Certificate of Test

QUOTE No.: NC8273 **REPORT No.: FNC12498**

COMBUSTIBILITY TEST FOR MATERIALS IN ACCORDANCE WITH AS 1530.1-1994

SPONSOR:

National Resources Pty. Ltd.
2/4 Gateway Drive
CARRUM DOWNS VIC 3201
AUSTRALIA

DESCRIPTION OF TEST SAMPLE:

The sponsor described the tested specimen as an aluminium material representative of the aluminium used in Atlas Aluminium Facade Panel. The aluminium was tested without any coating.

Nominal thickness:	3 mm (loose laid to form 50 mm for the test)
Nominal density:	2700 kg/m^3
Colour:	silver

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	$= \frac{\Sigma\, results}{5}$
Mean furnace thermocouple temperature rise **(°C)**	7.97
Mean specimen centre thermocouple temperature rise **(°C)**	11.71
Mean specimen surface thermocouple temperature rise **(°C)**	11.77
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: 25 November 2019

Issued on the 12th day of December 2019 without alterations or additions.

Faustin Molina
Testing Officer

Stephen Smith
Team Leader, Reaction to Fire & Façade Fire Laboratory

NATA Accredited Laboratory
Number: 165
Corporate Site No 3625
Accredited for compliance with ISO/IEC 17025 - Testing.

CSIRO INFRASTRUCTURE TECHNOLOGIES

14 Julius Avenue, Riverside Corporate Park, North Ryde NSW 2113 AUSTRALIA
Telephone: 61 2 9490 5444 Facsimile: 61 2 9490 5555 www.csiro.au

SUMMARY OF MEASUREMENTS AND OBSERVATIONS OF SAMPLES UNDER TEST C12498

Parameters	Symbol or expression	Unit symbol	Sample Number				
			1	2	3	4	5
Initial specimen mass	m_{si}	g	190.25	189.78	189.53	189.49	189.90
Final specimen mass	m_{sf}	g	189.82	189.74	189.47	189.29	189.87
Mass loss	$\Delta m = \frac{Msi - Msf}{Msi} \times 100$	%	0.23	0.02	0.03	0.11	0.02
Total duration of sustained flaming	Cumulative total of duration of flaming*	s	0	0	0	0	0
Initial furnace thermocouple temperature	T_{fi}	°C	751	754	751	752	753
Maximum furnace thermocouple temperature	T_{fm}	°C	775	776	784	785	768
Final furnace thermocouple temperature	T_{ff}	°C	765	766	779	779	760
Furnace thermocouple temperature rise	$\Delta Tf = Tfm - Tff$	°C	10	10	5	6	8
Maximum specimen centre thermocouple temperature	T_{cm}	°C	711	718	723	731	712
Final specimen centre thermocouple temperature	T_{cf}	°C	704	707	711	723	691
Specimen centre thermocouple temperature rise	$\Delta Tc = Tcm - Tcf$	°C	7	11	12	8	21
Maximum specimen surface thermocouple temperature	T_{cm}	°C	759	771	783	787	776
Final specimen surface thermocouple temperature	T_{sf}	°C	749	750	773	779	766
Specimen surface thermocouple temperature rise	$\Delta Ts = Tcm - Tsf$	°C	10	21	10	8	10
Test duration	-	min	115	155	100	105	80

* Any individual duration flaming less than 5 seconds was discarded

End of Test Certificate

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