

TEST REPORT

REPORT NO.: 2019FE0259	PAGE : 1 OF 5
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Applicant/ Manufacturer : **MECH REF ENGINEERING SDN. BHD.**
No. 40 & 42, Jalan Anggerik Mokara 31/47,
Kota Kemuning,
40460 Shah Alam,
Selangor Darul Ehsan.
(Attn: Tan Hooi Peng / Koay Wei Suang)

Product : **INSULATION PANEL (POLYURETHANE CORE)**

Reference Standard/ Method of Test : BS 476: Part 6: 1989+A1:2009
Fire Test on Building Materials and Structures
Part 6: Method of Test for Fire Propagation for Products.

Description of Test Specimen : 6 pieces of Insulation Panel (Polyurethane Core).
Size of Specimen : 225mm x 225mm x 48.5mm (measured thickness)
Brand : MR
Nominal Thickness : 50mm ~ 150mm
Core Density : 40 - 45 kg/m³
Mass Per Unit Area : 9.32 kg/m²

Descriptions of sample as claimed by the submitter: Refer to page 5.

The specimens were tested with the face side exposed to the specified heating condition of the fire test.

Date Received : 16.04.2019
Job Number : J20191440250

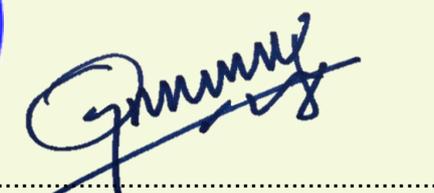
Test Result	Subindex i1	Subindex i2	Subindex i3	Fire Propagation Index (I)
	1.7	4.0	0.8	6.5

Issued Date : 3 May 2019

Approved Signatory



(MUHAMMAD SAFUAN MUSA)
Testing Executive

(AZMI MUSA)
HEAD
Fire Protection Section
Testing Services Department

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Product : INSULATION PANEL (POLYURETHANE CORE)
Brand : MR **Core Density** : 40 - 45 kg/m³
Nominal Thickness : 50mm ~ 150mm **Mass Per Unit Area** : 9.32 kg/m²
Measured Thickness : 48.5 mm **Date of Test** : 20.04.2019

Time (Min.)	Temperature Rise Above Ambient (°C)				
	Calibration	Specimen A	Specimen B	Specimen C	Specimen Average
0.5	13	12	15	14	13
1.0	17	18	22	21	20
1.5	22	24	26	28	26
2.0	26	27	33	35	32
2.5	29	33	40	39	37
3.0	34	38	44	46	42
4.0	62	75	76	75	75
5.0	95	160	116	108	128
6.0	118	189	176	135	167
7.0	140	197	190	160	182
8.0	155	214	205	199	206
9.0	169	224	220	215	219
10.0	181	230	232	225	229
12.0	200	233	249	238	240
14.0	211	230	255	243	242
16.0	219	223	253	244	240
18.0	228	217	247	238	234
20.0	235	213	243	236	230
Subindex 1		0.6	2.2	2.2	1.7
Subindex 2		5.4	4.1	2.6	4.0
Subindex 3		0.4	1.1	0.8	0.8
Index of Performance		6.4	7.4	5.6	6.5



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Date of Test : 20.04.2019

No. of Specimen Tested : 3 nos.

The Fire Propagation Index **I** is **6.5** for the Insulation Panel (Polyurethane Core) with mass per unit area of 9.32 kg/m² and measured thickness 48.5 mm.

The Subindex i1 is 1.7

The Subindex i2 is 4.0

The Subindex i3 is 0.8

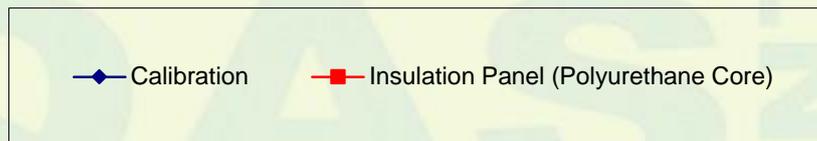
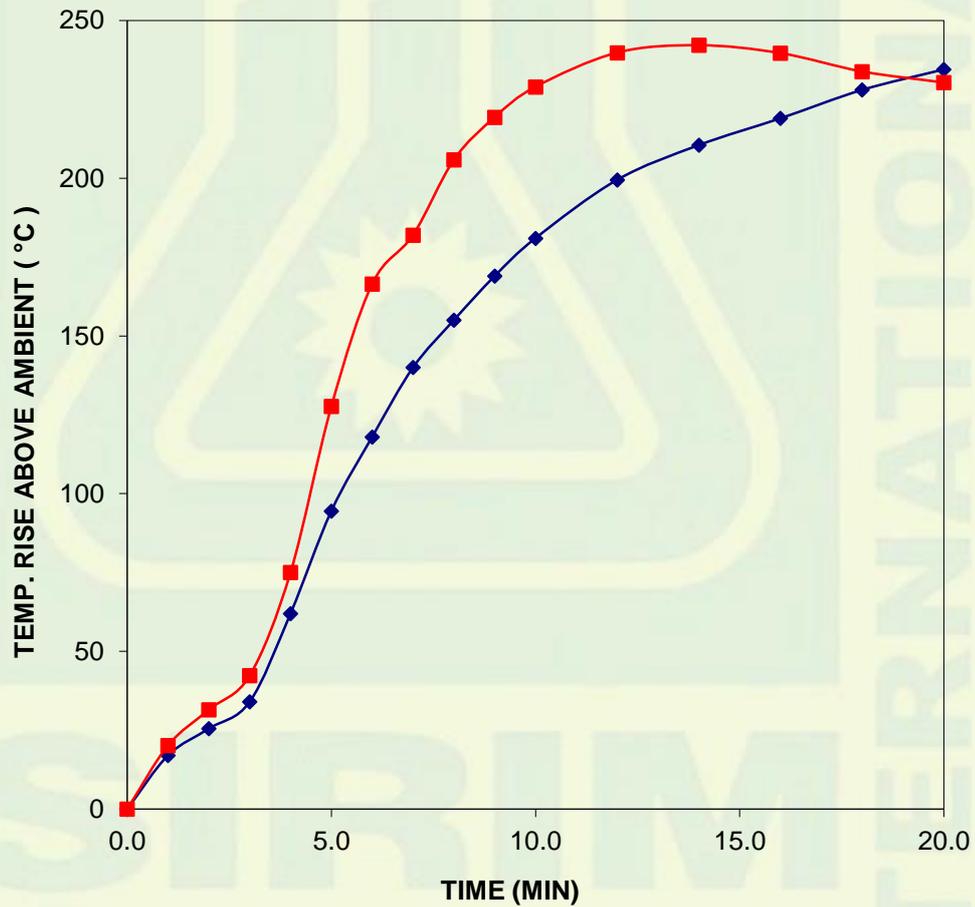
The test results relate only to the behavior of the test specimens of the product under the particular conditions of test; they are not intended to be the sole criterion for assessing the potential fire hazard of the product in use.



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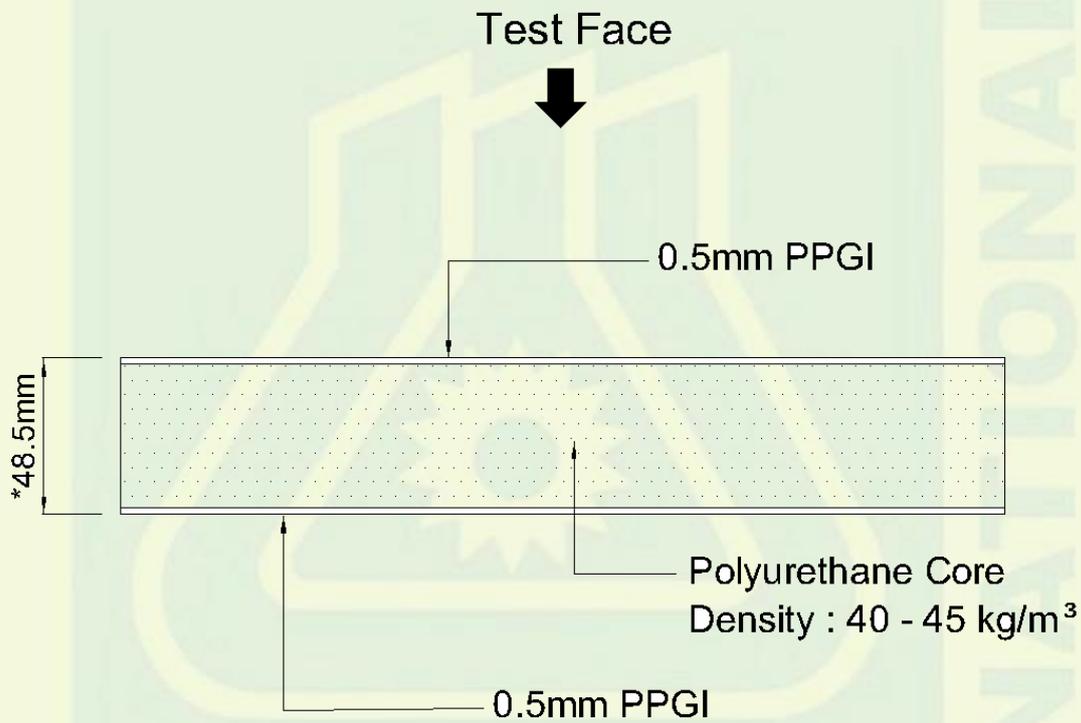
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Product	: INSULATION PANEL (POLYURETHANE CORE)	Core Density	: 40 - 45 kg/m ³
Brand	: MR	Mass Per Unit Area	: 9.32 kg/m ²
Nominal Thickness	: 50mm ~ 150mm	Date of Test	: 20.04.2019
Measured Thickness	: 48.5 mm		



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Descriptions of sample as claimed by the submitter



Details :

Panel Thickness : 50mm ~ 150mm

Note :

* Measured Thickness

Insulation Panel (Polyurethane Core)



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5. Customer (Applicant/Manufacture/Factory, etc.) is not permitted to use any SIRIM QAS International, SIRIM or other SIRIM's subsidiaries logo or words on packaging, sample's manual, technical specification, brochures/flyers or any other means without the prior written approval from the Managing Director of SIRIM QAS International.
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7. In the event there is an investigation from a Government Regulatory Agency concerning the Applicant's Test Report, SIRIM QAS International may disclose the information pertaining to the Test Report for purposes of such investigation.
8. Further or in the alternative, it is strictly forbidden unless with prior written approval from the Managing Director of SIRIM QAS International, to represent in any manner whatsoever that SIRIM QAS International, SIRIM and/or other SIRIM's subsidiaries has endorsed, approved or validated the Product of the Applicant in any manner whatsoever.
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 - a) Informing and placing a notice in the media;
 - b) Obtaining an injunction from Court (cost on a solicitor-client basis to be borne by the Applicant);
 - c) Refusing to accept any further Product for Testing Services from the Applicant or whosoever related to the Applicant, whether subsidiary or otherwise;
 - d) Instructing the Applicant to withdraw and recall the advertisement, statement or document in question and advertise a clarification and apology to SIRIM QAS International, SIRIM and/or other SIRIM's subsidiaries twice in a national publication of SIRIM QAS International's choice at the Applicant's sole cost; and
 - e) Informing or lodging a report pertaining the Applicant's Test Report with the relevant authorities.
10. Certified true copies of the Test Report may be issued upon request by the Applicant upon payment of the relevant fee.
11. Corrections to test report shall only be allowed within 6 months from issuance date of the test report and shall be limited to maximum 3 times, after either case whichever occurs earlier, a new test report shall be issued and replace the previous one (having error(s) or lack of information). Issuance of Supplementary Report to the original Test Report shall be for the followings;
 - a) Misprints and typo errors
 - b) Missing technical information
 - c) Test data not reported
 - d) Mistake in reporting of test data