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TEST REPORT

REPORT NO : 2018CB2475

PAGE : 1 OF 2

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Applicant : ZHONGQIAN BUILDING TECHNOLOGY SDN. BHD.
13A-01, KL Eco City (Strata Office), Lot 215, Pantai Baru,
59200 Jalan Bangsar, Kuala Lumpur, Malaysia.

Manufacturer : JIANGSU SPANL CO., LTD.

Product : Metal Siding
Reference Standard / Method of Test : MS ISO 8302: 2003
Thermal Insulation – Determination of Steady-State Thermal Resistance and Related Properties – Guarded Hot Plate Apparatus

Description of sample / Description of Test Specimen : One piece of Metal Siding with size of 500 mm x 500 mm was received for testing.
Brand: Spanl
Nominal Thickness: 20 mm
Density: 60 kg/m³

Date Received of Complete Application : 10 December 2018

Job No. : J20181432363

Description of Test Results / Overall Test Result : The results of the submitted test samples are described in page 2 of this test report.

Issued Date : 19 December 2018

Approved Signatories;

(ZAIMAR BIN MOHD JANUDIN)
Testing Executive



(RAJAH HANAN) (RAJAH HANAN)
Head

Civil & Construction Section
Testing Services Department

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Test : MS ISO 8302: 2003
Method : Thermal Insulation – Determination of Steady-State Thermal Resistance and Related Properties – Guarded Hot Plate Apparatus

Objective : To determine the:
1) Thermal resistance, R (m²K/w)
2) Thermal conductivity, λ (w/mK)

Apparatus : The apparatus was a single specimen type for the sample thickness ranges from 10 mm to 200 mm.

Test Procedure : The test has been conducted in general conformance with the MS ISO 8302: 2003 Thermal Insulation – Determination of Steady-State Thermal Resistance and Related Properties – Guarded Hot Plate Apparatus.
The measurement was computed at single temperature of 20 °C at temperature difference of 15 K temperature.

$$\text{Thermal Resistance} = \frac{\text{Temperature Difference} \times \text{Surface Area}}{\text{Total Heat Supplied}} = \frac{\Delta T \cdot A}{Q}$$

$$\text{Thermal Conductivity} = \frac{\text{Sample Thickness}}{\text{Thermal Resistance}} = \frac{d}{R}$$

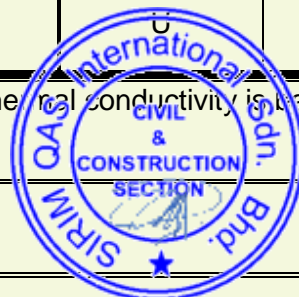
Sample Setup : Metal Siding test sample with size of 500 mm x 500 mm was laid horizontally in the hot plate apparatus.

Nominal Thickness: 20 mm
Density : 60 kg/m³

Test Result : Measured Thickness: 22.93 mm

PARAMETER	SYMBOL	UNIT	TEST 1
Measured Temperature	T	°C	20
Temperature Difference	ΔT	K	15
Thermal Conductivity*	λ	w/mK	0.026
Thermal Resistance	R	m ² K/w	0.876
Thermal Transmittance	U	w/m ² K	1.142

*Calculation of the thermal conductivity is based on the measured thickness



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