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**SAFETY, STRUCTURES AND FIRE DEPARTMENT**

Reaction to Fire

# **REACTION TO FIRE CLASSIFICATION REPORT No. RA14-0129 ACCORDING TO THE EUROPEAN STANDARD NF EN 13501-1+A1:2013**

**Notification by the French Government to the European Commission under no. 0679**

**Seule la version française fait foi**

**The French version is legally acceptable**

**Product standard**

**NF EN 16153:2013** 'Light transmitting flat multiwall polycarbonate (PC) sheets for internal and external use in roofs, walls and ceilings - Requirements and test methods'.

<b>Owner:</b>	<b>POLYGAL PLASTICS INDUSTRIES Ltd Ramat Hashofet 19238 ISRAEL ISRAEL</b>
<b>Commercial brand(s):</b>	<b>TOPGAL ROOFING SYSTEM</b>
<b>Manufacturing unit(s):</b>	<b>The manufacturing unit appears in the associated test report</b>
<b>Brief description:</b>	<b>Light transmitting flat and multiwall polycarbonate sheets (see detailed description in paragraph 2)</b>
<b>Date of issue:</b>	<b>June 09<sup>th</sup>, 2014</b>

The indicated classification does not prejudice the conformity of marketed materials with the samples submitted to the tests and under no circumstances, this document should not be considered as type approval or certification of the product in the sense of the L 115-27 to L 115-33 and R 115-1 to R 115-3 articles of the consumption's code.

If this report is being issued by e-mail and/or on an electronic medium, only the hard copy of the report signed by CSTB shall prevail in the event of a dispute.

The reproduction of this classification report is only authorised in its integral form.

It comprises 5 pages.

**CENTRE SCIENTIFIQUE ET TECHNIQUE DU BATIMENT**

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## 1. Introduction

This classification report defines the classification assigned to the above-mentioned product(s) in accordance with the procedures given in the NF EN 13501-1+A1:2013 standard.

## 2. Product description

Light transmitting flat multiwall polycarbonate sheet for internal and external roof, wall and ceiling. Sheet made of polycarbonate filled with a UV absorber. The "opal" version is also filled with a dye.

Overall nominal thicknesses: from 6 to 20 mm.

Overall nominal weights per unit area: from 1700 to 3200 kg/m<sup>2</sup>.

Colours: opal and colourless.

## 3. Tests reports and tests results in support of this classification

### 3.1 Tests reports

Name of laboratory	Name of sponsor	Test identification	Test report No.	Test method
CSTB	POLYGAL PLASTICS INDUSTRIES Ltd Ramat Hashofet 19238 ISRAEL ISRAEL	ES541130702	RA14-0129	EN ISO 11925-2:2002 EN 13823:2002

### 3.2 Tests results

Test method	Product	Number of tests	Parameters	Results
				Compliance parameters
EN ISO 11925-2 30s surface exposure	TOPGAL ROOFING SYSTEM 6 mm opal	6	Fs > 150 mm Filter paper	Not reached Not ignited
EN ISO 11925-2 30s surface exposure	TOPGAL ROOFING SYSTEM 6 mm colourless	6	Fs > 150 mm Filter paper	Not reached Not ignited
EN ISO 11925-2 30s surface exposure	TOPGAL ROOFING SYSTEM 20 mm opal	6	Fs > 150 mm Filter paper	Not reached Not ignited
EN ISO 11925-2 30s surface exposure	TOPGAL ROOFING SYSTEM 20 mm colourless	6	Fs > 150 mm Filter paper	Not reached Not ignited

**3.2 Tests results (continuation)**

Test method	Product	Number of tests	Parameters	Results	
				Continuous parameters Mean values	Compliance parameters
EN 13823	TOPGAL ROOFING SYSTEM 6 mm opal	3	FIGRA <sub>0.2MJ</sub> (W/s)	<b>0.0</b>	-
			FIGRA <sub>0.4MJ</sub> (W/s)	<b>0.0</b>	-
			LFS	-	<b>Not reached</b>
			THR <sub>600s</sub> (MJ)	<b>0.2</b>	-
			SMOGRA(m <sup>2</sup> /s <sup>2</sup> )	<b>0.0</b>	-
			TSP <sub>600s</sub> (m <sup>2</sup> )	<b>11.4</b>	-
			Flaming droplets or debris	-	<b>None</b>
EN 13823	TOPGAL ROOFING SYSTEM 6 mm colourless	1	FIGRA <sub>0.2MJ</sub> (W/s)	<b>0.0</b>	-
			FIGRA <sub>0.4MJ</sub> (W/s)	<b>0.0</b>	-
			LFS	-	<b>Not reached</b>
			THR <sub>600s</sub> (MJ)	<b>0.6</b>	-
			SMOGRA(m <sup>2</sup> /s <sup>2</sup> )	<b>0.0</b>	-
			TSP <sub>600s</sub> (m <sup>2</sup> )	<b>8.3</b>	-
			Flaming droplets or debris	-	<b>None</b>
EN 13823	TOPGAL ROOFING SYSTEM 20 mm colourless	3	FIGRA <sub>0.2MJ</sub> (W/s)	<b>0.0</b>	-
			FIGRA <sub>0.4MJ</sub> (W/s)	<b>0.0</b>	-
			LFS	-	<b>Not reached</b>
			THR <sub>600s</sub> (MJ)	<b>0.5</b>	-
			SMOGRA(m <sup>2</sup> /s <sup>2</sup> )	<b>0.0</b>	-
			TSP <sub>600s</sub> (m <sup>2</sup> )	<b>12.5</b>	-
			Flaming droplets or debris	-	<b>None</b>
EN 13823	TOPGAL ROOFING SYSTEM 20 mm opal	1	FIGRA <sub>0.2MJ</sub> (W/s)	<b>0.0</b>	-
			FIGRA <sub>0.4MJ</sub> (W/s)	<b>0.0</b>	-
			LFS	-	<b>Not reached</b>
			THR <sub>600s</sub> (MJ)	<b>0.6</b>	-
			SMOGRA(m <sup>2</sup> /s <sup>2</sup> )	<b>0.0</b>	-
			TSP <sub>600s</sub> (m <sup>2</sup> )	<b>13.3</b>	-
			Flaming droplets or debris	-	<b>None</b>

(-) means: not applicable

## 4. Classification and direct field of application

### 4.1 Reference of the classification

This classification has been carried out in accordance with clauses 11.6, 11.9.2 and 11.10.1 of the NF EN 13501-1+A1:2013 standard.

### 4.2 Classification

Fire behaviour		Smoke production		Flaming droplets or debris
<b>B</b>	-	<b>s1</b>	,	<b>d0</b>

**Classification: B - s1, d0**

### 4.3 Field of application

This classification is valid for the following product parameters:

- The product described in paragraph 2.
- A range of overall nominal thicknesses from 6 to 20 mm.
- A range of overall nominal weights per unit area from 1700 to 3200 g/m<sup>2</sup>.
- A product with an opal or colourless colour.

This classification is valid for the following end use conditions:

- Without substrate or with any A1 or A2-s1,d0 class substrate with a density  $\geq 652 \text{ kg/m}^3$ .
- With a minimum air gap of 80 mm.

## 5. Limitations

The present document does not represent type approval or certification of the product.

The classification assigned to the product in this report is appropriate to a declaration of performance by the manufacturer within the context of system 3 attestation of conformity and CE marking under the European Construction Products Regulation (regulation UE no. 305/2011). The manufacturer has made a declaration, which is held on file. This confirms that the products design requires no specific processes, procedures or stages (e.g. no addition of flame-retardants, limitation of organic content, or addition of fillers) that are aimed at enhancing the fire performance in order to obtain the classification achieved. As a consequence the manufacturer has concluded that system 3 attestation is appropriate.

The test laboratory has, therefore, played no part in sampling the product for the test, although it holds appropriate references, supplied by the manufacturer, to provide for traceability of the samples tested.

Champs-sur-Marne, June 09<sup>th</sup>, 2014

**The Technician  
Responsible for the test**



**Benoit FOREST**

**The Head of Reaction to Fire  
Unit**



**Gildas CREACH**

.....END OF THE CLASSIFICATION REPORT