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Petitioner's reference: **GRECO GRES INERNACIONAL, S.L.**  
Avda. Castilla-La Mancha, 1  
45240 Alameda de la Sagra  
Toledo

## **TEST REPORT**

Date which the sample was received: 30-11-2017

### **1.- OBJECT OF THE TEST**

-AS 1530.1 – 1994 – Methods for fire tests on building materials, components and structures. Part 1: Combustibility test for materials.

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## **2.- PRODUCT CHARACTERISTICS**

A ceramic material has been received with the following instructions, according to the technical specifications provided by the petitioner:

Product's commercial reference: FRONTEK

Ceramic material, with a thickness of 19.5 mm, absolute density of 2300 kg/m<sup>3</sup>, beige colour and smooth appearance.

Manufacturer: GRECO GRES INTERNACIONAL, S.L. Address: Avda. Castilla-La Mancha, 1  
– 45240 Alameda de la Sagra - TOLEDO

## **3.- DESCRIPTION OF THE FINAL CONDITIONS FOR USE**

Ventilated facade cladding anchored to metal substructure.

## **4.- TESTS**

### **4.1.- Combustibility test for materials with standard AS 1530.1-1994**

Date at which test was performed: Start: 8-01-2018  
End: 10-01-2018

#### **4.1.2. - Gathering of samples**

From the plate product, 5 samples for testing and 2 in reserve were obtained.

#### **4.1.3.- Preparation of samples**

Cylinder-shaped test tubes measuring 45<sup>+0</sup><sub>-2</sub> mm in diameter and 50±3 mm in height were prepared, in accordance with section 2.2 of the test standard.

#### **4.1.4.- Conditioning**

The specimens were conditioned in a ventilated oven maintained at 60 °C±5 °C for between 20h and 24 h, and cooled to ambient temperature in a desiccator prior to testing, in accordance with the instruction specified in section 2.2.5 of the test standard.

#### 4.1.5.- Data obtained

Test Nº	Initial temperature of the oven (°C)	Increase in Temperature (°C)			Sustained flame duration (s)	Loss of mass (%)
		Oven $\Delta T_f$	Surface $\Delta T_s$	Centre $\Delta T_c$		
1	747.7	11.9	2.1	1.7	-	17.5
2	746.2	8.8	10.1	1.8	-	16.8
3	747.7	28.9	6.3	1.2	-	15.6
4	750.9	20.7	1.5	4.6	-	15.8
5	748.6	23.0	0.7	2.5	-	16.4
<b>Mean Value:</b>		18.7	4.1	2.4	-	16.4

(-) no inflammation has occurred during the test.

#### Maximum uncertainty associated to the measurement

Factor	Uncertainty
Temperature	$\pm 5.7$ °C
Weight	$\pm 1.09$ g
Time	Not applied

#### 5.- TEST RESULTS

Testing method	AS 1530.1-1994
Values obtained	Mean furnace thermocouple temperature rise $\Delta T_f$ : <b>18.7 °C</b> Mean specimen centre thermocouple temperature rise $\Delta T_c$ : <b>2.4 °C</b> Mean specimen surface thermocouple temperature rise $\Delta T_s$ : <b>4.1 °C</b> Mean duration of sustained flaming : <b>0 seconds</b> Mean mass loss : <b>16.40 %</b>

**6.- CLASSIFICATION**

Criteria of combustibility

A material shall be deemed to be combustible under any of the following circumstances:

- a) The mean duration of sustained flaming, as determined in accordance with Clause 3.2, is other than zero
- b) The mean furnace thermocouple temperature rise, as determined in accordance with Clause 3.1, exceeds 50°C.
- c) The mean specimen surface thermocouple temperature rise, as determined in accordance with Clause 3.1, exceeds 50°C.

Testing method	<b>FRONTEK</b>	
<b>AS 1530.1-1994</b>	Mean duration of sustained flaming	<b>0 s</b>
	Mean furnace thermocouple temperature rise $\Delta T_f$	<b>18.7 °C</b>
	Mean specimen surface thermocouple temperature rise $\Delta T_s$	<b>4.1 °C</b>

**COMBUSTIBILITY**

**NOT DEEMED COMBUSTIBLE**

**These results relate only to the behaviour of the test specimens of the material under the particular conditions of the test and they are not intended to be the sole criterion for assessing the potential fire hazard of the material in use.**

Responsible of the fire laboratory  
LGAI Technological Center S.A. (APPLUS)

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The results refer exclusively to the samples tested at the time and under the conditions indicated.

The uncertainties expressed in this document pertain to the expanded uncertainty, which has been obtained by multiplying the typical measurement uncertainty by the coverage factor  $k=2$  which, for a regular distribution, corresponds to a coverage probability of approximately 95%.

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