

Classification report Nr 11748C

Owner of the classification report

BAYER SHEET EUROPE NV
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Introduction

This classification report defines the classification assigned to the products '**Makrolon UV clear 2099 and Makrolon GP clear 099**' in accordance with the procedures given in the standard EN 13501-1: 2002: Fire classification of construction products and building elements part 1: classification using data from reaction to fire tests.

This classification report consists of 7 pages

1. DETAILS OF CLASSIFIED PRODUCT

a) Nature and end use application

The products '**Makrolon UV clear 2099 and Makrolon GP clear 099**' are defined as 'polycarbonate sheets'.

Their classification is valid for the following end use application:

'Self supporting with protection of the cut edges, without joints and with a void.'

b) Description

Makrolon UV clear 2099

The tested material consists of a transparent, homogeneous polycarbonate sheet with an UV protection layer thick on each side. The polycarbonate plate and each of the protection layers contain an UV absorber.

	Nominal values		
Thicknesses (mm)	1	3	4
Average volumic mass (kg/m ³)	1200		

Makrolon GP clear 099

The tested material consists of a transparent, homogeneous polycarbonate sheet. The product is identical to the product 'Makrolon UV clear 2099' but without the UV protection layer.

	Nominal values	
Thicknesses (mm)	3	4
Average volumic mass (kg/m ³)	1200	

2. TEST REPORTS AND TEST RESULTS IN SUPPORT OF THE CLASSIFICATION

a) Test reports

Name of the laboratory	Name sponsor	Test report Nr..	Test method,
WFRGENT N.V. Ghent, Belgium	BAYER SHEET EUROPE NV	11747A, 11747D, 11748A	EN 13823 (February 2002)
WFRGENT N.V. Ghent, Belgium	BAYER SHEET EUROPE NV	11747B, 11747C, 11748B	EN ISO 11925-2 (February 2002)
WFRGENT N.V. Ghent, Belgium	BAYER SHEET EUROPE NV	11748D	EXAP report in accordance CEN TC127 N2157

b) Test results for construction products except floorings

Test method	Parameter	Number of tests	Results		Criteria for Class B-s1,d0	
			Mean parameter		Continuous parameter	Compliance parameter
			Continuous parameter	Compliance parameter		
EN ISO 11925-2 (1) 30s flame application: <u>surface</u> - front side	$F_s \leq 150\text{mm}$ Ignition filter paper	6	(-) (-)	Yes No	(-) (-)	Yes No
EN ISO 11925-2 (2) 30s flame application: <u>surface</u> - front side	$F_s \leq 150\text{mm}$ Ignition filter paper	6	(-) (-)	Yes No	(-) (-)	Yes No
EN 13823 (3)	FIGRA (W/s) LFS _{edge} THR _{600s} (MJ) SMOGRA (m ² /s ²) TSP _{600s} (m ²) FDP _{f<10s} FDP _{f>10s}	3	0 (-) 0,32 0 23,35 (-) (-)	(-) No (-) (-) (-) Yes No	≤ 120 (-) $\leq 7,5$ ≤ 30 ≤ 50 (-) (-)	(-) No (-) (-) (-) Yes No
EN 13823 (4)	FIGRA (W/s) LFS _{edge} THR _{600s} (MJ) SMOGRA (m ² /s ²) TSP _{600s} (m ²) FDP _{f<10s} FDP _{f>10s}	3	11,78 (-) 1,67 3,16 44,55 (-) (-)	(-) No (-) (-) (-) Yes No	≤ 120 (-) $\leq 7,5$ ≤ 30 ≤ 50 (-) (-)	(-) No (-) (-) (-) Yes No
EN 13823 (5)	FIGRA (W/s) LFS _{edge} THR _{600s} (MJ) SMOGRA (m ² /s ²) TSP _{600s} (m ²) FDP _{f<10s} FDP _{f>10s}	2	9,56 (-) 1,3 3,08 40,4 (-) (-)	(-) No (-) (-) (-) Yes No	≤ 120 (-) $\leq 7,5$ ≤ 30 ≤ 50 (-) (-)	(-) No (-) (-) (-) Yes No

(-) Not applicable

- (1) Based on the test results obtained in the test report 11747B – Makrolon UV clear 2099 (1mm)
- (2) Based on the test results obtained in the test report 11747C – Makrolon UV clear 2099 (3mm)
- (3) Based on the test results obtained in the test report 11747A – Makrolon UV clear 2099 (1mm)
- (4) Based on the test results obtained in the test report 11747B – Makrolon UV clear 2099 (3mm)
- (5) Based on the test results obtained in the test report 11843 – Makrolon GP clear 099 (3mm)

Test method	Parameter	Number of tests	Results		Criteria for Class B-s2,d0	
			Mean parameter		Continuous parameter	Compliance parameter
			Continuous parameter	Compliance parameter		
EN ISO 11925-2 (1) 30s flame application: surface - front side	$F_s \leq 150\text{mm}$ Ignition filter paper	6	(-) (-)	Yes No	(-) (-)	Yes No
EN 13823 (2)	FIGRA (W/s) LFS _{edge} THR _{600s} (MJ) SMOGRA (m ² /s ²) TSP _{600s} (m ²) FDP _{f<10s} FDP _{f>10s}	3	15,37 (-) 1,95 4,84 64,43 (-) (-)	(-) No (-) (-) (-) Yes No	≤ 120 (-) $\leq 7,5$ ≤ 180 ≤ 200 (-) (-)	(-) No (-) (-) (-) Yes No
EN 13823 (3)	FIGRA (W/s) LFS _{edge} THR _{600s} (MJ) SMOGRA (m ² /s ²) TSP _{600s} (m ²) FDP _{f<10s} FDP _{f>10s}	3	13,52 (-) 1,55 4,96 55,35 (-) (-)	(-) No (-) (-) (-) Yes No	≤ 120 (-) $\leq 7,5$ ≤ 180 ≤ 200 (-) (-)	(-) No (-) (-) (-) Yes No

(-) Not applicable

- (1) Based on the test results obtained in the test report 11748B – Makrolon UV clear 2099 (4mm)
- (2) Based on the test results obtained in the test report 11748A – Makrolon UV clear 2099 (4mm)
- (3) Based on the test results obtained in the test report 11843 – Makrolon GP clear 099 (4mm)

3. CLASSIFICATION AND DIRECT FIELD OF APPLICATION

a) Reference and direct field of application

This classification has been carried out in accordance with clause 10.6 .of EN 13501-1: 2002.

b) Classification

- The products '**Makrolon UV clear 2099 and Makrolon GP clear 099 with thicknesses from 1mm till 3 mm**' in relation to their reaction to fire behavior are classified as:

Fire behavior	Additional classification	
B	s1	d0

Field of application for the classification

This classification for the product as described in §1b, is valid for the following end use conditions :

- With a void
- No fixing but with protection of the cut edges with a metal frame
- No joints

this classification is valid for the following parameter range :

- nominal thickness : 1 mm till 3 mm
- nominal density: 1200 kg/m³
- Colour: transparant

- The products 'Makrolon UV clear 2099 and Makrolon GP clear 099 with a thickness of 4 mm' in relation to their reaction to fire behavior are classified as:

Fire behavior	Additional classification	
B	s2	d0

Field of application for the classification

This classification for the product as described in §1b, is valid for the following end use conditions :

- With a void
- No fixing but with protection of the cut edges with a metal frame
- No joints

this classification is valid for the following parameter range :

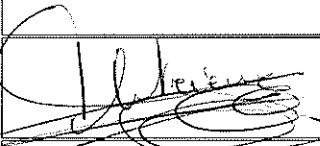

- nominal thickness : 4 mm
- nominal density: 1200 kg/m³
- Colour: transparant

4. RESTRICTIONS

At the time the standard EN 13501-1 (February 2002) was published, no decision was made concerning the duration of validity of a classification report.

5. WARNING

This classification report does not represent type approval nor certification of the product.

Report	Name	Signature (*)	Date
Prepared by	Ing. Frans DUTRIEUE		09. JAN. 2006
Reviewed by	Prof. Dr. Ir. Paul VANDEVELDE		09. JAN. 2006
(*) For and on behalf of "WFRGent N.V."			

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