

TEST REPORT

CUSTOMER: **TRIFLEX VIDRIOPANTALLA, S.L.**

PERSON REQUESTING THE TEST: **JOSÉ MANUEL ESTADA**

ADDRESS: **POLIGONO INDUSTRIAL SEPES, C/ ARANDA Nº 8
46520 SAGUNTO (VALENCIO)**

MATERIAL TESTED: **«TRIFLEX» DOUBLE GLAZING WITH VENETIAN
BLIND**

PURPOSE OF THE TEST: **SOLAR FACTOR CALCULATION
(PNE-PREN 13363-1)**

DATE OF RECEIPT: **04.04.2003**
TEST STARTING DATE: **08.05.2003**
TEST COMPLETION DATE: **14.05.2003**

Total No. of pages

5
(Including this one)

The results only refer to the material received and subjected to testing at this Research Centre on **04.04.2003**.

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Azpeitia, 30th of May 2003

FEATURES OF THE SAMPLE

On the 4th of April 2003, CIDEMCO received a (350 x 500) mm double glazing sample from the company TRIFLEX VIDRIOPANTALLA, S.L., whose reference is «TRIFLEX».

In accordance with the information provided by the customer, the composition and features of the sample are as follows:

- Exterior sheet of CLEAR glass of 4 mm in thickness
- Intermediate chamber made using an extruded aluminium perimeter profile of 16 mm in thickness
- Venetian blind fitted to the chamber and composed of aluminium slats of 12.5 mm in width, adjustable by means of a magnetic device. The blind has a run of 80 mm
- Exterior sheet of CLEAR glass of 4 mm in thickness
- Sealant composed of:
 - First barrier of butyl
 - Second barrier of polysulphur



TEST REQUESTED

The test requested is that of **solar factor calculation** in accordance with pNE-prEN 13363-1:1999.

TEST CARRIED OUT

The **solar factor calculation** has been carried out based on the features of the materials it comprises.

Details about the glass have been obtained from the data base of the Window 5.1. programme: "International glazing database. Laurence Berkeley National Laboratory," while those of the Venetian blind are the results of Report 9188-2 issued by CIDEMCO.

4 mm FLOAT glass

- Solar transmission: 82,6%
- Solar reflection: 73%
- Transmission visible: 90%
- Visible reflection: 80%
- Emissivity: 0.840
- λ : 1.0 W/m K

TRIFLEX Venetian blind

- e: 0.3 mm
- Solar transmission: 0%
- Solar reflection: 52,9%
- Visible transmission: 0.1%
- Visible reflection: 53.9%
- Emissivity: 0.09
- λ : 229 W/m K

Calculations have been made in accordance with UNE-EN 410:1998 «Glass for building. Determining the luminous and solar features of glass» and pNE-prEN 13363-1:1999 «Solar protection devices combined with glass. Calculation of light and solar transmittance. Part 1: simplified method».

The atmospheric conditions for double glazing with Venetian blind are as follows:

- “U-factor” calculation
 - Inside temperature: 20°C
 - Inside surface resistance: 3.60 W/m²K
 - Outside temperature: 5°C
 - Outside surface resistance: 20 W/m²K
 - Incident radiation: 300W/m²

- Solar Factor calculation:
 - Inside temperature: 25°C
 - Inside surface resistance: 2.5 W/m²K
 - Effective temperature of the room: 25°C
 - Effective emissivity of the room: 1
 - Outside temperature: 30°C
 - Outside surface resistance: 28 W/m²K
 - Incident radiation: 500W/m²
 - Effective temperature of the sky: 25°C
 - Effective emissivity of the sky: 1

RESULTS

Slat orientation: parallel to the surface (Venetian blind closed)

- Solar factor: **0.20**
- Solar transmission: **0.0%**
- Solar reflection: **45.2%**
- Visible reflection: **0.1%**
- Visible reflection: **53.6%**

Slat orientation: 45° (Venetian blind semi-open)

- Solar factor: **0.28**
- Solar transmission: **5.8%**
- Solar reflection: **35.5%**
- Visible transmission: **7.1%**
- Visible reflection: **41.9%**

Double glazing

- Solar factor: **0.76**
- Solar transmission: **69.1%**
- Solar reflection: **12.5%**
- Visible transmission: **81.5%**
- Visible reflection: **14.6%**