



RAPPORTO DI PROVA / TEST REPORT N. 102392

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Marghera

23/04/2012

rif. Your payment dated December 19th, 2011

richiedente  
proposer

MILKANA LTD  
GENA DIMITROVA, STR. 6A - 05800 PLEVEN

campione  
sample

Insulating Glass Units

prova eseguita dal / from 4/01/2012  
test date al / to 18/04/2012

contrassegnato  
reference

Milkana PS

ricevuto il  
received

28/11/2011 by carrier

CE INDEX rev6 5/8/2011

## EN 1279-5:2010 – Glass in building – Insulating glass units part 5 – Evaluation of conformity

Type of test: Ageing test and requirements for moisture penetration according to EN 1279-2:2002 standard

Producer: Milkana Ltd

Site of production: Pleven 5800, Western Industrial Zone - Bulgaria

Product type: Insulating Glass Unit (EN 1279-1:2004)

Code: Milkana PS

Sampling: Carried out by the proposer

Specimen labelling: production date: 9.11.2011 production line: BJIC 2,2/6/

Test carried out by: Massimo Cristofolletti and Luca De Riu

Test carried out at: Marghera laboratories

For any further information concerning product details (such as system description, processing, single components, quantity etc.) please make reference to the manufacturer's technical sheet.

Some constituents declared by proposer are listed below:

glass: float

inner sealant: butyl GD 115 (Kömmerring)

outer sealant: polysulphide PS 200 ((Kömmerring)

spacer: cut corner aluminium

desiccant: molecular sieve 3A

filling: air

The initial dew point was measured on the fifteen samples 4/12/4 of insulating glass units 35,0 x 50,0 cm in size according to EN 1279-2:2002 point 6.1; all values obtained were below -60°C. Sample set was divided into three groups (A,B,C,) which were tested as follows

group A): measurement of the initial humidity content - EN 1279-2:2002 point 6.2 (Ti);

group B): ageing cycle - EN 1279-2:2002 point 5;

group C): short ageing cycle - EN 1279-6:2002 annex B;

groups B) and C): measurement of final humidity content - EN 1279-2:2002 point 6.2 (T<sub>F</sub>);

groups B) and C): penetration index calculation - EN 1279-2:2002 point 5.4 (I).

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## Measurement of $T_i$ - $T_F$ and Calculation of I:

|         | specimen<br>n° | dry<br>desiccant<br>found (g) | $T_i$<br>(%) | $T_F$<br>(%) | I<br>(%) | $T_F^*$<br>(%) | I*<br>(%) |
|---------|----------------|-------------------------------|--------------|--------------|----------|----------------|-----------|
| group A | 1              | 60                            | 1.66         |              |          |                |           |
|         | 2              | 58                            | 1.64         |              |          |                |           |
|         | 3              | 58                            | 1.68         |              |          |                |           |
|         | 4              | 59                            | 1.70         |              |          |                |           |
|         |                | Mean $T_i$ :                  | 1.67         |              |          |                |           |
| group B | 5              | 58                            |              | 2.59         | 5.0      |                |           |
|         | 6              | 60                            |              | 2.72         | 5.7      |                |           |
|         | 7              | 59                            |              | 2.87         | 6.5      |                |           |
|         | 8              | 57                            |              | 2.70         | 5.6      |                |           |
|         | 9              | 58                            |              | 2.81         | 6.2      |                |           |
|         |                |                               |              | Mean I:      | 5.8      |                |           |
| group C | 10             | 58                            |              |              |          | 2.14           | 2.6       |
|         | 11             | 59                            |              |              |          | 2.23           | 3.1       |
|         | 12             | 59                            |              |              |          | 1.99           | 1.7       |

(\*) Aged specimens subjected to a short ageing cycle: 3 weeks at 58,0°C and r.h. > 95% (annex B4 of EN 1279-6:2002)

The  $T_c$  value (moisture absorption capacity in standard conditions) used for the calculation of I is that reported in the standard EN 1279-2:2002 (annex D):  $T_c = 20\%$ .

## Requirements established in EN 1279-2:2002 standard for the samples of B Group

1. Average percentage I not higher than 20;
2. No single percentage value of I higher than 25.

THE HEAD OF THE LABORATORY  
Ennio Mognato

THE LABORATORIES DIRECTOR  
Dr. Nicola Favaro

THE TECHNICAL DIRECTOR  
Ing. Roberto Dall'Igna

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