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Institut Interuniversitaire des Silicates, Sols et Matériaux  
**Laboratoire de Recherches et d'Essais**

Association sans but lucratif



Accreditation N° : 32-Test  
according to ISO 17025

## **TEST REPORT N° 2011B COU 12535**

Including 3 pages + 1 annex  
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Mons, May 06<sup>th</sup>, 2011

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

**REFERENCE OF THE REQUEST :** Order Nr 450198133 – 19/04/2011

**CONCERNED MANUFACTURER:** AGC GLASS EUROPE  
Chaussée de la Hulpe, 166  
1170 BRUXELLES  
BELGIUM

**NUMBER OF SAMPLES AND IDENTIFICATION :** Vision 36-T  
See page 2

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

**SAMPLES RECEIVED ON :** 06/04/2011

**TESTING DATE :** 07/04/2011

**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**  
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Concerned manufacturer : **AGC GLASS EUROPE**  
Chaussée de la Hulpe, 166  
1170 BRUXELLES  
BELGIUM

Production site : **Lodelinsart**

Commercial name of the product : **Vision 36-T**

Customer's references : **Code AGC 66228**

Internal reference : CCOU 12535

Sampling : Under responsibility of the applicant

Sampling information : Traceability of the samples is under responsibility of the manufacturer.

Class of Coating : C

Coating position : 2

Low emissivity : yes

Glass Substrate : Clear Float Glass

Normal emissivity of clear glass ( $\epsilon_n$ ) : 0.89

Samples :

Number of samples : 1 (130 \* 120 mm)

Nominal Thickness : 6 mm

## PHOTO-ENERGETIC PROPERTIES - EN 1096-1

Instruments Description	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 Gold Mirror	Primary surface Ag Mirrors 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  $\pm 0.005$

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

12535 : 5.86 mm

		COATED GLASS (EN 1096-1)	IGU (EN 673)
<b>U.V. range (280 – 380 nm)</b>			
• Transmission	$\tau_{uv}$	11.8 %	8.6 %
<b>Visible range (380 – 780 nm) – III D65/obs 2°</b>			
• Transmission	$\tau_v$	40.5 %	37.2 %
• Reflection coated side	$\rho_v$	31.9 %	/
• Reflection opposite side	$\rho'_v$	29.0 %	/
<b>Solar range (300 – 2500 nm)</b>			
• Transmission	$\tau_e$	22.6 %	20.2 %
• Reflection coated side	$\rho_e$	53.4 %	/
• Reflection opposite side	$\rho'_e$	42.9 %	/
• Solar factor	g	0.29	0.23
<b>Thermal range (5000 – 50000 nm)</b>			
• Emissivity	$\epsilon_n$	0.016	/
• Thermal coefficient	U <sub>g</sub>	/	1.06 W/m <sup>2</sup> °K

D. LIBERT  
 Head of Department

Glazing and Components - INISMa