



Avenue Gouverneur Cornez, 4  
B-7000 MONS (Belgium)  
Tel. (065)40.34.34  
Fax (065)34.80.05

V.A.T. : BE 0413.106.271  
RC MONS : 130.828 - Registration : 08/02/01

[www.bcrc.be](http://www.bcrc.be)

IGPG-03-08

**Interuniversity Institute for Silicates, soils and Materials  
Test and Research laboratory**

Non-profit-making association



Accreditation N° : 32-Test  
according to ISO 17025

Including 3 pages

## **TEST REPORT : N° 2011A DIV 13419**

Page 1/3

Mons, November 3<sup>rd</sup>, 2011

**REQUESTED BY :** AVI Vinçotte Certification - Automotive Glazing  
Business Class Kantoren Park  
Jan Olieslagerslaan, 35  
B-1800 VILVOORDE

**REQUEST REFERENCE :** IGPG Taber Round Robin test

### **NUMBER OF SAMPLES AND IDENTIFICATION :**

18 SAMPLES 300 X 300 MM BAYER

**Type of samples : polycarbonate**

**REQUESTED TEST :** Taber round robin test  
Mechanical resistance, resistance to humidity and resistance to high  
temperature according to the UNECE regulation 43\*

**SAMPLES RECEIVED ON :** July 5<sup>th</sup>, 2011

**TESTS START ON :** July 26<sup>th</sup>, 2011

**REMARK :** \* Test under BELAC accreditation

## DESCRIPTION OF THE EQUIPMENTS

- **Humidity test** : Heraeus HSK400
- **High temperature test** : a tank
- **Mechanical resistance**: steel balls of 227g and 2.26 kg.

## TEST METHOD

Testing conditions: temperature  $20 \pm 5^{\circ}\text{C}$  (R43),  $60 \pm 20$  RH (R43) and pressure of 860 to 1060 mbar (R43).

Before testing, remove any protective masking material from the specimen.

Six samples are conditioned at  $-20 \pm 2^{\circ}\text{C}$  before testing with the 227 g ball. Then three samples are placed in a vertical position for two weeks in a closed container in which the temperature is maintained at  $50 \pm 2^{\circ}\text{C}$  and  $95 \pm 4\%$  RH and three samples are placed in water of  $100^{\circ}\text{C}$  during 2 hours.

Six samples are conditioned at  $40 \pm 2^{\circ}\text{C}$  before testing with a 227 g ball. Then three samples are placed in a vertical position for two weeks in a closed container in which the temperature is maintained at  $50 \pm 2^{\circ}\text{C}$  and  $95 \pm 4\%$  RH and three samples are placed in water of  $100^{\circ}\text{C}$  during 2 hours.

Six samples are conditioned at  $23 \pm 2^{\circ}\text{C}$  before testing with a 2.26 kg ball.

## RESULTS

### 1. 227g ball test at $-20^{\circ}\text{C}$

Height of drop: 8.5 meters

Sample n° n°	Thickness (mm)	Results		
		Ball test <sup>(1)</sup>	Humidity test <sup>(2)</sup>	Boil test <sup>(2)</sup>
1	4.03	ok	ok	-
2	4.03	ok	ok	-
3	4.03	ok	ok	-
4	4.03	ok	-	ok
5	4.04	ok	-	ok
6	4.03	ok	-	ok

Results: (1) the ball doesn't pass through the test piece  
(2) no significant change is observed at the impact point

2. 227g ball test at +40°C

Height of drop: 9 meters

Sample n° n°	Thickness (mm)	Results		
		Ball test <sup>(1)</sup>	Humidity test <sup>(2)</sup>	Boil test <sup>(2)</sup>
1	4.03	ok	ok	-
2	4.04	ok	ok	-
3	4.01	ok	ok	-
4	4.07	ok	-	ok
5	4.06	ok	-	ok
6	4.07	ok	-	ok

Results: (1) the ball doesn't pass through the test piece  
 (2) no significant change is observed at the impact point

3. 2.26 kg ball test

Height of drop: 4 meters

Sample n°	Thickness (mm)	Results
1	4.03	ok
2	4.03	ok
3	4.03	ok
4	4.04	ok
5	4.04	ok
6	4.04	ok

Results: the ball doesn't pass through the test piece

Patricia DUMONT  
Head of Laboratory

Glazing and Components - INISMa