DELTA PANELS PTY LTD

FIRE ASSESSMENT REPORT

DeltaCool-MW and DeltaTrim-MW in accordance with AS 5637.1:2015

Report number: 252674
Revision: R1.0
Issued date: 28 November 2025 Expiry date: 30 November 2030

JENSEN HUGHES

jensenhughes.com/pacific

Quality management

Revision	Date	Revision Description		
R1.0	Issue: 28 Nov 2025	Initial issue		
	Expiry: 30 Nov 2030	**Prepared**	**Reviewed**	**Authorised**
		Alim Rasel	Omar Saad	Omar Saad

Jensen Hughes Fire Testing Pty Ltd
ABN 81 050 241 524
Formerly Warringtonfire Australia Pty Ltd[1]

[1] *Warringtonfire Australia Pty Ltd was acquired by Jensen Hughes in December 2023. Jensen Hughes Fire Testing Pty Ltd is not affiliated, associated, authorised, or endorsed by Warringtonfire Australia Pty Ltd, Warringtonfire Testing and Certification Limited or its "Warringtonfire" or "Certifire" brands.*

Executive summary

This report documents the findings of the assessment undertaken to determine the fire hazard properties of DeltaCool-MW and DeltaTrim-MW in accordance with AS ISO 9705:2003 (R2016) and AS 5637.1:2015.

DeltaCool-MW and DeltaTrim-MW are insulation panels comprised of two steel skin bonded to a non-combustible mineral wool core. These panels are to be used as internal wall or ceiling lining in residential or commercial.

This report documents the findings of the assessment undertaken to determine the fire hazard properties of DeltaCool-MW and DeltaTrim-MW – in accordance with AS 1530.4:2014 and AS 5637.1:2015.

The analysis in section 5.0 of this report found that the proposed systems, together with the described variations, will achieve group number as shown in Table 1 – in accordance with AS ISO 9705:2003 (R2016) and AS 5637.1:2015.

Table 1 Overview of variations and assessment outcome

Specimen	Thickness	Profile	Group number	SMOGRA$_{RC}$ (in $m^2/s^2 \times 1000$)
DeltaCool-MW	+ 75 mm + 100 mm	+ Smooth + Ribbed + MicroRibbed + 5V + Single V	1	< 100
Delta Trim-MW	100 mm	Ribbed		
Notes- + The panels must be fixed as tested in RTF252619 R1.0. + The panels are assessed as group number 1-S in accordance with C/VM2 – Verification Method: Framework for Fire Safety Design.				

Table of contents

1.0 Introduction

This report documents the findings of the assessment undertaken to determine the fire hazard properties of DeltaCool-MW and DeltaTrim-MW in accordance with AS ISO 9705:2003[2] and AS 5637.1:2015[3].

This report may be used as evidence of suitability in accordance with the requirements of the relevant National Construction Code (NCC) to support the use of the material, product, form of construction or design as given within the scope of this assessment report. It also references test evidence for meeting deemed-to-satisfy (DTS) provisions of the NCC that apply to the assessed systems.

This assessment was carried out at the request of Delta Panels Pty Ltd. The sponsor details are included in Table 2.

Table 2 Sponsor details

Sponsor	Address
Delta Panels Pty Ltd	731 Boundary Road Richlands QLD 4077 Australia

2.0 Framework for the assessment

2.1 Assessment approach

An assessment is a professional opinion about the expected performance of a component or element of structure subjected to a fire test.

No specific framework, methodology, standard or guidance documents exists in Australia for undertaking these assessments. We have therefore followed the 'Guide to undertaking technical assessments of the fire performance of construction products based on fire test evidence' prepared by the Passive Fire Protection Forum (PFPF) in the UK in 2021[4].

This guide provides a framework for undertaking assessments in the absence of specific fire test results. Some areas where assessments may be offered are:

- Where a modification is made to a construction which has already been tested
- The interpolation or extrapolation of results of a series of fire resistance tests, or utilisation of a series of fire test results to evaluate a range of variables in a construction design or a product
- Where, for various reasons – eg size or configuration – it is not possible to subject a construction or a product to a fire test.

Assessments can vary from relatively simple judgements on small changes to a product or construction through to detailed and often complex engineering assessments of large or sophisticated constructions.

This assessment uses established empirical methods and our experience of fire testing similar products to extend the scope of application by determining the limits for the design and performance based on the

[2] Standards Australia, 2003, Fire tests - Full-scale room test for surface products, AS ISO 9705:2003, Standards Australia, NSW.
[3] Standards Australia, 2015, Determination of fire hazard properties – Wall and ceiling linings, AS 5637.1:2015, Standards Australia, NSW.
[4] Passive Fire Protection Forum (PFPF), 2021, Guide to undertaking technical assessments of the fire performance of construction products based on fire test evidence, Passive Fire Protection Forum (PFPF), UK.

tested constructions and performances obtained. The assessment is an evaluation of the potential fire hazard properties of the elements in accordance with AS 5637.1:2015.

This assessment has been written in accordance with the general principles outlined in EN 15725:2023[5] for extended application on the fire performance of construction products and building elements: Principle of EXAP standards and EXAP reports.

This assessment has been written using appropriate test evidence generated at accredited laboratories to the relevant test standard. The supporting test evidence has been deemed appropriate to support the manufacturer's stated design.

2.2 Compliance with the National Construction Code

This assessment report has been prepared to meet the evidence of suitability requirements of the NCC 2022[6] under A5G3(1)(d). It references test evidence for meeting deemed-to-satisfy (DTS) provisions of the NCC under A5G6 for fire hazard properties that apply to the assessed systems.

This assessment report may also be used to demonstrate compliance with the requirements for evidence of suitability under the relevant sections of previous versions of the NCC.

2.3 Declaration

The 'Guide to undertaking technical assessments of the fire performance of construction products based on fire test evidence' prepared by the PFPF in the UK requires a declaration from the client. By accepting our fee proposal on 10 September 2025 Delta Panels Pty Ltd confirmed that:

- To their knowledge, the variations to the component or element of structure, which is the subject of this assessment, have not been subjected to a fire test to the standard against which this assessment is being made.
- They agree to withdraw this assessment from circulation if the component or element of structure is the subject of a fire test by a test authority in accordance with the standard against which this assessment is being made and the results are not in agreement with this assessment.
- They are not aware of any information that could adversely affect the conclusions of this assessment and – if they subsequently become aware of any such information – they agree to ask the assessing authority to withdraw the assessment.

[5] European Committee for Standardization, 2023, Extended application on the fire performance of construction products and building elements: Principle of EXAP standards and EXAP reports, EN 15725:2023, European Committee for Standardization, Brussels, Belgium.

[6] National Construction Code Volumes One and Two - Building Code of Australia 2022, Australian Building Codes Board, Australia.

3.0 Requirements and limitations of this assessment

- The scope of this report is limited to an assessment of the variations to the tested systems described in section 4.3.
- This report details the methods of construction, test conditions and assessed results in accordance with AS ISO 9705:2003 (R2016) and AS 5637.1:2015.
- This assessment applies to assessed products used as internal wall and ceiling lining.
- This report relies on test evidence and applies only to the specific specimens tested. It does not verify ongoing compliance or the performance of future production batches.
- This assessment report has been prepared based on the fire hazard performance and condition of the products/systems at the time they were tested. Any deterioration of fire hazard performance due to external factors including but not limited to passage of time and exposure to elements – is not considered in this report.
- Jensen Hughes has provided this report on the fire performance of building elements in a controlled laboratory setting, strictly within the parameters allowed by the test standards and building regulations. The outcome of this report are intended to assist in verifying the suitability of the product or system for practical use in specific applications.
- This report is only valid for the assessed systems and must not be used for any other purpose. Any changes with respect to size, construction details, loads, stresses, edge or end conditions – other than those identified in this report – may invalidate the findings of this assessment. If there are changes to the system, a reassessment will need to be done by an Accredited Testing Laboratory (ATL) that is accredited to the same nominated standards of this report.
- This report has been prepared using information provided by others. Jensen Hughes has not verified the accuracy and/or completeness of that information and will not be responsible for any errors or omissions that may have been incorporated into this report as a result.
- This assessment is based on the proposed systems being constructed under comprehensive quality control practices and following appropriate industry regulations and Australian Standards on quality of materials, design of structures, guidance on workmanship and expert handling, placing and finishing of the products on site. These variables are beyond the control and consideration of this report.

4.0 Description of the specimen and variations

4.1 Description of assessed system

This report assessed DeltaCool-MW and DeltaTrim-MW are insulation panels which are steel skin cladded mineral wool panel. A 100 mm thick DeltaCool-MW panel was tested in accordance with AS ISO 9705:2003 (R2016). Based on the test the proposed range of DeltaCool-MW and DeltaTrim-MW panels are proposed to be assessed.

4.2 Referenced test data

The assessment of the variation to the tested system and the determination of the performance are based on the results of the fire test documented in the reports summarised in Table 3. Further details of the tested system are included in Appendix C.

Table 3 Referenced test data

Report number	Test sponsor	Test date	Testing authority
RTF252619 R1.0	Delta Panels Pty Ltd	22 October 2025	Jensen Hughes

4.3 Variations to the tested system

The tested systems and variations to those tested system – together with the referenced standard fire tests – are described in Table 4.

Table 4 Variations to tested system

Item	Reference test	Description	Variations
Thickness	RTF252619 R1.0	100 mm thick DeltaCool smooth insulated panels was tested	Its is proposed to assess 75 mm thick DeltaCool-MW panel.
Steel skin profile			The following steel skin profile are proposed to be assessed: + Ribbed + MicroRibbed + 5V + Single V
DeltaTrim-MW			100 mm thick Delta Trim-MW panel is proposed to be assessed.

4.4 Test and assessment standard

AS ISO 9705:2003 (R2016) stipulates full scale room burn test procedure for surface products.

AS 5637.1:2015 sets out procedures for the assessment of internal wall and ceiling linings according to their tendency to ignite, release heat, cause flashover, release smoke and contribute to fire growth.

5.0 Schedule of component

Table 5 describes the tested system and lists the schedule of components. These were provided by the test sponsor and surveyed by Jensen Hughes.

All measurements were done by Jensen Hughes – unless indicated otherwise.

Detailed drawings of the test specimen are provided in Appendix B.

Table 5 Schedule of components

Item	Description	
Lining		
1.	Product name	DeltaCool™ 100 mm thick smooth panel – Mineral wool core
	Material	Nominated by the supplier: the tested panels consisted of a 99 mm thick mineral wool core sandwiched between two 0.65 mm thick roll-formed painted steel skins. The panels were joined along the vertical joint, where one edge has a tongue, while the other edge has a groove. The tongue edge locks into the groove edge of the next panel.
	Supplier	Delta Panel
	Measured size	2400 mm tall × 1219 mm (overall)/1200 mm (effective face) wide × 100 mm thick
	Mass measurements	Panel mass per unit length: 26.4 kg/m Core volumetric density: 106 kg/m^3
	Batch	80015
	Colour	Steel skin – white painted (outer face) Core - khaki
	Installation	The wall panels were slotted into 100 mm wide channels (item 2) that were fixed to the floor. The wall panels were joined via the 9 mm long tongue and 10 mm deep groove edges except for the corner joints which were mitre joined via 45° tapered faces. The ceiling panels were then slotted into the grooves – 60 mm deep × 100 mm high - at the top of the wall panels. The panels closest to the doorway were capped using 100 mm channels (item 2) while all the internal corners were capped using 50 mm equal angles (item 3). All the tongue and groove joints were sealed on the exposed side using FR sealant (item 4) and 4 mm rivets (item 5) fixed at 300 mm centres.
Capping		
2.	Item name	100 x 40 x 1.2 BMT steel painted channel
	Dimensions	2400 mm long × 108 mm wide × 41 mm flanges with a total thickness of 1.3 mm (overall)/1.2 BMT
	Material	Painted steel
	Supplier	Delta Panel
	Batch	Unknown
	Installation	Used to cap the end of the panels (item 1). Also used as base channel for the wall panels.
3.	Item name	40 x 40 x 1.2 BMT steel painted equal angle
	Dimensions	2400/3600 mm long × 41 mm × 41 mm with a total thickness of 1.3 mm (overall)/1.2 BMT
	Material	Painted steel
	Supplier	Delta Panel

	Batch	Unknown
	Installation	Used to cap the internal corners of the panels (item 1).
Sealant		
4.	Item name	FR sealant
	Product name	Selleys FlameFlex – grey
	Manufacturer	Selleys
	Batch	317F W250146
	Density	1470 kg/m^3
	Installation	Used between the panel (item 1) joints and the interface between the panels and the capping (item 2 and 3).
Fixings		
5.	Product name	Ø4 mm stainless steel rivet
	Supplier	Delta Panel
	Batch	4138-1604
	Installation	Used to secure the tongue and groove joints, the 50 mm equal angle (item 3) to the panels and the 100 mm channels (item 2) to the panels.
6.	Product name	45 mm fine thread plasterboard screw
	Supplier	Bunnings
	Batch	Unknown
	Installation	Used to secure the 100 mm channels (item 2) to the room floor.

6.0 Assessment – DeltaCool-MW and DeltaTrim-MW

6.1 Description of variation / background

A 100 mm thick DeltaCool-MW panel was tested in accordance with AS ISO 9705:2003 (R2016). Based on the test the following variations are proposed to be assessed.

- 75 mm thick DeltaCool-MW panel
- DeltaCool-MW panel profiles: Ribbed, MicroRibbed, 5V and Single V
- 100 mm thick Delta Trim-MW panel

6.2 Methodology

The method of assessment used is summarised in Table 6.

Table 6 Method of assessment

Assessment method	
Level of complexity	Basic assessment
NCC procedure for determining fire performance	Fire hazard properties in accordance with S7C4(2)
Type of assessment	Qualitative and comparative, Qualitive, comparative

6.3 Tested system

In test RTF252619 R1.0, the specimen consisted of DeltaCool smooth insulated panels with a mineral wool core, supplied by Delta Panel. Each panel measured 2400 mm high × 1219 mm overall width (1200 mm effective face) × 100 mm thick, with a 99 mm mineral wool core sandwiched between two 0.65 mm painted steel skins. The panels featured tongue-and-groove vertical joints for interlocking, sealed with FR sealant and secured using 4 mm stainless steel rivets at 300 mm centres. This specimen achieved group number 1 and recorded $SMOGRA_{RC}$ (in $m^2/s^2 \times 1000$) of 1.5.

6.4 Variation in thickness

It is proposed to assess a 75 mm thick DeltaCool panel. As discussed above, a 100 mm thick DeltaCool panel was previously tested under report RTF252619 R1.0. During the test, the fire remained localised around the burner. Under a 100 kW exposure, the total heat release rate (HRR) was close to the burner output, and the same was observed when the burner exposure was increased to 300 kW. This indicates minimum contribution to the heat release rate from the tested specimen. Reducing the panel thickness to 75 mm is expected to lower the overall fuel load within the room. This reduction should decrease the potential heat release rate and deliver an equal or improved group number performance.

Based on the above observations and considering the safety margin demonstrated in the test, it is concluded that the proposed 75 mm thick DeltaCool panel is capable of achieving group number 1 in accordance with AS 5637.1:2015.

6.5 Variation in profile

In test RTF252619 R1.0, the tested specimen consisted of smooth profile of the steel skin. It is proposed to assess Ribbed, MicroRibbed, 5V and Single V profiles. The variation in steel skin profiles is not expected to

influence the reaction to fire performance of the specimen. Steel is inherently non-combustible and does not contribute to the fuel load or heat release rate during fire exposure in a negative way. Profile changes are for aesthetic purposes and do not alter the thermal or combustion characteristics of the system. Consequently, regardless of the profile, the steel skin continues to act as a barrier, ensuring that the mineral wool remains shielded and that the overall system exhibits limited contribution to fire growth. Based on the above, the proposed steel skin profiles are positively assessed.

6.6 Delta Trim-MW

It is proposed to assess DeltaTrim panel based on the tested DeltaCool panel. The Delta Trim panel remains identical to tested Delta Trim except for the variation in the steel skin profile. The impact of steel skin profile variation was discussed in section 6.5 and concluded to not impact the reaction to fire performance. Based on the above, the proposed Delta Trim panel is positively assessed.

6.7 Assessment outcome

This assessment demonstrates that the tested specimen with proposed variation is capable of achieving group number classification as listed in Table 7 in accordance with AS 5637.1:2015.

Table 7 Assessment outcome

Specimen	Thickness	Profile	Group number	$SMOGRA_{RC}$ (in $m^2/s^2 \times 1000$)
DeltaCool-MW	+ 75 mm + 100 mm	+ Smooth + Ribbed + MicroRibbed + 5V + Single V	1	< 100
Delta Trim-MW	100 mm	Ribbed		
Notes- + The panels must be fixed as tested in RTF252619 R1.0. + The panels are assessed as group number 1-S in accordance with C/VM2 – Verification Method: Framework for Fire Safety Design.				

7.0 Validity

Jensen Hughes does not endorse the tested or assessed products and systems in any way. The conclusions of this assessment 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 conditions.

Due to the nature of fire testing and the consequent difficulty in quantifying the uncertainty of measurement, it is not possible to provide a stated degree of accuracy. The inherent variability in test procedures, materials and methods of construction, and installation may lead to variations in performance between elements of similar construction.

This assessment is based on test data, information and experience available at the time of preparation. If contradictory evidence becomes available to the assessing authority, the assessment will be unconditionally withdrawn and the report sponsor will be notified in writing. Similarly, the assessment should be re-evaluated, if the assessed construction is subsequently tested since actual test data is deemed to take precedence.

The sponsor is responsible for formally notifying Jensen Hughes of any additional testing performed on their product/system. This obligation applies regardless of where the test was conducted, the results of the test, or whether it was initially considered part of Jensen Hughes' ongoing assessment. The primary goal of this notification is to allow Jensen Hughes to review the changes and determine whether they require re-evaluation or re-testing to determine whether the changes have affected the product's performance. It is important that the client promptly notify Jensen Hughes if any such changes are implemented.

The procedures for the conduct of tests and the assessment of test results are subject to constant review and improvement. The sponsor is therefore recommended that this report be reviewed on, or before, the stated expiry date.

This assessment represents our opinion about the performance of the proposed systems that is expected to be demonstrated when subjected to test conditions in accordance with AS 5637.1:2015, based on the evidence referred to in this report.

This assessment is provided to Delta Panels Pty Ltd for their own specific purposes. This report may be used as evidence of suitability in accordance with the requirements of the relevant National Construction Code. Building certifiers and other third parties must determine the suitability of the systems described in this report for a specific installation.

Appendix A Panel profiles

A.1 DeltaCool

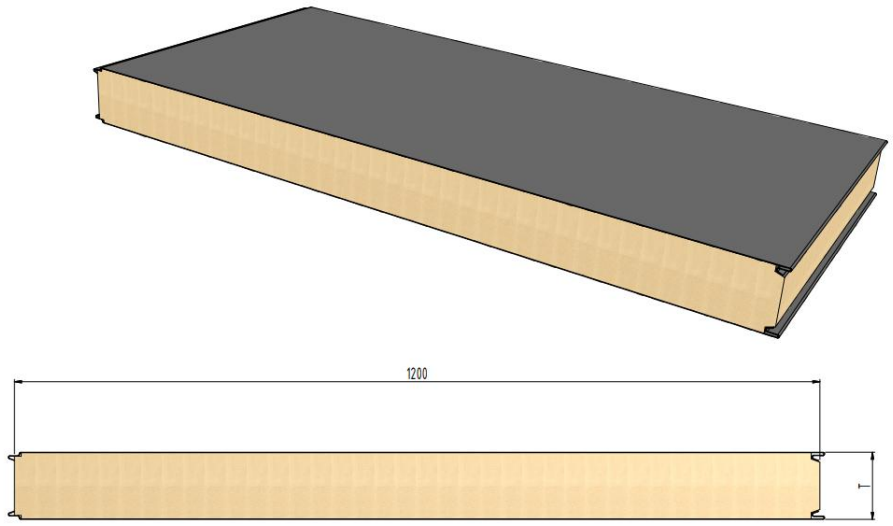

Figure 1 Smooth panel

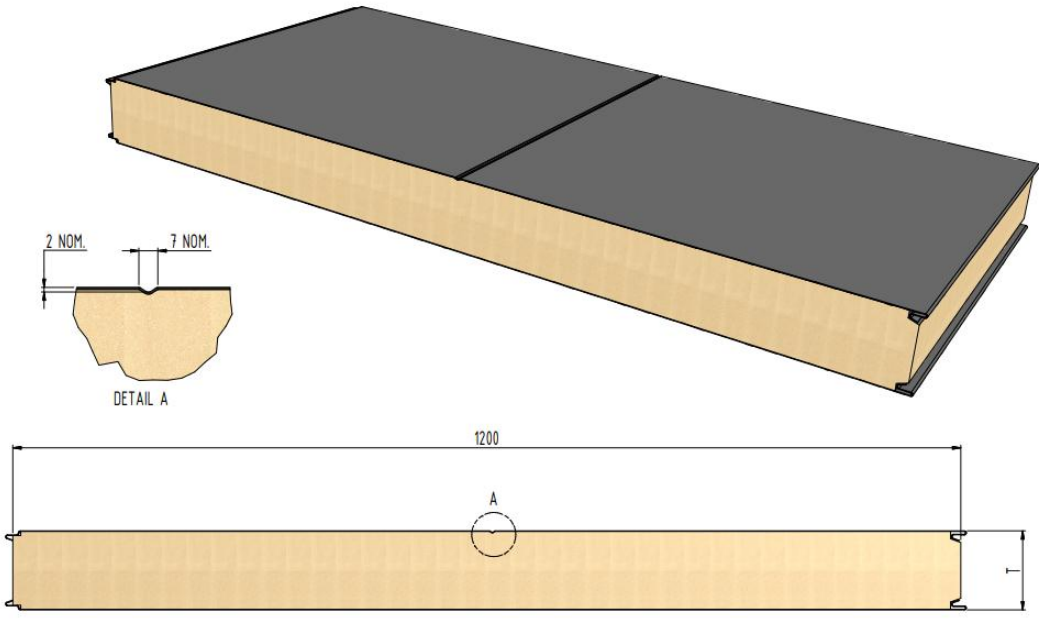

Figure 2 Single V

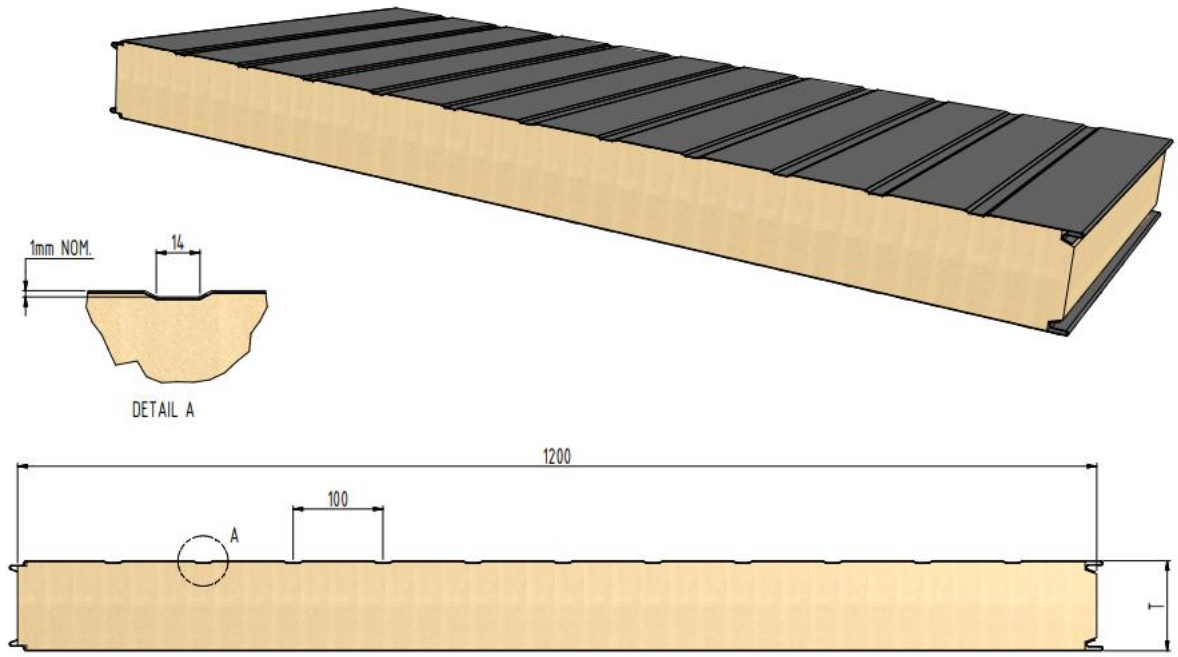

Figure 3 Ribbed

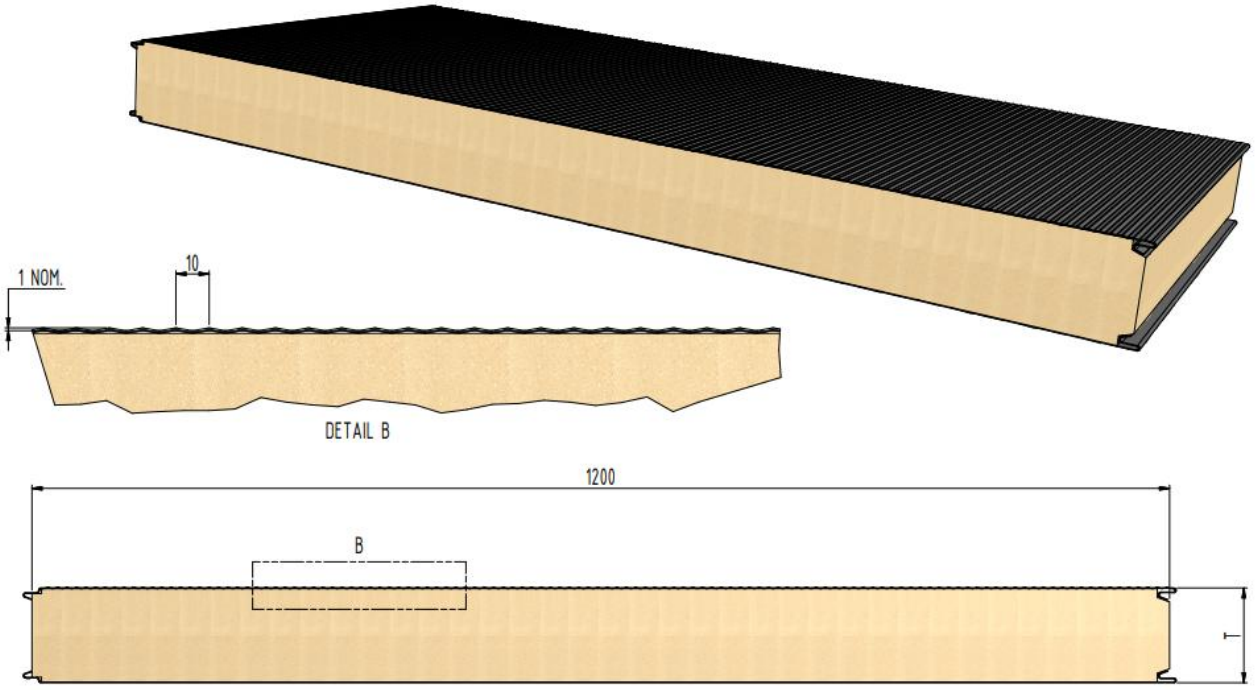

Figure 4 MicroRib

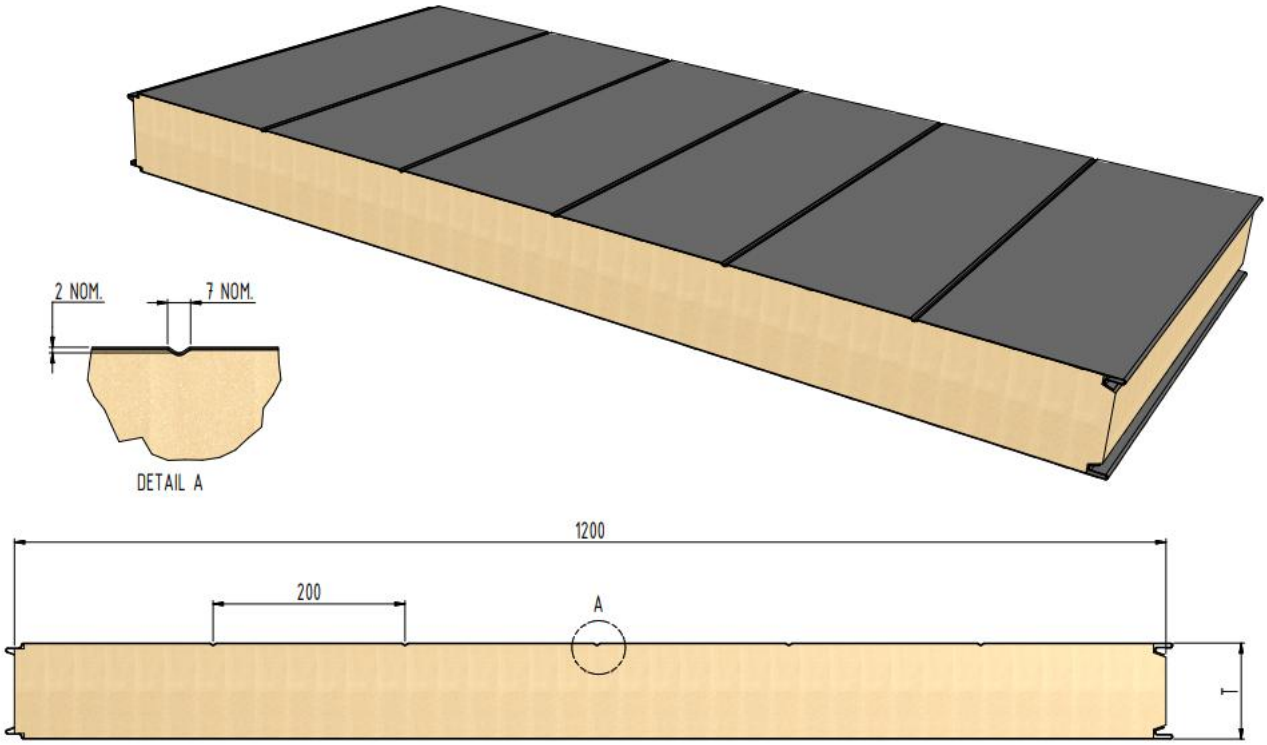

Figure 5 5V

A.2 Delta Trim

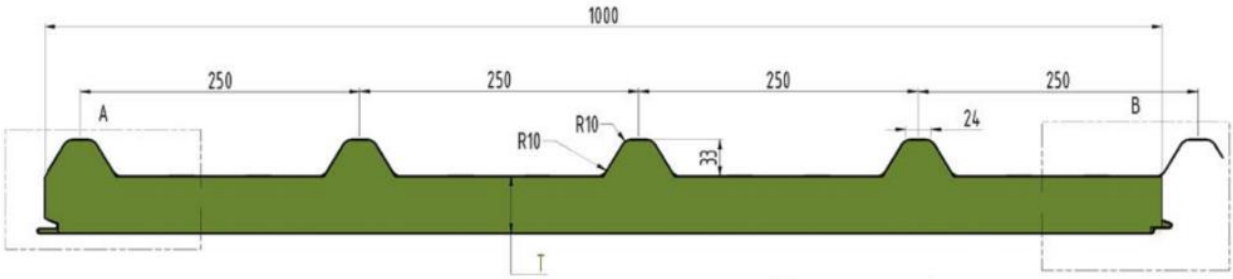

Figure 6 Delta Trim

Appendix B Tested system

The drawings of the test assembly in Figure 7 to Figure 15 were provided by the test sponsor. All measurements – unless indicated – are in millimetres.

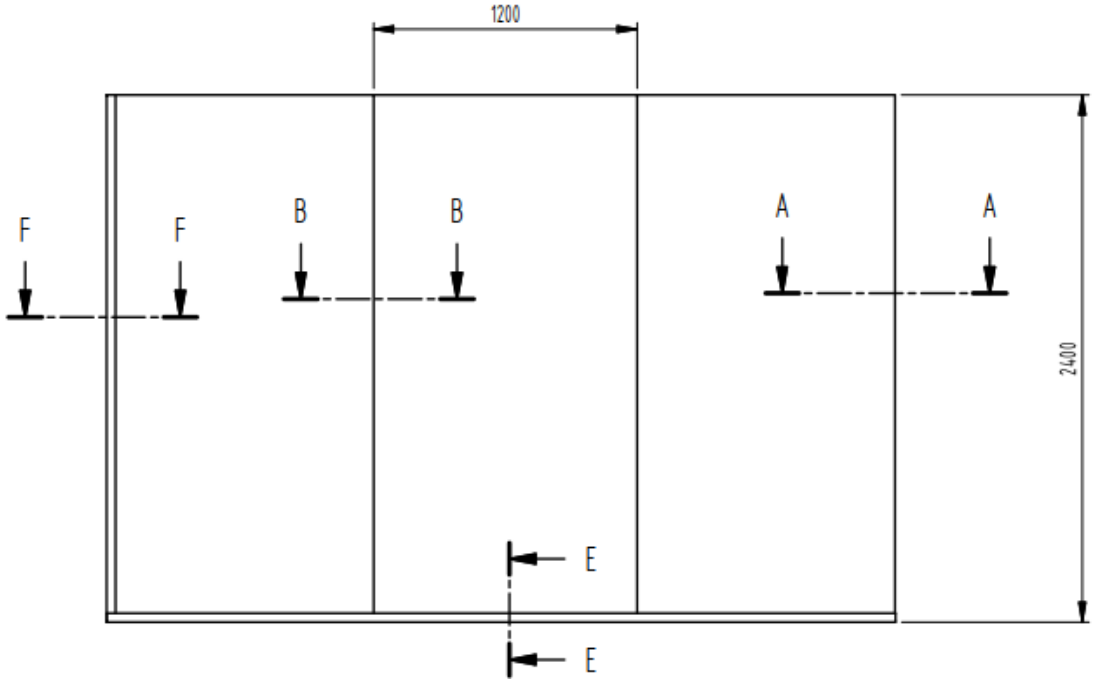

Figure 7 Left and right wall panel layout

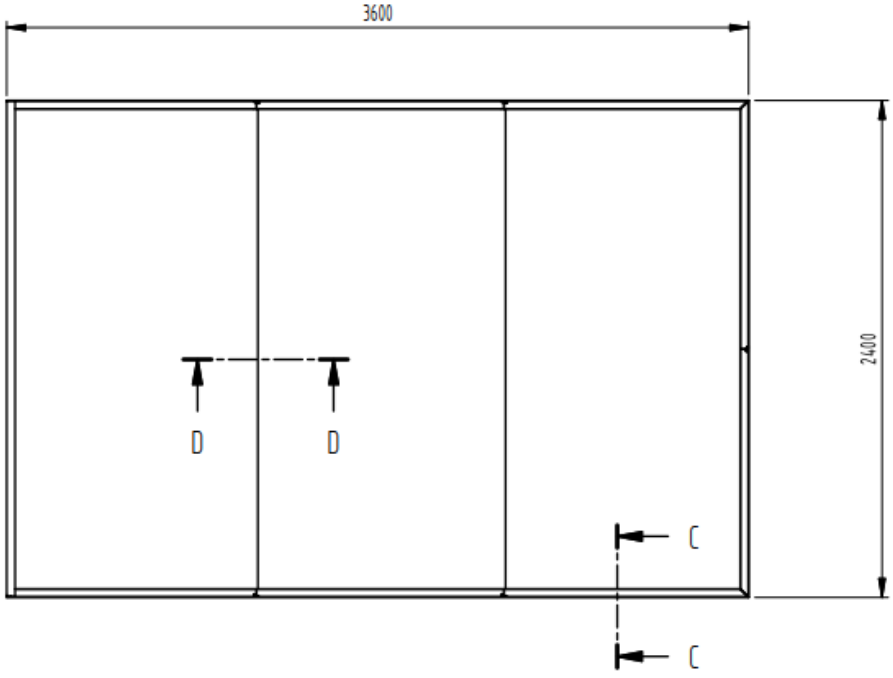

Figure 8 Ceiling panel layout

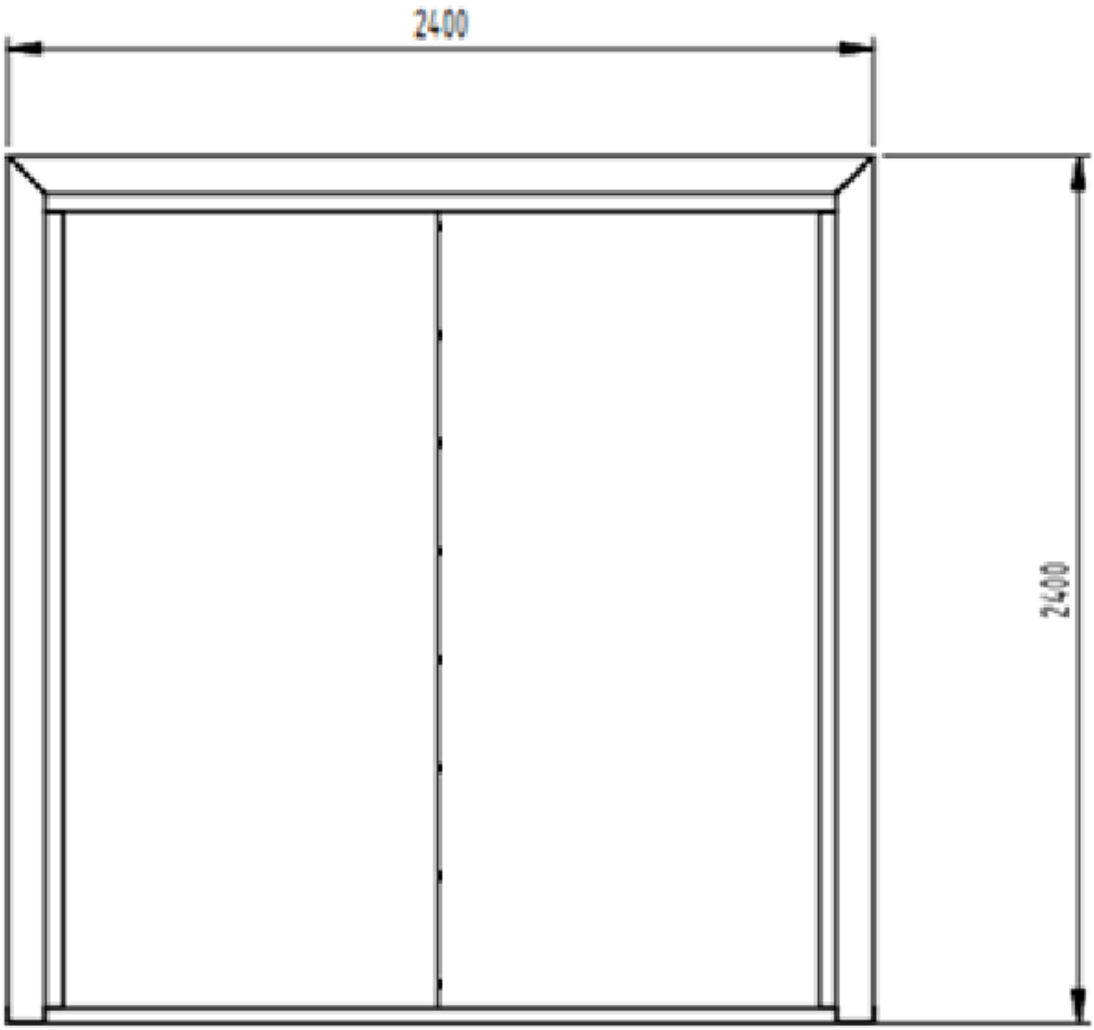

Figure 9 Back wall panel layout

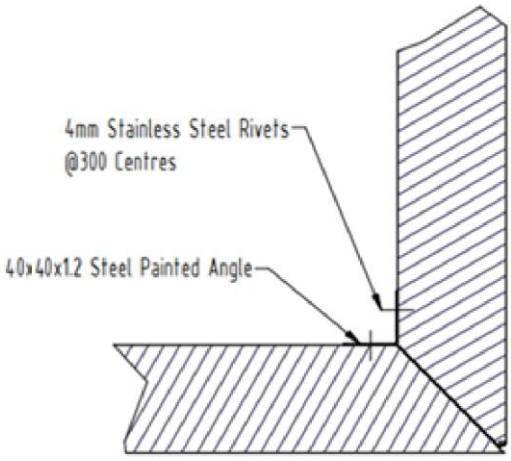

Figure 10 Section A-A – wall to wall corner detail

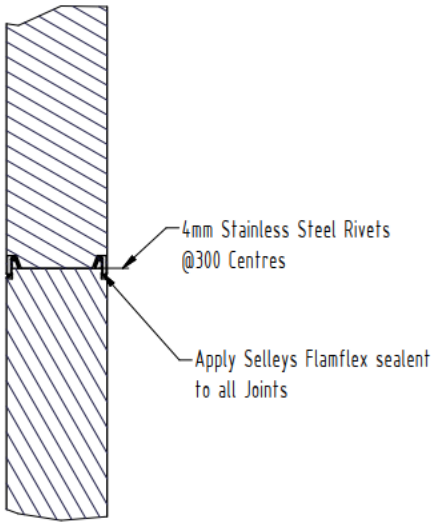

Figure 11 *Section B-B – wall to wall joint detail*

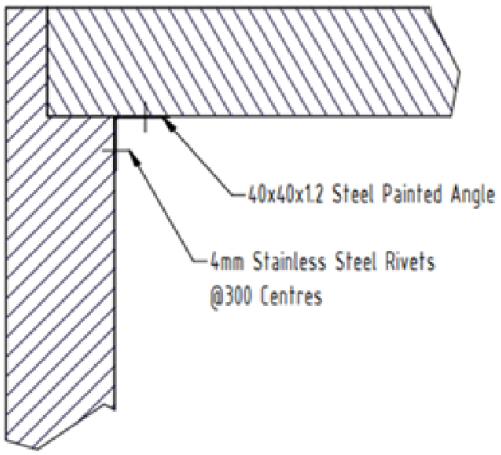

Figure 12 *Section C-C – wall to ceiling joint detail*

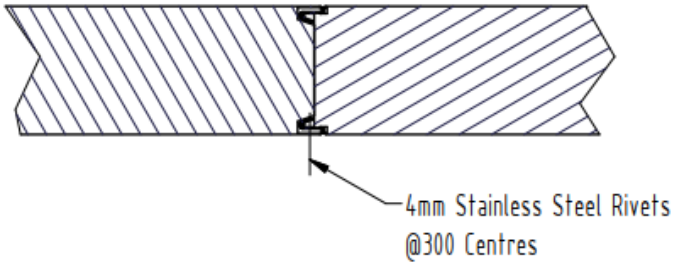

Figure 13 *Section D-D – ceiling to ceiling joint detail*

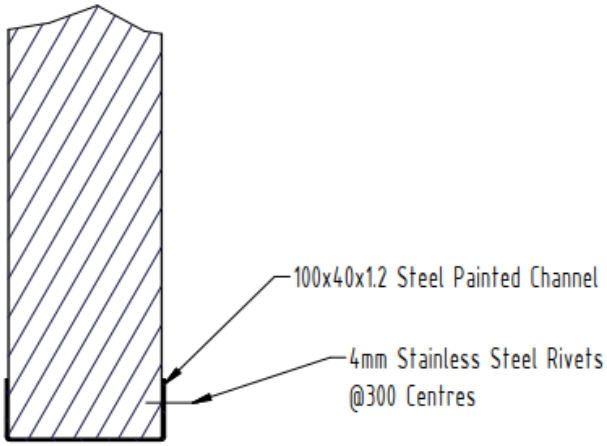

Figure 14 *Section E-E – wall to floor detail*

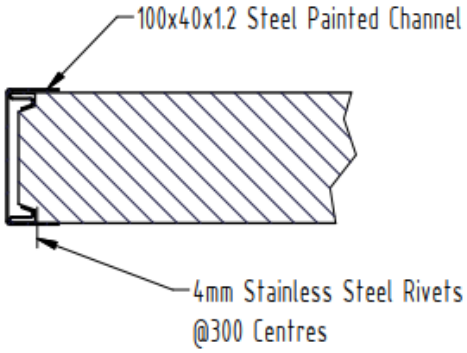

Figure 15 *Section F-F – front end of the panel detail*

Appendix C Summary of supporting test data

C.1 Test report – RTF252619 R1.0

Table 8 Information about test report

Item	Information about test report
Report sponsor	Delta Panels Pty Ltd, 731 Boundary Road, Richlands QLD 4077, Australia
Test laboratory	Jensen Hughes Fire Testing, 409-411 Hammond Road, Dandenong, Victoria 3175, Australia.
Test date	The reaction to fire test was done on 22 October 2025.
Test standards	The test was done in accordance with AS ISO 9705:2003 (R2016).
Variation to test standards	Smoke obscuration measurements were made using a helium-neon laser smoke photometer, as outlined in Annex H of ISO 9705-1:2016 in lieu of a halogen bulb and photocell apparatus as outlined under Annex E.4 of AS ISO 9705 (2016). This is not expected to prejudice the test outcome.
General description of tested specimen	The tested panels consisted of a 99 mm thick mineral wool core sandwiched between two 0.65 mm thick roll-formed painted steel skins. The panels were joined along the vertical joint, where one edge has a tongue, while the other edge has a groove. The tongue edge locks into the groove edge of the next panel.
Instrumentation	The test report states that the instrumentation was in accordance with AS ISO 9705:2003 (R2016).

The test specimen achieved the following results – see Table 9.

Table 9 Results summary for this test report

Criteria	Results
Group number	1
$SMOGRA_{RC}$ (in $m^2/s^2 \times 1000$)	1.5