

TEST REPORT TRANSLATION

CLIENT: **COMPOSITES GUREA, S.A.**

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TESTED MATERIAL: **HPL COMPACT LAMINATE SAMPLES
«PARKLEX FACADE “F” COPPER»
«PARKLEX FACADE “S” COPPER»**

PURPOSE OF THE REQUEST: **RESISTANCE TO ARTIFICIAL WEATHERING**

RECEIPT DATE **10.05.2007**
TEST BEGINNING DATE: **10.05.2007**
TEST END DATE: **21.02.2008**
REPORT EMISSION DATE **28.03.2008**

The results of the tests can only be applied to the material received and tested in this Research Centre on the indicated dates.

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1. TEST SPECIMENS

HPL compact laminate samples belonging to the company “**COMPOSITES GUREA, S.A.**” was received at CIDEMCO on May 10th of 2007 with the following references:

- «**PARKLEX FACADE “F” COPPER**»
- «**PARKLEX FACADE “S” COPPER**»

2. TEST REQUESTED

The requested test is the following:

- ◆ Weathering performance according to UNE-EN ISO 4892-2:2006 “Methods of exposure to laboratory light sources. Part 2: Xenon-arc sources”

3. CARRIED OUT TESTS

As indicated in the standard EN 438-2:2005 apt. 29 about the assessment of the properties of high pressure decorative laminates, the weathering test is carried out according to the method of the standard UNE-EN ISO 4892-2:2006.

- ◆ **Weathering performance according to UNE-EN ISO 4892-2:2006**

The test was carried out in a chamber with xenon arc lamp. This lamp fitted with suitable filters and properly maintained produces a radiation with a spectral energy distribution similar to that of terrestrial sunlight in the ultraviolet and visible regions of the spectrum. The used combination of filters is:

- Inside filter: Borosilicate
- Outside filter: Borosilicate

Chamber temperature: $(38 \pm 5)^{\circ}\text{C}$.

Relative humidity: $(65 \pm 5)\%$.

Black panel temperature: $(65 \pm 3)^{\circ}\text{C}$.

Spray cycle: - 18 minutes spray
- 102 minutes dry period

Test duration: Two assessment are made:

- After 325 MJ/m² of irradiance
- After 650 MJ/m² of irradiance

The degradation was evaluated using a grey scale (EN 20105-A02:1994) as reference. This scale uses the following values:

- EG=1 Very strong change
- EG=2 Strong change
- EG=3 Important change
- EG=4 Change beginning
- EG=5 Without change

The surface of the test specimen was observed by naked eye, at a distance of approximately 50 cm. The appearance was assessed in comparison with the control specimen with the following rating scale:

- Rating 5: No visible change
- Rating 4: Change of gloss only
- Rating 3: Hairline surface cracks and/or erosion of surface delamination
- Rating 2: Surface cracks
- Rating 1: Blistering and/or delamination

The samples are classified according to EN 438-6:2005 as:

Irradiance	Specification (EN 438-6:2005)	Classification
325 MJ/m ²	Grey scale EG=3	EGS or EGF
650 MJ/m ²	Appearance Rating 4	EDS or EDF

4. RESULTS

In the following table the obtained results are showed:

Reference	Performance (650 MJ/m ²)				
	No. hours	Appearance	Grey scale	Specification	Assessment
«PARKLEX FACADE “F” COPPER»	3000	Rating 5	3	Appearance Rating 4	EDF
«PARKLEX FACADE “S” COPPER»	3000	Rating 5	3	Grey scale Rating 3	EDS

The test sample continues in the test until the time required for the sample to receive an irradiance of 1300 MJ/m² is completed. The results obtained are shown in the following table:

Reference	Performance (1300 MJ/m ²)		
	No. hours	Appearance	Grey scale
«PARKLEX FACADE “F” COPPER»	6000	Rating 5	3
«PARKLEX FACADE “S” COPPER»	6000	Rating 5	3

Despite the sample has received double of the irradiance (1300 MJ/m²) specified in the Standard EN 438-6:2005; the value of the grey scale and the appearance of the test sample are into the specifications required when the irradiance is 650 MJ/m².