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Reaction-to-fire test report

Test standard: AS/NZS 1530.3:1999 (R2016)

Test sponsor: Health Based Building

Product: Magnum board®

Job number: RTF200320

Test date: 17 September 2020 Revision: R1.0

Quality management

Revision	Date	Information about the report			
R1.0	21 September 2020	Description	Initial issue		
			Prepared by	Reviewed by	Authorised by
		Name	Anthony Rosamilia	Tanmay Bhat	Tanmay Bhat
		Signature			

Contents

1. Introduction

This report documents the findings of the fire hazard properties of Magnum Board® tested in accordance with AS/NZS 1530.3:1999 (R2016) on 17 September 2020.

Australian Wool Testing Authority (AWTA) undertook the test on behalf of Warringtonfire Australia at the request of the test sponsor listed in Table 1.

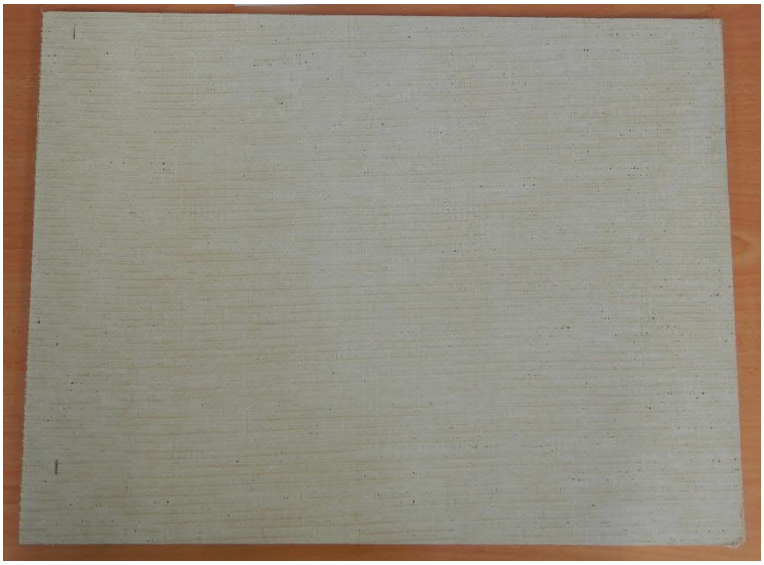
Table 1 Test sponsor details

Test sponsor	Address
Health Based Building	1062 Colombo Street St Albans, Christchurch 8014 New Zealand

2. Product description

The description of the specimen in Table 2 has been prepared from information provided by the test sponsor, unless otherwise specified. Warringtonfire was not involved in sampling or selecting the specimens. All measurements – unless indicated – were measured by Warringtonfire.

Table 2 Product description

Item	Detail
Product	Magnum board®
General description	12 mm thick board made from magnesium oxide, magnesium chloride, cellulose, perlite, a proprietary additive with 2 layers of glass fibre reinforcement mesh. The top surface was smooth whilst the bottom layer was rough (sanded). One layer of glass fibre mesh was embedded 0.2 mm in from the smooth face and one layer of glass fibre mesh was embedded approximately 0.5 – 1 mm in from the sanded face.
Average as received mass per unit area	12.5 kg/m^2
Average mass per unit area after conditioning	12.0 kg/m^2
Colour	Off-white
Photograph of specimen	

3. Test results and regulatory indices

Table 3 summarises the results the tested product achieved. Table 4 summarises the regulatory indices for the tested product.

Table 3 Test results

Characteristic	Mean	Units	Standard error
Ignition time	Nil	Minutes	Nil
Flame propagation time	Nil	Seconds	Nil
Heat release integral	Nil	kJ/m^2	Nil
Smoke release, log d	-2.5152		0.0786
Optical density, d	0.0033	per metre	

Table 4 Regulatory indices

Index	Value	Range
Ignitability index	0	Range 0 to 20
Spread of flame index	0	Range 0 to 10
Heat evolved index	0	Range 0 to 10
Smoke developed index	0-1	Range 0 to 10

4. Comments

The specimens were tested on 17 September 2020 and 0 out of the 6 specimens tested ignited. Ignition is initiated by a pilot flame that is held near to – but does not touch – the specimen. A material that does not ignite during the standard test may ignite if contacted with a pilot flame during the test.

These results only apply to the specimen mounted, as described in this report. The result of this fire test may be used to directly assess fire hazard, but it should be recognised that a single test method will not provide a full assessment of fire hazard under all fire conditions.

Each test specimen had an unattached backing of 4.5 mm thick fibre reinforced cement board.

Each test specimen was clamped along all sides.

The Smoke Developed Index is reported as 0-1 due to the inability of the smoke measurement equipment to resolve an index of zero.

5. Application of test results

This test report does not provide an endorsement by Warringtonfire Australia Pty Ltd of the performance of the actual products supplied.

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

5.1 Uncertainty of measurements

Because of the nature of reaction-to-fire testing and the consequent difficulty in quantifying the uncertainty of measurements obtained from a reaction-to-fire test, it is not possible to provide a stated degree of accuracy of the result.

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