho_v$                    | 31.9 %                   | 33.7 %                   |
| • Reflection opposite side $\rho'_v$                 | 30.4 %                   | /                        |
| <b>Solar range (300 – 2500 nm)</b>                   |                          |                          |
| • Transmission $\tau_e$                              | 65.7 %                   | 55.7 %                   |
| • Reflection coated side $\rho_e$                    | 25.2 %                   | 25.3 %                   |
| • Reflection opposite side $\rho'_e$                 | 22.3 %                   | /                        |
| • Solar factor g                                     | 0.68                     | 0.62                     |
| <b>Thermal range (5000 – 50000 nm)</b>               |                          |                          |
| • Emissivity $\epsilon_n$                            | 0.877                    | /                        |
| • Thermal coefficient Ug                             | /                        | 2.60 W/m <sup>2</sup> °K |

**Considered parameters for the calculation of g and Ug**

|                                     |                |
|-------------------------------------|----------------|
| Composition of the insulating glass | : 5.85/15/5.85 |
| Position of the coating             | : 3            |
| Filling up                          | : 90% Ar       |

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