

Certificate of Test

QUOTE No.: NC8163

REPORT No.: FNC12446

COMBUSTIBILITY TEST FOR MATERIALS IN ACCORDANCE WITH AS 1530.1-1994

SPONSOR: Fairview Architectural Pty Ltd
18 – 20 Donald Street
LITHGOW NSW 2790
AUSTRALIA

DESCRIPTION OF TEST SAMPLE:

The sponsor described the tested specimen as an aluminium material representative of the aluminium used in the aluminium Vitracore G2 cladding panel. The aluminium was tested without any coatings or adhesives. The specimen was comprised of the following layers:

Layer 1: 0.7-mm thick aluminium sheet;
Layer 2: 2.8-mm thick expanded corrugated aluminium core with a 0.3-mm aluminium wall thickness;
Layer 3: 0.5-mm thick aluminium sheet.

The layers were loose laid on top of each other to form 50-mm (± 3mm) thick samples required for testing.

Nominal thickness of top aluminium sheet: 0.7 mm
Nominal thickness of bottom aluminium sheet: 0.5 mm
Nominal thickness of expanded corrugated aluminium core: 2.8 mm
Nominal wall thickness of expanded corrugated aluminium core: 0.3 mm
Nominal total thickness: 50 mm
Nominal density: 2700 kg/m³
Colour: silver

Note: The specimen was provided by UL International Singapore Pte Ltd.

TEST PROCEDURE:

Five (5) samples were tested in accordance with Australian Standard 1530 Methods for fire tests on building materials, components and structures, Part 1- 1994: Combustibility Test for Materials.

An alternative suitable insulating material was used to fill the annular space between the furnace tubes, as specified in Clause 4.2 of ISO 1182:2010.

RESULTS:

The following calculated results were obtained, refer also to Summary of measurements:

Arithmetic mean	$\frac{\Sigma \text{ results}}{5}$
Mean furnace thermocouple temperature rise (°C)	4.22
Mean specimen centre thermocouple temperature rise (°C)	7.76
Mean specimen surface thermocouple temperature rise (°C)	10.58
Mean duration of sustained flaming (s)	0
Mean mass loss (%)	0.08

DESIGNATION:

The material is **NOT** deemed combustible according to the test criteria specified in Clause 3.4 of AS 1530.1-1994.

These test results relate only to the behaviour of the test specimens of the material under the particular conditions of the test and they are not intended to be the sole criterion for assessing the potential fire hazard of the material in use.

DATE OF TEST: 29 August 2019

Issued on the 18th day of September 2019 without alterations or additions.

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Testing Officer

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Group Leader, Fire Testing and Assessments

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Number: 165

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SUMMARY OF MEASUREMENTS AND OBSERVATIONS OF SAMPLES UNDER TEST C12446

Parameters	Symbol or expression	Unit symbol	Sample Number				
			1	2	3	4	5
Initial specimen mass	m_{si}	g	89.66	78.73	79.26	81.73	78.65
Final specimen mass	m_{sf}	g	89.63	78.65	79.10	81.68	78.64
Mass loss	$\Delta m = \frac{M_{si} - M_{sf}}{M_{si}} \times 100$	%	0.03	0.10	0.20	0.06	0.01
Total duration of sustained flaming	Cumulative total of duration of flaming*	s	0	0	0	0	0
Initial furnace thermocouple temperature	T_{fi}	°C	754	751	752	747	755
Maximum furnace thermocouple temperature	T_{fm}	°C	776	793	779	786	783
Final furnace thermocouple temperature	T_{ff}	°C	773	790	774	782	777
Furnace thermocouple temperature rise	$\Delta T_f = T_{fm} - T_{ff}$	°C	3	3	5	4	6
Maximum specimen centre thermocouple temperature	T_{cm}	°C	724	745	731	737	738
Final specimen centre thermocouple temperature	T_{cf}	°C	717	737	726	729	727
Specimen centre thermocouple temperature rise	$\Delta T_c = T_{cm} - T_{cf}$	°C	7	8	5	8	11
Maximum specimen surface thermocouple temperature	T_{cm}	°C	750	764	753	754	757
Final specimen surface thermocouple temperature	T_{sf}	°C	739	752	742	743	748
Specimen surface thermocouple temperature rise	$\Delta T_s = T_{cm} - T_{sf}$	°C	11	12	11	11	9
Test duration	-	min	65	85	65	85	70

* Any individual duration flaming less than 5 seconds was discarded

End of Test Certificate