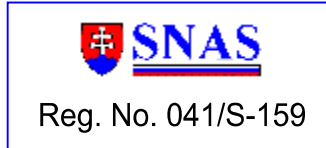


## **CLASSIFICATION OF REACTION TO FIRE FIRES-CR-147-14-AUPE**

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**Polymethylmethacrylate – PMMA, Akrylon XT**

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# CLASSIFICATION OF REACTION TO FIRE IN ACCORDANCE WITH EN 13501-1: 2007 + A1: 2009 with direct field of application

## FIRES-CR-147-14-AUPE

**Name of the product:** Polymethylmethacrylate – PMMA, Akrylon XT

**Sponsor:** Polycasa Slovakia, s.r.o.  
M.R.Štefánika 71  
010 39 Žilina  
Slovak Republic

**Prepared by:** FIRES, s.r.o.  
Osloboditeľov 282  
059 35 Batizovce  
Slovak Republic

**Tested property:** Reaction to fire  
**Test method:** EN ISO 11925-2: 2002  
**Type of test:** Accredited

**Task No.:** PR-14-0446  
**Date of issue:** 26. 11. 2014

Reports: 3  
Copy No.: 2

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## 1. INTRODUCTION

This classification report defines the reaction to fire classification assigned to element polymethylmethacrylate – PMMA, Akrylon XT in accordance with the procedures given in EN 13501-1: 2007 + A1: 2009.

## 2. DETAILS OF CLASSIFIED PRODUCT

### 2.1 GENERAL

The element, polymethylmethacrylate – PMMA, Akrylon XT is used in board form as a door glazing, separating walls, roofs ceilings and from thickness 10 mm as a sound barrier to the highways, after treatment by formation or bending as skylights, covers on lamps, luminous boards in accordance with EN ISO 7823-2: 2003.

### 2.2 PRODUCT DESCRIPTION

Polymethylmethacrylate – PMMA, type Akrylon XT is made from PMMA granulate, which contains from 4,5 % up to 6 % MA.

The additional additives, which modify the polymer properties or its appearance, are possible to add (antioxidants, inner oils, UV absorbers etc.)

Boards are made with thickness from 1,8 mm up to 25 mm and with bulk density from 1190 kg.m<sup>-3</sup> up to 1244 kg.m<sup>-3</sup>.

## 3. TEST REPORTS IN SUPPORT OF CLASSIFICATION

### 3.1 TEST REPORTS

No.	Name of laboratory	Name of sponsor	Test report No.	Date of the test	Test method
[1]	FIRES, s.r.o., Batizovce, SK	Barlo Plastics Slovakia s.r.o., SK	FIRES RF 040/04 CS	29. 10. 2004	STN EN ISO 11925-2
[2]	MPA NRW, Erwitte, Germany	Barlo Plastics GmbH, Germany	230004416	21. 06. 2004 15. 07. 2004	DIN EN ISO 11925-2

[1] - [2] Test specimens were conditioned according to EN 13238 before the fire resistance test

[1] Tested product Polymethylmethacrylate – PMMA, AKRYLON<sup>®</sup> XT, clear sheet, thickness 1,8 mm, bulk density 1190 kg.m<sup>-3</sup>

[2] Tested product Polymethylmethacrylate – PMMA, BARLO<sup>®</sup> XT, clear sheet, thickness 1,8 mm, bulk density 1171 kg.m<sup>-3</sup>;

Tested product Polymethylmethacrylate – PMMA, BARLO<sup>®</sup> XT opal, white translucent sheet, thickness 2 mm, bulk density 1227 kg.m<sup>-3</sup>;

Tested product Polymethylmethacrylate – PMMA, BARLO<sup>®</sup> XT opal, white translucent sheet, thickness 2 mm, bulk density 1200 kg.m<sup>-3</sup>;

Tested product Polymethylmethacrylate – PMMA, BARLO<sup>®</sup> XT opal, white opaque sheet, thickness 2 mm, bulk density 1244 kg.m<sup>-3</sup>;

Tested product Polymethylmethacrylate – PMMA, BARLO<sup>®</sup> XT opal, white opaque sheet, thickness 6 mm, bulk density 1220 kg.m<sup>-3</sup>;



### 3.2 TEST RESULTS

AKRYLON® XT clear sheet, thickness 1,8 mm, bulk density 1190 kg.m<sup>-3</sup>

Test report number and test method	Characteristic value	Number of tests	Results	
			Continuous parameter - mean (m)	Compliance with parameters
[1] EN ISO 11925-2 surface/edge of specimen* exposed to flame (exposure time 15 s)	$F_s \leq 150$ mm	12	(-)	compliant
flaming droplets/particles	ignition of the paper		(-)	non-compliant

BARLO® XT clear sheet, thickness 25 mm, bulk density 1171 kg.m<sup>-3</sup>

Test report number and test method	Characteristic value	Number of tests	Results	
			Continuous parameter - mean (m)	Compliance with parameters
[2] EN ISO 11925-2 surface/edge of specimen* exposed to flame (exposure time 15 s)	$F_s \leq 150$ mm	12	(-)	compliant
flaming droplets/particles	ignition of the paper		(-)	non-compliant

BARLO® XT opal, white translucent sheet, thickness 2 mm, bulk density 1227 kg.m<sup>-3</sup>

Test report number and test method	Characteristic value	Number of tests	Results	
			Continuous parameter - mean (m)	Compliance with parameters
[2] EN ISO 11925-2 surface/edge of specimen* exposed to flame (exposure time 15 s)	$F_s \leq 150$ mm	12	(-)	compliant
flaming droplets/particles	ignition of the paper		(-)	non-compliant



BARLO® XT opal, white translucent sheet, thickness 4 mm, bulk density 1200 kg.m<sup>-3</sup>

Test report number and test method	Characteristic value	Number of tests	Results	
			Continuous parameter - mean (m)	Compliance with parameters
[2] EN ISO 11925-2 surface/edge of specimen* exposed to flame (exposure time 15 s)	$F_s \leq 150$ mm	12	(-)	compliant
flaming droplets/particles	ignition of the paper		(-)	non-compliant

BARLO® XT opal, white opaque sheet, thickness 2 mm, bulk density 1244 kg.m<sup>-3</sup>

Test report number and test method	Characteristic value	Number of tests	Results	
			Continuous parameter - mean (m)	Compliance with parameters
[2] EN ISO 11925-2 surface/edge of specimen* exposed to flame (exposure time 15 s)	$F_s \leq 150$ mm	12	(-)	compliant
flaming droplets/particles	ignition of the paper		(-)	non-compliant

BARLO® XT opal, white opaque sheet, thickness 6 mm, bulk density 1220 kg.m<sup>-3</sup>

Test report number and test method	Characteristic value	Number of tests	Results	
			Continuous parameter - mean (m)	Compliance with parameters
[2] EN ISO 11925-2 surface/edge of specimen* exposed to flame (exposure time 15 s)	$F_s \leq 150$ mm	12	(-)	compliant
flaming droplets/particles	ignition of the paper		(-)	non-compliant

\* Specimens main surface and edge (bottom part of boards) were exposed to flame.

#### 4. CLASSIFICATION AND FIELD OF APPLICATION

##### 4.1 REFERENCE OF CLASSIFICATION

This classification has been carried out in accordance with clause 11.3 of EN 13501-1: 2007 + A1: 2009.



## 4.2 CLASSIFICATION

The product, Polymethylmethacrylate – PMMA, Akrylon XT, in relation to its reaction to fire behaviour is classified:

E

The additional classification in relation to smoke production is:

-

The additional classification in relation to flaming droplets/particles is:

-

The format of the reaction to fire classification for construction products excluding floorings is:

Fire behaviour		Smoke production				Flaming droplets	
E	-	-	-	-	,	-	-

**Reaction to fire classification: E**

## 4.3 FIELD OF APPLICATION

This classification is valid for the following final use applications:

Thickness	change in the thickness from 1,8 mm up to 25 mm for clear sheets and from 2 mm up to 25 mm for translucent colour sheets is allowed;
Bulk density	change in the bulk density from 1190 kg.m <sup>-3</sup> up to 1244 kg.m <sup>-3</sup> is allowed;
Chemical composition	no change in chemical composition of product is allowed;

## 5. LIMITATIONS

This classification document does not represent type approval or certification of the product.

The classification is valid provided that the product, field of application and standards and regulations are not changed.

Approved:

Signed:

Ing. Štefan Rástocký  
leader of the testing laboratory



Ing. Samuel Skokan  
technician of the testing laboratory