

TEST REPORT

Your Ref : Letter dtd 1999-11-29

Date : 1999-12-22

Our Ref : 25S0000501/2A/PF
(Please quote our ref. no. in reply)

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OID : 8653783

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SUBJECT:

Large scale surface spread of flame test on "Pantech Vitreous Enamel Honeycomb Panel" material submitted by Pantech (Metal Panel) Technologies Ltd on 1999-10-21.

TESTED FOR:

Pantech (Metal Panel) Technologies Ltd
Unit-5, 7/F Nan-Fung Comm. Center
Wang Kwun Road
Kowloon Bay, Kowloon
Hong Kong

Attn: Mr Terrence Li

DATE OF TEST:

1999-12-02

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.

The results reported herein have been performed in accordance with the laboratory's terms of accreditation under the Singapore Accreditation Council - Singapore Laboratory Accreditation Scheme
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DESCRIPTION OF SAMPLES:

13 pieces of sample, said to be "Pantech Vitreous Enamel Honeycomb Panel" material, each of nominal size of 900mm x 230mm were received. The sample was said to consist of 1.6mm thick front steel sheet with 14mm width flanges and coated by 260 micron thick vitreous enamel coating, 1/2" cell size aluminium honeycomb core and back cover steel sheet coated by 80 micron thick inorganic glass powder coating. Adhesive used was said to be epoxy resin. 9 specimens were prepared; each specimen consisted of 1 no. each of 900mm x 230mm and 900mm x 40mm samples placed together to form the required nominal test size of 885mm x 270mm. The thickness and bulk density of the sample were found to be 19mm and 1118kg/m³ respectively.

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 were tested with the vitreous enamel coated 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 825mm 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	21.6
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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RESULTS OF TEST:

Specimen No.	1	2	3	4	5	6
Spread of flame at 1½ minutes (mm)	0	0	0	0	0	0
Distance (mm)	Time of spread of flame to indicated distance (minutes • seconds)					
75	-	-	-	-	-	-
165	-	-	-	-	-	-
190	-	-	-	-	-	-
215	-	-	-	-	-	-
240	-	-	-	-	-	-
285	-	-	-	-	-	-
290	-	-	-	-	-	-
375	-	-	-	-	-	-
455	-	-	-	-	-	-
500	-	-	-	-	-	-
525	-	-	-	-	-	-
600	-	-	-	-	-	-
675	-	-	-	-	-	-
710	-	-	-	-	-	-
750	-	-	-	-	-	-
785	-	-	-	-	-	-
825	-	-	-	-	-	-
865	-	-	-	-	-	-
Time of maximum spread of flame (minutes • seconds)	-	-	-	-	-	-
Distance of maximum spread of flame (mm)	0	0	0	0	0	0
Observation	None					

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

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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			

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.

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Mah Poh Huat
Technical Executive

[Signature]

Chan Lung Toa
Team Leader
(Fire Safety & Security Product)
Mechanical Test Centre