Test Report No. 7191163498-MEC17/B1-YWA
dated 09 Jun 2017
(221412106)

PSB Singapore

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SUBJECT:

Large scale surface spread of flame test on "Superlon" Insulation material submitted by Superlon Worldwide Sdn Bhd on 26 May 2017.

TESTED FOR:

Superlon Worldwide Sdn Bhd
Lot 2567, Jalan Sungai Jati
41200 Klang
Selangor
Malaysia

DATE OF TEST:

31 May 2017

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 test was conducted at TÜV SÜD PSB's fire test laboratory located at No. 10 Tuas Avenue 10, Singapore 639134.

TÜV SÜD PSB

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LA-2007-0381-F	LA-2007-0385-E
LA-2007-0382-B	LA-2007-0386-C
LA-2007-0383-G	LA-2010-0464-D

The results reported herein have been performed in accordance with the terms of accreditation under the Singapore Accreditation Council. Inspections/Calibrations/Tests marked "Not SAC-SINGLAS Accredited" in this Report are not included in the SAC-SINGLAS Accreditation Schedule for our inspection body/laboratory.

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DESCRIPTION OF SPECIMENS:

Nine pieces of specimen, said to be "Superlon" (13mm thick x 60kg/m^3) Insulation material comprising of Nitrile Butadiene Rubber (NBR), each of nominal test size of 885mm x 270mm were submitted. The bulk density of the specimen were found to be approximately 64kg/m^3.

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 skin (smooth) 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	Irradiance kW/m^2		
mm	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

RESULTS OF TEST:

Specimen No.	1	2	3	4	5	6
Spread of flame at first 1½ minutes (mm)	0	75-165	0	0	75-165	0
Distance (mm)	Time of spread of flame to indicated distance0.30 (minutes • seconds)					
Start of flaming	nil	0.11	nil	nil	0.24	nil
75	-	0.20	-	-	0.30	-
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)	-	0.22	-	-	0.32	-
Distance of maximum spread of flame (mm)	0	75-165	0	0	75-165	0
Comments	None					

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.

REMARKS:

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.

Ye Wint Aung
Higher Associate Engineer

Ong Kian Huat
Senior Associate Engineer
Fire Property
Mechanical

PSB Singapore

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July 2011