

Certificate of Test

QUOTE No.: NC8205

REPORT No.: FNC12440

COMBUSTIBILITY TEST FOR MATERIALS IN ACCORDANCE WITH AS 1530.1-1994

TRADE NAME: Low Carbon Steel Manufactured by Bluescope Australia

SPONSOR: Bluescope Steel Limited
Five Islands Road
Sirius Building (#51)
PORT KEMBLA NSW 2505
AUSTRALIA

DESCRIPTION OF TEST SAMPLE: The sponsor described the tested specimen as low carbon steel.

Nominal thickness: 4.38 mm (loose laid to form 50 mm)
Nominal density: 7850 kg/m³
Colour: grey

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)	0.10
Mean specimen centre thermocouple temperature rise (°C)	0.06
Mean specimen surface thermocouple temperature rise (°C)	0.32
Mean duration of sustained flaming (s)	0
Mean mass loss (%)	0.06

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: 27 August 2019

Issued on the 9th day of September 2019 without alterations or additions.



Faustin Molina
Testing Officer



Brett Roddy
Group Leader, Fire Testing and Assessments

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SUMMARY OF MEASUREMENTS AND OBSERVATIONS OF SAMPLES UNDER TEST C12440

Parameters	Symbol or expression	Unit symbol	Sample Number				
			1	2	3	4	5
Initial specimen mass	m_{si}	g	540.98	543.87	544.14	541.96	543.60
Final specimen mass	m_{sf}	g	540.82	543.84	544.00	541.15	543.21
Mass loss	$\Delta m = \frac{M_{si} - M_{sf}}{M_{si}} \times 100$	%	0.03	0.01	0.03	0.15	0.07
Total duration of sustained flaming	Cumulative total of duration of flaming*	s	0	0	0	0	0
Initial furnace thermocouple temperature	T_{fi}	°C	747	753	751	751	751
Maximum furnace thermocouple temperature	T_{fm}	°C	782	775	781	779	780
Final furnace thermocouple temperature	T_{ff}	°C	782	775	781	779	780
Furnace thermocouple temperature rise	$\Delta T_f = T_{fm} - T_{ff}$	°C	0	0	1	0	0
Maximum specimen centre thermocouple temperature	T_{cm}	°C	766	763	763	769	771
Final specimen centre thermocouple temperature	T_{cf}	°C	766	763	763	769	771
Specimen centre thermocouple temperature rise	$\Delta T_c = T_{cm} - T_{cf}$	°C	0	0	0	0	0
Maximum specimen surface thermocouple temperature	T_{cm}	°C	770	764	766	771	768
Final specimen surface thermocouple temperature	T_{sf}	°C	769	764	765	771	768
Specimen surface thermocouple temperature rise	$\Delta T_s = T_{cm} - T_{sf}$	°C	1	0	1	0	0
Test duration	-	min	105	85	75	85	85

* Any individual duration flaming less than 5 seconds was discarded

End of Test Certificate