

TEST REPORT

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ACCOUNT CHARGEABLE TO : WALER PRECISION MFG. SDN. BHD

PROJECT CODE : A0170
PROJECT NAME : TESTING OF RESYSTA SOLID PROFILE MATERIAL

SUBJECT : LARGE SCALE SURFACE SPREAD OF FLAME TEST ON RESYSTA
SOLID PROFILE MATERIAL

TEST STANDARD : BS 476: PART 7: 1997

JOB REF : ADM / 09 / 1366

DATE RECEIVED : 29-Apr-2019
DATE OF REPORT : 06-Jun-2019

TOTAL PAGES : 6 (including cover page)

REMARKS : *Test was conducted by TUV SUD PSB Pte Ltd
(Test Report No. S09MEC04439/1/OKH)*

Test Report No. S09MEC04439/1/OKH
dated 30 Apr 2019



PSB Singapore

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SUBJECT:

Large scale surface spread of flame test on Resysta Solid Profile material submitted by Admaterials Technologies Pte Ltd on 30 Apr 2019.

TESTED FOR:

Waler Precision Mfg. Sdn. Bhd
No. 2 Jalan Canggih1
Taman Perindustrian Cemerlang
81800 Ulu Tiram
Johor, Malaysia

Attn: Mr Michael Tiongson

DATE OF TEST:

22 May 2019

PURPOSE OF TEST:

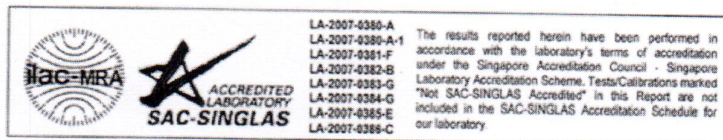
To determine the tendency of the surface of a material or a combination of materials to support the spread of flame across its surface and to classify the surface according to the test given in British Standard 476 : Part 7 : 1997.

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



Laboratory:
TÜV SÜD PSB Pte. Ltd.
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TUV®

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. Tests/Calibrations marked "Not SAC-SINGLAS Accredited" in this Report are not included in the SAC-SINGLAS Accreditation Schedule for our laboratory.



DESCRIPTION OF SPECIMENS:

Nine pieces of specimen, said to be Resysta (50mm thick x 1.2 - 1.5g/cm³) Solid Profile material comprising of Organic Fibre with Plastic, each of nominal size of 885mm x 270mm were submitted. Each piece of specimen comprised of 9 layers of the said material butt jointed (maximum 2 joints) and adhesive together in alternate orientation. Each layer comprised of specimen of width range of 30mm to 237mm. The Adhesive and Fire Retardant used were said to be PVC Glue and Antimony Trioxide respectively. The thickness of each layer and the overall bulk density of the specimen were found to be approximately 5.5mm and 1207kg/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, backed with calcium silicate board, were tested with the specimen indicated 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	21.5
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	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	nil
75	-	-	-	-	-	-
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)	-	-	-	-	-	-
Distance of maximum spread of flame (mm)	0	0	0	0	0	0
Comments	None					

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Classification of Surface Spread of Flame

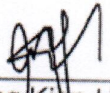
Classification	Spread of flame at 1.5 min.		Final spread of flame	
	Limit (mm)	Limit for one specimen in sample (mm)	Limit (mm)	Limit for one specimen in sample (mm)
Class 1	165	165 + 25	165	165 + 25
Class 2	215	215 + 25	455	455 + 45
Class 3	265	265 + 25	710	710 + 75
Class 4	Exceeding the limits for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

CONCLUSION:

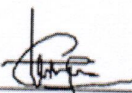
In accordance with the class definitions specified in the Standard, the test results show that the sample tested has a Class One Surface Spread of Flame.

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.



Ong Kian Huat
Associate Engineer



Chan Lung Toa
Product Manager
(Fire Safety & Security Products)
Mechanical Centre

Test Report No. S09MEC04439/1/OKH
dated 30 Apr 2019



PSB Singapore

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