Certificate of Conformity

Certification Body:

CMI CERTIFICATION
ABN: 81 663 250 815
JAS-ANZ Accreditation No. Z4450210AK
PO Box 273,
Palmwoods Qld 4555
Australia
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Certificate Holder:

Delta Panels Pty Ltd
ABN: 11 147 861 292
731 Boundary Road,
Richlands, QLD, 4077
Australia
Ph: 07 3271 2170
www.deltapanels.com.au

Certificate number: CM40365

THIS IS TO CERTIFY THAT

DeltaCool™-EPS-FR & TPC

Type and/or use of product:

Insulated wall panel.

Description of product:

DeltaCool™-EPS-FR & TPC are insulated wall panels comprising of either Expanded Polystyrene with Fire Retardant (SL Grade EPS-FR) core or Thermosetting Phenolic Composite (TPC) core between steel skins. Refer A2 for further information.

COMPLIES WITH THE FOLLOWING BCA PROVISIONS AND STATE OR TERRITORY VARIATION(S) **BCA 2022**

	Volume One		Volume Two	
Performance Requirement(s):	Not Applicable		Not Applicable	
Deemed-to-Satisfy Provision(s):	C2D11 (1)(b) & (i)	Fire Hazard Properties – Walls, Ceiling & Other Insulative Material other than sarking - Refer A3	H1D7(5)	Roof and wall cladding.
	F3D5(1)(c)	Weatherproofing – Wall cladding	H2D6(4)	Weatherproofing – Roof and wall cladding
	G5D3	Construction in bushfire prone areas – Refer A3	H6D2(1)(b)(i)	Energy Efficiency – Contributes to the overall energy efficiency of the building - Refer A3
	J4D6	Energy Efficiency – Contributes to the overall energy efficiency of the building - Refer A3	H7D4	Construction in bushfire prone areas – Refer A3
State or territory variation(s):	Not Applicable		Not Applicable	

SUBJECT TO THE FOLLOWING LIMITATIONS AND CONDITIONS AND THE PRODUCT TECHNICAL DATA IN APPENDIX A AND EVALUATION STATEMENTS IN APPENDIX B

Limitations and conditions:

1. This product has not been tested to AS 1530.1-1994 and cannot be considered a non-combustible product.
2. BCA requires certain external walls, common walls or internal load bearing walls and/or ancillary elements of some Class 2 to 9 buildings to be non-combustible. In the absence of site-specific performance solution, this product or system is not suitable for use in these applications where a non-combustible product is required. Note, this product can be used as internal and external walls in class 1 & 10 buildings.

Building classification/s:

Class 1,2,3,4,5,6,7,8,9 & 10

Richard Donarski – CMI

Don Grehan – Unrestricted Building Certifier

Date of issue: 18/12/2023

Date of expiry: 18/12/2026

3. The metal wall panels will be limited by wind load shown in the manufacturer's specifications on the span certified for the product type, thickness, and configuration as per the product's certified span tables.
4. The structural support members are designed and engineered separately as per project requirements by building designers and engineers.
5. Compliance with H1D7(5) is limited to the DeltaCool™-EPS-FR & TPC panels being used in a wall configuration only, not as a roof.
6. The Group numbers have been determined in accordance with testing conducted to AS ISO 9705 and assessment against AS5637.1: 2015 as Group 1, refer A3.
7. When used as internal wall lining, this product as a Group 1 fire rated product, must comply with the group number specified in Table S7C4 of Specification 7 of the BCA 2022, Volume 1. Refer A3.
8. Compliance with BAL should be reviewed with the respective BAL requirements of AS 3959 by Building Designers & Authorities having jurisdiction as each building may require specific design or construction requirements outside of the specific wall material.
9. Bushfire Compliance is limited to the 100mm panel thickness or greater for the TPC core, and the 50-150mm thick EPS-FR Core, refer A3.
10. This certificate is limited to the details within this certificate including the above compliance elements, product description, purpose or use.
11. Other than the items and information listed, the remainder of the information contained in the product's literature is outside the scope of this certification.
12. The use of the certified product/system is subject to these Limitations and Conditions and must be read in conjunction with the Scope of Certification below.

Scope of certification: The CodeMark Scheme is a building product certification scheme. The rules of the Scheme are available at the ABCB website www.abcb.gov.au. This Certificate of Conformity is to confirm that the relevant requirements of the Building Code of Australia (BCA) as claimed against have been met. The responsibility for the product performance and its fitness for the intended use remain with the Certificate Holder. The certification is not transferrable to a manufacturer not listed on Appendix A of this certificate.

Only criteria as identified within this Certificate of Conformity can be used for CodeMark certification claims. Where other claims are made in a client's Installation Manual, Website or other documents that are outside the criteria on this Certificate of Conformity, such criteria cannot be used or claimed to meet the requirements of this CodeMark certification.

The NCC defines a Performance Solution as one that complies with the Performance Requirements by means other than a Deemed-to-Satisfy Solution. A Building Solution that relies on a CodeMark Certificate of Conformity that certifies a product against the Performance Requirements cannot be considered as Deemed-to-Satisfy Solution.

This Certificate of Conformity may only relate to a part of a Performance Solution. In these circumstances other evidence of suitability is needed to demonstrate that the relevant Performance Requirements have been met. The relevant provisions of the Governing Requirements in Part A of the NCC will also need to be satisfied.

This Certificate of Conformity is issued based on the evidence of compliance as detailed herein. Any deviation from the specifications contained in this Certificate of Conformity is outside of this document's scope and the installation of the certified product will not be covered by this Certificate of Conformity.

Disclaimer: The Scheme Owner, Scheme Administrator and Scheme Accreditation Body do not make any representations, warranties or guarantees, and accept no legal liability whatsoever arising from or connected to, the accuracy, reliability, currency or completeness of any material contained within this certificate; and the Scheme Owner, Scheme Administrator and Scheme Accreditation Body disclaim to the extent permitted by law, all liability (including negligence) for claims of losses, expenses, damages and costs arising as a result of the use of the product(s) referred to in this certificate.

When using the CodeMark logo in relation to or on the product/system, the Certificate Holder makes a declaration of compliance with the Scope of Certification and confirms that the product is identical to the product certified herein. In issuing this Certificate of Conformity, CertMark International has relied on the experience and expertise of external bodies (laboratories and technical experts).

Nothing in this document should be construed as a warranty or guarantee by CMI, and the only applicable warranties will be those provided by the Certificate Holder.

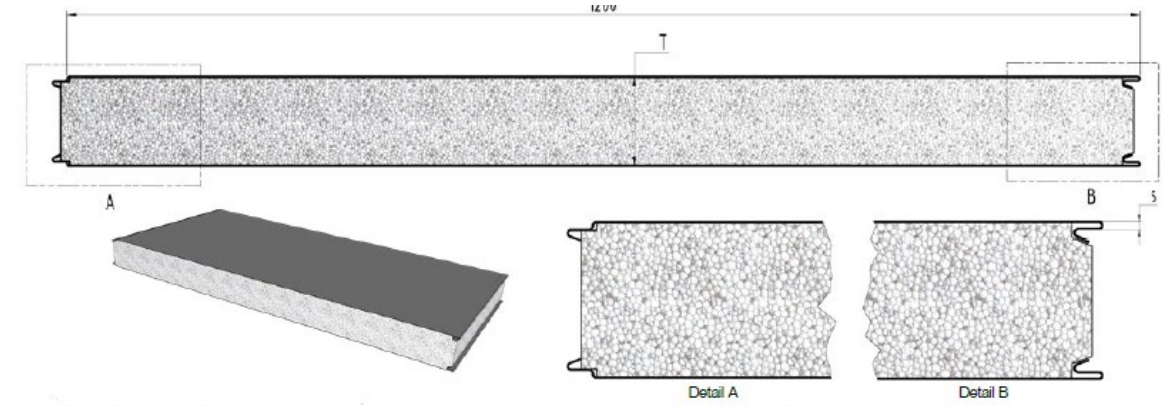
APPENDIX A – PRODUCT TECHNICAL DATA

A1 Type and intended use of product

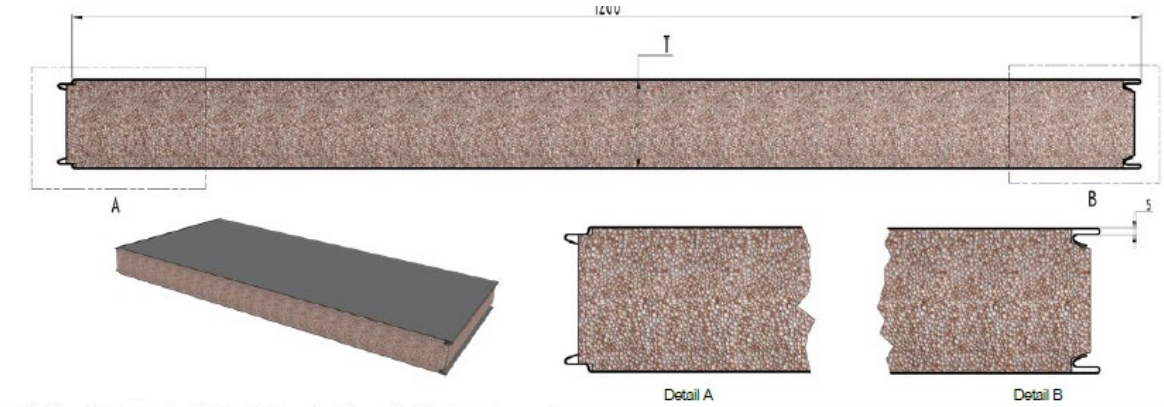
As per page 1.

A2 Description of product

Core 1	EPS-FR (Expanded Polystyrene SL Grade with fire retardant)
Sheet Width	1200mm
Thickness	50mm, 75mm, 100mm, 150mm, 200mm
Length	Cut to a Length Min of 1800mm +/-5mm
External Material	0.40mm / 0.60mm / G300 Z275
Internal Material	0.40mm / 0.60mm / G300 Z275
Specification sheet	DeltaCool-EPS-FR V23-10-12



Core 2	Thermosetting Phenolic Composite (TPC)
Sheet Width	1200mm
Thickness	50mm, 75mm, 100mm, 150mm, 200mm
Length	Cut to a Length Min of 1800mm +/-5mm
External Material	0.40mm / 0.60mm / G300 Z275
Internal Material	0.40mm / 0.60mm / G300 Z275
Specification sheet	DeltaCool-TPC V23-10-12



A3 Product specification

Structure

In order to maintain compliance with structure for DeltaCool-EPS-FR & DeltaCool-TPC, the following Span Tables must be referred to which have been certified by a licensed Professional Engineer in accordance with AS/NZS 1170.0, AS/NZS 1170.1, AS/NZS 1170.2, AS 4040, AS 4055 & AS 1562.1.

Delta Cool EPS Panel Span Tables (mm)					
	N1				
	Freestanding	1 Wall	2 Walls	3 Walls	Enclosed
50mm	5300	5300	5300	4200	4700
75mm	7100	7100	6500	4500	5300
100mm	7800	7800	7000	4850	5500
150mm	9600	9600	7600	5600	7500
200mm	10500	10500	8300	6600	8200
	N2				
	Freestanding	1 Wall	2 Walls	3 Walls	Enclosed
50mm	5000	5000	4300	3450	4200
75mm	6500	6500	5300	3850	4700
100mm	7000	7000	5500	3950	4850
150mm	8600	8600	6300	4500	6100
200mm	9800	9800	7200	4800	7100
	N3				
	Freestanding	1 Wall	2 Walls	3 Walls	Enclosed
50mm	4400	4400	3800	2750	3300
75mm	5400	5400	4200	2900	3600
100mm	5600	5600	4400	3050	3900
150mm	6900	6900	5000	3300	4900
200mm	7800	7800	5400	3700	5300
	N4				
	Freestanding	1 Wall	2 Walls	3 Walls	Enclosed
50mm	3600	3600	2500	2050	2400
75mm	4400	4400	2650	2150	2600
100mm	4600	4600	2800	2250	2700
150mm	5600	5600	3400	2450	3300
200mm	6800	6800	3600	2650	3500

Delta Cool TPC Panel Span Tables (mm)						
	N1					
	Freestanding	1 Wall	2 Walls	3 Walls	Enclosed	Walls
50mm	5400	5300	5300	4300	5200	3700
75mm	7100	7100	5400	5100	6300	4600
100mm	7800	7800	7000	5650	7000	5500
150mm	9600	9600	7600	6400	8000	8400
200mm	10500	10500	8300	6900	8400	10500
	N2					
	Freestanding	1 Wall	2 Walls	3 Walls	Enclosed	Walls
50mm	5000	5000	4600	3500	4300	3700
75mm	7100	7100	5400	4100	5000	4600
100mm	8000	8100	5800	4300	5400	5500
150mm	9600	9600	6700	4900	6200	8400
200mm	10500	10500	8300	6000	7100	10500
	N3					
	Freestanding	1 Wall	2 Walls	3 Walls	Enclosed	Walls
50mm	4600	4600	3400	2750	3200	3700
75mm	5400	5300	3900	2900	3600	4200
100mm	6600	5700	4100	3050	3800	4500
150mm	8700	6600	4600	3400	4300	5100
200mm	10500	8700	5700	3900	5200	6600
	N4					
	Freestanding	1 Wall	2 Walls	3 Walls	Enclosed	Walls
50mm	3600	3500	2700	2200	2500	2900
75mm	5100	4000	3200	2200	2800	3200
100mm	5400	4200	3000	2300	2800	3300
150mm	6300	4900	3400	2500	3300	3800
200mm	7800	6000	3400	2500	3300	4200

Source: *Summermore Pty Ltd, Certificate No. 23-28904-T1, dated Certificate No. 23-28904-T2; Dated 12/09/2023 & Summermore Pty Ltd, Certificate No. 23-28904-T2, dated Certificate No. 23-28904-T2; Dated 12/10/2023.*

Weatherproofing

The DeltaCool EPS-FR & TPC cores have both been found to meet the requirements of AS 1562.1 when installed in line with the Span tables listed above. As such, compliance with BCA 2022 Volume 1 Clause F3D5(1)(c) and BCA Volume 2 Clause H1D7(5) & H2D6(4) is met for Weatherproofing provisions.

Source*: Summermore Pty Ltd, Certificate No. 23-28904-T1, dated Certificate No. 23-28904-T2; Dated 12/09/2023 & Summermore Pty Ltd, Certificate No. 23-28904-T2, dated Certificate No. 23-28904-T2; Dated 12/10/2023.*

Fire Hazard Properties

AS/NZS 1530.3-1999 Indices

TPC Core

Ignitability Index	0	Range 0-20
Spread of Flame Index	0	Range 0-10
Heat Evolved Index	0	Range 0-10
Smoke Index	1	Range 0-10

EPS-FR Core

Ignitability Index	0	Range 0-20
Spread of Flame Index	0	Range 0-10
Heat Evolved Index	0	Range 0-10
Smoke Index	2	Range 0-10

Source: AWTA Product Testing Report No. 18-006076 dated 25/5/2023 & AWTA Product Testing Report No. 23-000591 dated 20/2/2023.

Material Group Numbers

Group Numbers have been determined in accordance with testing conducted to ISO 9705 and assessment against AS 5637.1:2015. Construction requirements for Group 1 for the EPS-FR & TPC cores are shown below.

EPS-FR Core Group 1:

Panel thickness up to 250mm

- Insulating sandwich panel, nominal thickness 250mm or less.
- Panel core of Class SL (to AS 1366.3) expanded EPS.
- Clad both sides with “Colorbond” steel, thickness 0.4mm or greater.
- Panel to panel junctions require steel angles fixed to the steel skins at not more than 300mm centre, with steel rivets. Ceiling panel to panels joins require steel (stitch) rivet connecting the metal skins at not more than 1200mm centres.

  Smoke Growth Rate Index $SMOGRA_{RC} < 100\ m^2/s^2$.

TPC Core Group 1:

Panel thickness 100mm only.

- The interlocking joints to be filled with a fire-resistant sealant secured with 4.8 x 12mm 304 grade stainless steel rivets at 1200mm centres.
- The internal mitred corners in the walls and the stepped wall to ceiling junctions to be filled with a fire-resistant sealant and covered with 40 x 40 x 1.2mm pre-painted steel angle secured with 4.8 x 12mm 304 grade stainless steel rivets at 200mm centres.
- Panel comprising 0.6mm steel skins with a 100mm thick Phenolic composite (TPC) core.

  Smoke Growth Rate Index $SMOGRA_{RC} < 100\ m^2/s^2$.

Source: BRANZ, Report FAR2489 – Issue 3 dated 23/02/2023 & BRANZ, Report FI6323-01-2 dated 25/05/2023.

Construction in bushfire prone areas

The EPS-FR & TPC cores have been assessed against AS 3959.1 (EPS-FR core) & tested against AS 1530.8.1 (TPC Core) with the results shown below.

EPS-FR BAL 29 for Panel thicknesses up to 150mm (assessed against AS 3959.1):

It is considered that in that the wall and roof sheet is deemed non-combustible and roof/wall junctions are sealed with a non-combustible (steel sheet) flashing limiting gaps to not greater than 3 mm the Delta Panels Pty Ltd wall and roof systems have the following BAL-Ratings for compliance with AS 3959-2009:

- DeltaCool wall system - **BAL-29**.

TPC Core for Panel thickness from 100-250mm (tested to AS 1530.8.1):

This report details the methods of construction, the test conditions and the results obtained when the specific element of construction described herein was tested in accordance with the test method of AS 1530.8.1:

- For the purpose of building regulations in Australia, the test specimen achieved a Bushfire Attack Level **(BAL) of AA29.**

Source: CSIRO, Report FSZ 2373 dated 9/06/2023 & BRANZ, Report FAR 2489 Issue 3 dated 23/02/2021.

Energy Efficiency

DeltaCool™-EPS-FR walls (insulated sandwich panels)

Thickness (mm)	Material R $_{50/90}$ values (m².K/W)			Total R values (m².K/W)		
	Winter (15°C)	Rating (23°C)	Summer (30°C)	Winter (15°C)	Rating (23°C)	Summer (30°C)
50	1.20	1.17	1.14	1.36	1.33	1.30
75	1.78	1.73	1.69	1.94	1.89	1.85
100	2.35	2.28	2.23	2.51	2.44	2.39
150	3.44	3.35	3.27	3.60	3.51	3.43
200	4.49	4.37	4.27	4.65	4.53	4.43

Declared R of insulated sandwich panels - DeltaCool™-TPC walls

Nominal Thickness (mm)	Insul Effective Thickness (mm)	Material R $_{50/90}$ values (m².K/W)	Total R values (m².K/W)			
		Winter (15°C)	Rating (23°C)	Summer (30°C)	Winter (15°C)	Summer (30°C)
50	49	1.25	1.20	1.20	1.40	1.35
75	74	1.9	1.85	1.80	2.05	1.95
100	99	2.55	2.45	2.40	2.70	2.55
150	149	3.85	3.75	3.65	4.00	3.80
200	199	5.15	5.00	4.90	5.30	5.05

Notes:

- The requirements of J3D6(1) of Volume 1 of the BCA and Part 13.2.5 (5) of the ABCB Housing Provisions do not apply to walls constructed using insulated sandwich panels.

Source: James Fricker Report No. i548c dated 2/06/2023. & James Fricker Report No. i548c dated 19/09/2023.

A4 Manufacturer and manufacturing plant(s)

Delta Panels Pty Ltd
731 Boundary Road, Richlands, QLD 4077, Australia

A5 Installation requirements

Installation of the DeltaCool wall panels must be in accordance with the Handling & Installation Manual - Walls V23-11-20.

A6 Other relevant technical data

Nil

APPENDIX B – EVALUATION STATEMENTS

B1 Evaluation methods

1. Fire Safety Provisions – A5G3(1)(d)&(e). Reports from Accredited Testing Laboratories and a professional engineer.
2. Structural Provisions – A5G3(1)(e). Reports from a professional engineer.
3. Thermal Provisions – A5G3(1)(d)&(e). Reports from Accredited Testing Laboratories and a professional engineer.
4. Weatherproofing Provisions – A5G3(1)(e). Reports a professional engineer.

B2 Reports

1. Summermore Pty Ltd, Certificate No. 23-28904-T1, Generic Compliance Certificate for building design or specification, dated 12/09/2023. This report provides compliance for the AS 1562.1, F3D5, H1D7 & H2D6 based on the span tables nominated within.
2. Summermore Pty Ltd, Certificate No. 23-28904-T2, Generic Compliance Certificate for building design or specification, dated 12/10/2023 This report provides compliance for the AS 1562.1, F3D5, H1D7 & H2D6 based on the span tables nominated within.
3. BRANZ, IANZ Accreditation No.37, Report Number FI6323-01-2, AS ISO 9705 (R2016) & ISO 9705:1993 FIRE TEST OF PHENOLIC COMPOSITE, INSULATED BUILDING PANEL, dated 25/05/2023. This report contributes compliance to C2D11 for the TPC Core.
4. BRANZ, IANZ Accreditation No.37, Report Number FAR 2849, ASSESSMENT OF THE PERFORMANCE OF METAL CLAD EXPANDED POLYSTYRENE SANDWICH PANELS IN THE AS ISO 9705:2003 (R2016) ROOM FIRE TEST, dated 23/2/2021. This report contributes compliance to C2D11 for the EPS-FR Core.
5. AWTA, NATA Accreditation No.1356, Report Number 18-006076, Testing to AS 1530.3 1999, dated 25/5/2023, This report contributes compliance to C2D11 for the EPS-FR Core.
6. AWTA, NATA Accreditation No.1356, Report Number 23-000591, Testing to AS 1530.3 1999, dated 20/2/2023, This report contributes compliance to C2D11 for the TPC Core.
7. BRANZ, IANZ Accreditation No.37, Report Number DI17595-01, THERMAL TESTING OF EPS-FR 50MM, dated 5/4/2023. This report contributes compliance towards J4D6 & H6D2 for the EPS-FR Core.
8. BRANZ, IANZ Accreditation No.37, Report Number DI17595-02, THERMAL TESTING OF EPS-FR 200MM, dated 5/5/2023. This report contributes compliance towards J4D6 & H6D2 for the EPS-FR Core.
9. BRANZ, IANZ Accreditation No.37, Report Number DI17801-01, THERMAL TESTING OF TPC 50MM. dated 27/6/2023. This report contributes compliance towards J4D6 & H6D2 for the TPC Core.
10. BRANZ, IANZ Accreditation No.37, Report Number DI17801-02, THERMAL TESTING OF TPC 200MM. dated 7/7/2023. This report contributes compliance towards J4D6 & H6D2 for the TPC Core.
11. James M Fricker Pty Ltd, Report i518c, Calculation No. 548w03, DECLARED R OF FLAT SANDWICH PANELS THERMAL PERFORMANCE CALCULATIONS TO AS/NZS 4859 Parts 1 & 2:2018, dated 2/6/2023. This report contributes to the thermal compliance of J4D6 & H6D2.
12. James M Fricker Pty Ltd, Report i518c, Calculation No. 548w03b, DECLARED R OF FLAT SANDWICH PANELS THERMAL PERFORMANCE CALCULATIONS TO AS/NZS 4859 Parts 1 & 2:2018, dated 2/6/2023. This report contributes to the thermal compliance of J4D6 & H6D2.
13. CSIRO Pty Ltd, NATA Accreditation No.165, Report Number FSZ 2373, Bushfire test on an external wall system, dated 09/06/2023 provides compliance for G5D3 & H7D4 for the TPC Core.
14. BRANZ, Report No. FC10893-001, ASSESSMENT OF DELTA PANELS PTY LTD DELTACOOL WALL AND DELTATRIM AND DELTAORB ROOFING SYSTEMS FOR COMPLIANCE WITH BAL-29 AND BAL-40 RATINGS OF AS 3959-2009, dated 24/10/2018 provides compliance for G5D3 & H7D4 for the EPS-FR Core.

The Certificate Holder has chosen not to make the above evidence of compliance publicly available, due to the documents being considered commercial in confidence.