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MateriaLab

REPORT ON THE SURFACE SPREAD OF FLAME TEST TO BS 476 : PART 7 : 1997 ON "BETACRYL" MODEL 0-100 CLASSIC WHITE COLOUR SOLID SURFACE PURE ACRYLIC

Client : Bts srl.

Project : Fire Testing on "**BETACRYL**" Material

Client Ref. : --

Report No. : 091232ST90233

Date : 05 June 2009

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1.0 Introduction

Fugro Technical Services Limited, MaterialLab Division was commissioned by the client, Bts s.r.l. to arrange a Surface Spread of Flame Test in accordance with BS 476 Part 7 : 1997 on samples of "Betacryl" Model 0-100, Classic White Colour Solid Surface Pure Acrylic Material.

The test was conducted by Fugro Technical Services, MaterialLab Division's approved sub-contract Laboratory, TÜV SÜB PSB Pte. Ltd. TÜV SÜB PSB Pte. Ltd. is a Singapore Laboratory accredited by SAC-SINGLAS, with accreditation number LA-007-0380-A, LA-2007-0380-A-1, LA-2007-0381-F, LA-2007-0382-B, LA-2007-0383-G, LA-2007-0384-G, LA-2007-0385-E and LA-2007-0386-C.

Six samples were prepared by the client and received by Fugro Technical Services Limited, MaterialLab Division on 20 April 2009. The samples were given Lab. I.D. : ST90233/1-6.

2.0 Description of Samples

Nine pieces of specimen, said to be "Betacryl" (12.3 mm thick x 1750 kg/m^3) model 0-100, Classic White colour Solid Surface Pure acrylic material comprising of MMA, ATH and Hardener, each of nominal size of 885 mm x 270 mm were submitted.

3.0 Purpose of Test

To determine the tendency of the surface of a material or a combination of materials to support the spread of flame across its surface and to classify the surface according to the test given in British Standard 476 : Part 7 : 1997.

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4.0 Test Procedure

Prior to test, the specimens were prepared and conditioned in accordance with paragraphs 5.3 to 5.6 of the standard and secured to a specimen holder as described in paragraph 6.3.

Six specimens, backed with calcium silicate board, were tested with the polished face exposed to the specified thermal radiation from the apparatus described in paragraph 6.1 of the standard. The intensity of the radiated heat incident on the specimen varies with distance from the hotter end, so that when the specified calibration panel is mounted in the place to be occupied by the specimen, the irradiance of the radiometer is as given in Table 1. The test was terminated when the flame front reached the 825 mm reference line, or after 10 minutes has elapsed, whichever is the shorter.

Table 1 : Irradiance Along Horizontal Reference Line on the Calibration Board

Distance along reference line from inside edge of specimen holder (mm)	Irradiance (kW/m^2)		
	specified	min.	max.
75	32.5	32.0	33.0
225	21.0	20.5	21.5
375	14.5	14.0	15.0
525	10.0	9.5	10.5
675	7.0	6.5	7.5
825	5.0	4.5	5.5

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5.0 Date of Test

07 May 2009

6.0 Results of Test

Specimen No.	1	2	3	4	5	6
Spread of flame at first 1½ minutes (mm)	0	0	0	0	0	0
Distance (mm)	Time of spread of flame to indicated distance (minutes • seconds)					
Start of flaming	Nil	Nil	Nil	Nil	Nil	9.47
75	--	--	--	--	--	9.58
165	--	--	--	--	--	--
190	--	--	--	--	--	
215						
240						
265						
290						
375						
455						
500						
525						
600						
675						
710						
750						
785						
825						
865						
Time of maximum spread of flame (minutes • seconds)	--	--	--	--	--	10.00
Distance of maximum spread of flame (mm)	0	0	0	0	0	75-165
Comments	None					

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7.0 Conclusion

In accordance with the class definitions specified in the Standard, the test results show that the sample tested has a Class One Surface Spread of Flame.

Classification of Surface Spread of Flame

Classification	Spread of flame at 1.5 min.		Final spread of flame	
	Limit (mm)	Limit for one specimen in sample (mm)	Limit (mm)	Limit for one specimen in sample (mm)
Class 1	165	165 + 25	165	165 + 25
Class 2	215	215 + 25	455	455 + 45
Class 3	265	265 + 25	710	710 + 75
Class 4	Exceeding the limits for class 3			

Remarks : 1.) The test results relate only to the behaviour of the test specimens of the product under the particular conditions of test ; they are not intended to be the sole criterion for assessing the potential fire hazard of the product in use.

Checked by : _____

Date : 5-6-2009

Certified by : _____
Chan Chun Wai Ivan
Manager (Product Testing Laboratory)

Date : 5.6.2009