

28 July 2017

Mr Mark Fitt
Committee Secretary
Senate Economics References Committee
PO Box 6100
Parliament House ACT 2600

economics.sen@aph.gov.au

Dear Mr Fitt,



Re: Inquiry into non-conforming building products – incorrect testimony

Fairview Architectural wishes to draw to the attention of the Senate Economics References Committee, incorrect information Senators were provided by Halifax Vogel Group (HVG) Pty Ltd in Sydney on 19 July.

I refer to the following exchange from pages 67 and 68 of the Hansard Proof.

Mr Martin: The term 'non-combustible' is the issue within the industry.

Senator KIM CARR: I'm old fashioned. I think 'non-combustible' means it shouldn't catch fire and it shouldn't be a fire hazard. Is that what you think it means?

Mr Martin: Yes.

Senator XENOPHON: What's the difference between 'non-combustible' and 'fire retardant'?

Mr Martin: 'Fire retardant', or 'FR', has no reference in the code. It's not called up. There is no level of combustibility.

Senator XENOPHON: What standard is non-combustible then?

Mr Martin: The standard is AS1530.1. There is no such thing as a panel that passes AS1530.1 as the product would be supplied.

Senator XENOPHON: What do you mean by, 'no such thing'? We have a standard, but no-one can comply with the standard? Can you explain that to me? So there's a standard for non-combustible material—AS1530.1— but no-one actually complies with that at the moment?

Mr Martin: As the material would be supplied. So, if you supplied a material, the product would not pass that test.

Senator XENOPHON: Sorry, I'm being a bit slow here. What are you saying? So there's a standard that we can't comply with?

Mr Martin: Correct.

Mr Rayment: Correct.

Senator XENOPHON: Why can't it be complied with?

Mr Martin: For one, it's because the actual test itself is not intended for these types of products.

Senator XENOPHON: So we have a standard that can't be complied with? Mr Martin: Yes.

Senator XENOPHON: It's not much of a standard then, is it?

Mr Martin: No.

Mr Rayment: The bottom half of page 3 of our submission talks about the AS1530.1 test and how, going back as far as 2000, the Fire Code Reform Project report of 2000, said that 'this type of test was developed over 50 years ago and has shortcomings'. The Melbourne Fire Brigade report on the Lacrosse building also said:

... the MFB is not aware of any competitor ... produce which has been successful in being determined as non-combustible when tested under AS1530.1.

The difference here is that the AS1530.1 test is taking small pieces of product and dipping them in effectively a furnace. We are calling for full-scale facade testing of building facade products.

Senator XENOPHON: How would you do that?

Mr Rayment: You construct a mock facade and put a fire underneath it, in simple terms.

Incorrect information

1. Selective quoting of MFB report on the Lacrosse Building:

HVG's spoken testimony incorrectly says that according to the MFB's report, the MFB is unaware of any ACM panels sold in Australia that have been deemed as non-combustible when tested under AS1530.1.

Mr Rayment's testimony leaves out a crucial piece of information contained in the MFB report. As a matter of fact, this excluded information does appear in HVG's written submission to the Committee.

To quote directly from page 3 of HVG's written submission (emphasis added):

With reference to the Lacrosse Building fire, the Melbourne Fire and Emergency Services Board (MFB) Post-Incident Analysis Report of 25 November 2014 (MFB Report) states that "the MFB is not aware of any competitor **aluminium/polythelene (sic) panel product** which has been successful in being determined as non-combustible when tested under AS1530. 1 1994 Combustibility test for Materials". It follows that if an ACP cannot be deemed noncombustible under AS1530.1-1994 then the testing methodology is redundant.

The MFB report was referring specifically to PE-cored products, not all ACM panels.

As the Committee is aware, there are some ACM panels sold in Australia that contain aluminium cores, such as Fairview's Vitracore G2 panels. Others include Aodeli Australia's Alumcanbond Aluminium Core Panel and the Blue Chip Group's Ultracore G2 panel. As outlined below, these panels have indeed been deemed non-combustible under AS1530.1-1994.

2. There is no such thing as a panel that passes AS1530.1

I again quote directly from the Hansard proof:

Mr Martin: The standard is AS1530.1. There is no such thing as a panel that passes AS1530.1 as the product would be supplied.

Senator XENOPHON: What do you mean by, 'no such thing'? We have a standard, but no-one can comply with the standard? Can you explain that to me? So there's a standard for non-combustible material—AS1530.1— but no-one actually complies with that at the moment?

Mr Martin: As the material would be supplied. So, if you supplied a material, the product would not pass that test.

Senator XENOPHON: Sorry, I'm being a bit slow here. What are you saying? So there's a standard that we can't comply with?

Mr Martin: Correct.

Mr Rayment: Correct.

Both Mr Martin's and Mr Rayment's testimonies are wrong.

I attach to this letter correspondence from Mr Brett Roddy, Manager, Fire Testing & Assessments CSIRO Infrastructure Technologies and Testing Services, to me, dated 8 September 2016.

Mr Roddy clearly states that Vitracore G2 passes the AS1530.1-1994 test and is NOT deemed combustible. This contradicts Mr Martin's and Mr Rayment's testimony to the committee.

Mr Roddy wrote to me:

"Vitracore G2 aluminium composite panel (ACP) has been the subject of AS 1530.1 – 1994 'Combustibility test for materials' testing, as well as AS 1530.3 - 1999 'Simultaneous determination of ignitability, flame propagation, and smoke release' testing, undertaken by CSIRO Infrastructure Technologies, Fire Technology Laboratory at North Ryde NSW, as summarised below:

CSIRO report reference	Test standard	Specimen details	Results
FNC11476B	AS 1530.1 - 1994	Aluminium corrugated profiled core material and aluminium flat skins only (no adhesive or coating).	The material is NOT deemed combustible.
FNE11459A	AS 1530.3 - 1999	Complete Vitracore G2 composite panel (including coating and adhesive)	Ignitability Index 0 Spread of Flame Index 0 Heat Evolved Index 0 Smoke Developed Index 1

"The testing summarised above demonstrates that each laminate is not deemed combustible under AS 1530.1," Mr Roddy wrote.

I have attached to this letter the two certificates of test issued by the CSIRO.

Fairview is aware of at least two other ACM panels in Australia, sold by two of our competitors, that have been tested using the AS1530.1-1994 test standard and have not been deemed combustible.

These are:

- Aodeli Australia's Alumcanbond Aluminium Core Panel; and
- Blue Chip Group's Ultracore G2 panel.

I have attached to this letter, two certificates of test issued by the CSIRO verifying that the Alumcanbond and Ultracore G2 panels are not deemed combustible using the AS1530.1-1994 test standard.

As the committee would be aware, Fairview takes its responsibility to educate and inform the building and construction industry and the wider public very seriously.

It is Fairview's considered view that consumers, regulators, developers, building owners and occupiers, and government need to be better informed about ACM panels so that community concerns are allayed.

I hope the information outlined above ensures the Committee is availed of a fuller picture of ACM panel safety.

Yours sincerely,

A black rectangular box redacting the signature of Andrew Gillies.

Andrew Gillies
Managing Director

Certificate of Test

Quote No.: NC7442

REPORT No.: FNC11476B

COMBUSTIBILITY TEST FOR MATERIALS IN ACCORDANCE WITH AS 1530.1-1994

TRADE NAME: Vitracore G2 – Aluminium composite panel incorporating a corrugated profiled aluminium core with aluminium outer skins.

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 composite panel comprising three layers. The test specimen comprised the two flat skins and a profiled core.

Layer 1: 0.7-mm thick aluminium face;
Layer 2: 0.3-mm thick corrugated profiled aluminium core, expanded to 2.6-mm;
Layer 3: 0.5-mm thick aluminium face.

Nominal total thickness: 4-mm

Nominal mass: 4 kg/m² (measured)

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:

Mean furnace thermocouple temperature rise..... 11.0°C

Mean specimen centre thermocouple temperature rise14.2°C

Mean specimen surface thermocouple temperature rise..... 5.4°C

Mean duration of sustained flaming..... 0 seconds

Mean mass loss..... 0.09 %

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: 3 September 2015

Issued on the 12th day of November 2015 without alterations or additions. This certificate supersedes Report No. FNC11476A issued on 4 November 2015.

Testing Officer

Team Leader, Fire Testing and Assessments

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NATA Accredited Laboratory

Number: 165

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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



Certificate of Test

Quote No.: NK7601

REPORT No.: FNC11679

COMBUSTIBILITY TEST FOR MATERIALS IN ACCORDANCE WITH AS 1530.1-1994

TRADE NAME: Ultracore G2

SPONSOR: Blue Chip Group
62 Division Street
Welshpool WA
AUSTRALIA

**DESCRIPTION OF
TEST SAMPLE:**

The sponsor described the tested specimen as the corrugated profiled aluminium core of the Ultracore G2 aluminium composite sandwich panel.

Nominal thickness: 0.3-mm to 0.5-mm
Nominal mass: 4 kg/m² (measured); 4.564 kg/m² (specified by sponsor)
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:

Mean furnace thermocouple temperature rise..... 11.0°C
Mean specimen centre thermocouple temperature rise14.2°C
Mean specimen surface thermocouple temperature rise..... 5.4°C
Mean duration of sustained flaming..... 0 seconds
Mean mass loss..... 0.09 %

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: 3 September 2015

TEST NUMBER: 11476

Issued on the 4th day of April 2016 without alterations or additions.

HENDERSON ALAN
Testing Officer

Brett Roddy
Team Leader, Fire Testing and Assessments

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Certificate of Test

Quote No.: NC7610

REPORT No.: FNC11707A

COMBUSTIBILITY TEST FOR MATERIALS IN ACCORDANCE WITH AS 1530.1-1994

TRADE NAME: Aodeli Alumcanbond Aluminium Core Panel

SPONSOR: Aodeli Australia Pty Ltd
Unit 3, 55 Christensen Road
STAPYLTON QLD 4207
AUSTRALIA

**DESCRIPTION OF
TEST SAMPLE:**

The sponsor described the tested specimen as an uncoated aluminium-faced, aluminium-cored composite panel comprising the following layers:

Layer 1: 0.6-mm uncoated aluminium facing;
Layer 2: 2.8-mm aluminium core;
Layer 3: 0.6-mm uncoated aluminium backing.

The layers were loose laid on each other and stacked up without adhesive to form the 50-mm height suitable for testing.

Note: As per Clause 1.4 of AS 1530.1:1994, to allow testing on a faced or laminated product, the individual layers were tested separately: on the uncoated aluminium facing (CSIRO Test No. C11707); and on the aluminium core (CSIRO Test No. C11714).

Nominal total mass of aluminium composite panel: 4.5 kg/m²
Colour: silver (mill finish)

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:

CSIRO Test No:	C11707	C11714
Layer:	uncoated aluminium facing	aluminium core
Mean furnace thermocouple temperature rise (°C)	8.8	3.4
Mean specimen centre thermocouple temperature rise (°C)	10.6	5.4
Mean specimen surface thermocouple temperature rise (°C)	9.2	3.6
Mean duration of sustained flaming (s)	0	0
Mean mass loss (%)	0.3	0.3

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.

DATES OF TEST: 13 May 2016; 6 June 2016

Issued on the 11th day of July 2016 without alterations or additions. This certificate supersedes Certificate of Test No. 11707 issued on 30 June 2016.

Henerson Alarde
Testing Officer

Brett Roddy
Team Leader, Fire Testing and Assessments
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Certificate of Test

Quote No.: NE7377

REPORT No.: FNE11459C

AS/NZS 1530.3:1999 SIMULTANEOUS DETERMINATION OF IGNITABILITY, FLAME PROPAGATION, HEAT RELEASE AND SMOKE RELEASE

TRADE NAME: Vitracore G2
SPONSOR: Fairview Architectural Pty Limited
18-20 Donald Street
LITHGOW NSW 2790
AUSTRALIA

DESCRIPTION OF SAMPLE:

The sponsor described the tested specimen as an aluminium composite sandwich decorative panel comprised of the following layers:

Layer 1: 0.7-mm thick aluminium face finished with 30- μ m thick surface finish;
Layer 2: 0.1-mm thick adhesive film;
Layer 3: 0.3-mm thick corrugated profiled aluminium core, expanded to 2.6-mm;
Layer 4: 0.1-mm thick adhesive film;
Layer 5: 0.5-mm thick aluminium face finished with 10- μ m thick surface finish.

The layers were adhered together using an adhesive film glue at an application rate of 96 g/m².

Nominal total thickness: 4 mm

Nominal total mass: 3.7 kg/m² (measured); 4.564 kg/m² (specified by sponsor)

Colour: silver (exposed face coating)

TEST PROCEDURE:

Six samples were tested in accordance with Australian Standard 1530, Method for fire tests on building components and structures, Part 3: Simultaneous determination of ignitability, flame propagation, heat release and smoke release, 1999. For the test, each sample was clamped to the specimen holder in four places.

RESULTS:

The following means and standard errors were obtained:

Parameter	Mean	Standard Error
Ignition Time (min)	N/A	N/A
Flame Spread Time (s)	N/A	N/A
Heat Release Integral (kJ/m ²)	N/A	N/A
Smoke Release (log ₁₀ D)	-2.075	0.147

For regulatory purposes these figures correspond to the following indices:

Ignitability Index	Spread of Flame Index	Heat Evolved Index	Smoke Developed Index
(0-20)	(0-10)	(0-10)	(0-10)
0	0	0	1

The results 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.

DATE OF TEST: 12 August 2015

Issued on the 31st day of October 2015 without alterations or additions. This certificate supersedes Report No. FNE11459B issued on 19 October 2015.

Henerson Alford
Testing Officer

Brett Roddy
Team Leader, Fire Testing and Assessments

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