Exova Warringtonfire, Frankfurt
Industriepark Höchst, C369
Frankfurt am Main
D-65926
Germany

T : +49 (0) 69 305 3476
F : +49 (0) 69 305 17071
E : EBH@exova.com
W: www.exova.com

Testing. Advising. Assuring.

Classification report No. 2013-2175-K1-1

issued 04.09.2013

Applicant: Remmers Baustofftechnik GmbH
Bernhard-Remmers-Str. 13
49624 Löningen

Order: **Classification of the burning behaviour according to DIN EN 13501-1 (2010-01)**

Date of order **24.05. + 28.08.2013**

Notification number of the test laboratory

NB 1378

Designation of the classificated building product

Products designated as „PUR FG-201 Filling Primer"
"PUR SL-210 Finish"
"PUR HL-211 / 90 High Gloss"

This classification report lays down the classification of the building product above according to the procedures of DIN EN 13501-1.

This classification report is a translation of the German version 2013-2175-K1 (issued 04.09.2013). In case of doubt only the German version is valid.
This classification report contains 5 pages.

1. Description of the material

1.1 Details of the customer:

Products designated as	PUR FG-201 Filling Primer" "PUR SL-210 Finish" "PUR HL-211 / 90 High Gloss"
Trade name:	PUR FG-201 Filling Primer, MV=10:1 PUR H-280-hardener PUR SL-210/10 Finish matt blunt, MV=10:1 PUR H-280-hardener PUR SL-210/50 Finish silk gloss, MV=10:1 PUR H-280-hardener PUR SL-211/90 High Gloss; MV=4:1 PUR H-280-hardener
Sample material:	coating
Type of material:	acrylic resin coating
Method of production:	Coated
Total square weight:	see coating log
Colour:	colourless
Flame retardants:	
Manufacturer:	Lanxess
Type flame retardant:	Phosphate
Content flame retardants:	1.50%
For composite (e.g. layered materials):	
Type of surface:	coating
Used substrate:	Topan MDF FF FR, Glunz AG, class B-s2, do DIN EN 13501-1 raw density: 802,12 kg / m³, 19.2 mm thick
Intended end use:	Coating of wood-based materials

Coating log:

Nr.	Lacquers / raw materials	matt - gloss clear lacquer				
		P1951-1	P1951-2	P1951-3	P1951-2	P1951-2
		colourless	colourless	colourless	colourless	colourless
	PUR FG-201Filling Primer (MV=10:1 PUR H-280-hardener)	1x 200 g/m²				
	PUR SL-210/10 Finish matt blunt (MV=10:1 PUR H-280_hardenerr)	1x 150 g/m²				
	PUR SL-210/50 Finish silk gloss		1x 150 g/m²		2x120ml/m² = 2x115g/m²	2x120ml/m² = 2x115g/m²
	PUR SL-211/90 High Gloss (MV=4:1 PUR H-280-hardener)			1x 150 g/m²		

1.2 At the specimen preparation from the Exova Warringtonfire determined values:

Painting on wood material, thickness: 19 mm (front surface and edges painted)

sample No.	material	article	colour	total thickness	total square weight
1	coating	P1951-1	colourless	19 mm	14,7 kg/m²
2	coating	P1951-2	colourless	19 mm	14,6 kg/m²
3	coating	P1951-3	colourless	19 mm	15,0 kg/m²
4	coating	P1951-2	colourless	19 mm	14,5 kg/m²
5	coating	P1951-2	colourless	19 mm	14,6 kg/m²

Test arrangement: Lacquered surface to the burner

Material construction and fixing see fotos:

picture: edge of the large sample wing

fixing of specimen

1.3 Production and pretreatment of the samples for the tests according to DIN EN 13823

The samples were provided and delivered for the tests in the necessary sample dimensions, by the manufacturer.
The test was conducted fully without joint.
The test was conducted without a gap to the plasterboard substrate in accordance with DIN EN 13823, Point 4.4.10 (calcium silicate, gross density 800 ± 150 kg/m³, thickness 12 ± 3 mm).

The samples were conditioned for more then 48 h to constant mass at a temperature of 23 ± 2°C and a relative humidity of 50 ± 5% prior to the testing.

1.4 Production and pretreatment of the samples for the tests according to DIN EN 11925-2

The samples were provided and delivered for the tests in the necessary sample dimensions, by the manufacturer.

The samples were conditioned for more then 48 h to constant mass at a temperature of 23 ± 2°C and a relative humidity of 50 ± 5% prior to the testing.

2. Test reports and test results

2.1 Test reports

Name of test laboratory	Customer	Report to form the basis	Test procedure
Exova Warringtonfire, Frankfurt	Remmers Baustofftechnik GmbH	**2013-2175**	**DIN EN 13823 (SBI)** **EN ISO 11925-2 (30s ignition time and edge surface ignition)**

2.2 Test results

Test procedures	Parameter / classes	Test results
		average
DIN EN 13823 (SBI)	FIGRA $_{0,2MJ}$ ≤120 [W/s] for class A2 FIGRA $_{0,2MJ}$ ≤ 120 [W/s] for class B	**175,25**
	FIGRA $_{0,4MJ}$ ≤ 250 [W/s] for class C FIGRA $_{0,4MJ}$ ≤ 750 [W/s] for class D	**168,90**
	THR $_{600s}$ [MJ] ≤ 7,5 MJ for class A2 THR $_{600s}$ [MJ] ≤ 7,5 MJ for class B THR $_{600s}$ [MJ] ≤ 15 MJ for class C THR $_{600s}$ [MJ] no requirement for class D	**3,91**
	SMOGRA-index ≤ 30 [m²/s²] für s1 SMOGRA-index ≤ 180 [m²/s²] für s2	**5,88**
	TSP $_{600s}$ ≤ 50 [m²] for s1 TSP $_{600s}$ ≤ 200 [m²] for s2	**55,18**
	LFS < edge of the specimen for class A2 LFS < edge of the specimen for class B LFS < edge of the specimen for class C	fulfilled
	no burning dripping off/dropping within 600s for class d0	fulfilled
DIN EN ISO 30s 11925-2 15s	FS ≤ 150 mm within 60 s for class B, C u. D FS ≤ 150 mm within 20 s for class E	fulfilled

Explanations of table standing too above:
Figra$_{02MJ}$: Heat release rate with consideration of the THR of threshold value of 0,2MJ [W/s]
Figra$_{04MJ}$: Heat release rate with consideration of the THR of threshold value of 0,4MJ[W/s]
THR$_{600s}$: Total Heat Release during 600s [MJ]
SMOGRA: Smoke development rate
TSP$_{600s}$: Total Smoke Production 600s [m²]
LFS: Lateral Flame Spread

3 Classification and range of application

3.1 Reference

The classification was carried out according to the chapter 11 of DIN EN 13501-1

3.2 Classification

The tested material is ranked into the class **C** related to its behaviour in case of fire
Concerning the smoke development the tested material is ranked into the class **s2**
Concerning the dripping off behaviour the tested material is ranked into the class **d0**.

The classification of the tested material reads therefore:

C – s2 d0

3.3 Area of application

The classification is only valid for the coatings described in chapter one, in the tested gloss levels, on the wood material FF FR Topan MDF, company Glunz AG, Class B-s2, do according to DIN EN 13501-1 (raw density: 802,12 kg / m³, 19.2 mm thick).

According to the experience of the test laboratory are in the classification even in between gloss levels included.

4 Reservation

This classification report replaces not a possible required type admittance or type certification of the product.

This classification report replaces the English translation of the classification report 2013-2175-K1 issued 17.03.2014 (date of signature), which is invalid from now on.

Frankfurt 26th March 2014

P. Scheinkönig
Tester in charge

Dipl.-Ing. T. Zachäus
Laboratory Supervisor