

DeltaCool-TPC is an Insulated Wall Panel System, comprising of two pre-painted, roll-formed steel skins, bonded to a Thermosetting Phenolic Composite core. Both skins have a roll-formed tongue and groove edge. Skins are coated with an anti-bacterial paint that inhibits the growth of bacteria.

CodeMark

CodeMark Australia Certificate CM40365 certifies that DeltaCool-TPC complies with the stated performance provisions of the NCC2022. Please refer to the certificate as displayed on our web page for the exact details of the compliance.



Profiles Available

- Smooth
- Ribbed
- MicroRibbed
- 5V
- SingleV

Recommendations

- Cold Stores
- Commercial Kitchens
- Food Processing Areas
- Portable Buildings
- Home Extensions
- Spray Booths
- Wineries
- Commercial Buildings
- Residential Buildings
- Growing Rooms

Bushfire Attack Level - BAL 29

DeltaCool-TPC achieved a Bushfire Attack Level (BAL) of AA29, as per CSIRO report Number FSZ2373 issued 9 June 2023, when tested in accordance with the test method AS 1530.8.1

Fire Test Certificate - AS ISO 9705

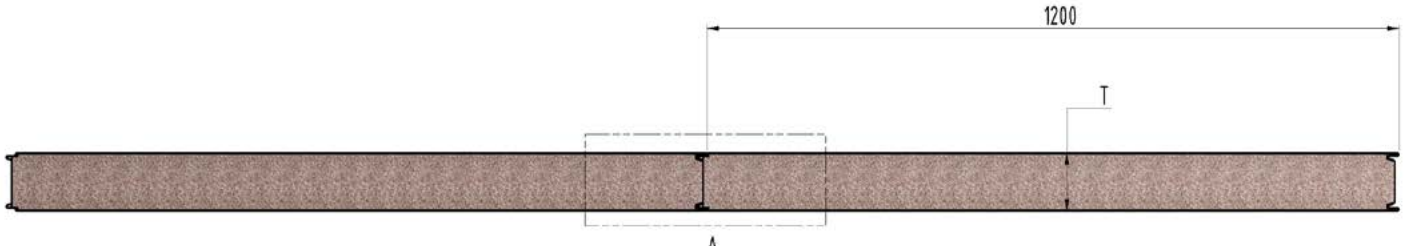
Group 1 Classification in accordance with NCC Volume One Specification BCA2022 C2D11 & Specification 7, Fire Hazard Properties, Clause S7C4 determined in accordance with AS 5637.1:2015 as per BRANZ test report Fl6323-01-2 issued 23rd February 2021

Early Fire Hazard Properties AS 1530.3:1999

AWTA Test Report 23-000591 20-02-2023

Index	Test Range	External Top Skin
Ignitability	0-20	0
Spread of Flame	0-10	0
Heat Evolved	0-10	0
Smoke Developed	0-10	1

Steel Skin Details	Top Skin	0.40mm / 0.60mm / G300 Z275	
	Bottom Skin	0.40mm / 0.60mm / G300 Z275	
Max. Skin Temperature	78°C Dry Heat		
Core Material Details	Thermosetting Phenolic Composite (TPC)		
Thermal Conductivity AS 1366.2/ASTM C 518	Average 0.039 W/mK @23°C		
Core Density	36kgs/m ³ +/- 4 kgs		
Panel Weight (kgs/m²) based on 0.6mm steel skins	50mm Panel	11.70	
	75mm Panel	12.06	
	100mm Panel	12.43	
	150mm Panel	13.15	
	200mm Panel	13.84	
External Wall R Value (m².K/W) AS/NZS 4859 Parts 1 & 2:2018	Thickness	Winter (15°C)	Summer (23°C)
	50mm Panel	1.46	1.41
	75mm Panel	2.11	2.01
	100mm Panel	2.76	2.61
	150mm Panel	4.06	3.86
200mm Panel	5.41	5.16	
Factory Mutual	FM Approval Class 4880, 4881 & 4882		
Certificate of Conformity	CodeMark Australia Certificate - CM40365		
Sheet Coverage (mm)	1200mm		
Length (mm)	Cut to length. Minimum of 1800mm +/-5mm		
Thickness (mm)	50, 75, 100, 150, 200		
Flatness Standards	0.40mm 0.60mm	Surface deformations can be apparent to the naked eye when observed in certain lighting conditions	
Patent Application No.	AU2023266264		



Detail A

* Figures for 1.2m & 4.8m high panels are extrapolated. It is acceptable to extrapolate Bracing Capacity heights between 1.2m & 4.8m. For heights outside of this dimension range, Diaphragm Analysis is required to establish Bracing Capacity.

Shear Load Transference - Shear load is transferred by rivets into the floor / ground surface or the perpendicular walls, ceiling & roof at a rate of 1.21 kN per 4.0 mm diameter rivet.

Fixing rivets at 200mm centres complies with the 20-minute flame barrier requirements and delivers 14.5 kN of shear capacity transfer per panel (6 on each side) horizontally, and 12.1 kN per metre in vertical joints. Limited by the ability of the panel to transfer the shear.

If a higher level is required, it is necessary to stitch the joints, with each 4.0mm diameter rivet providing 1.21 kN in shear in the slip joint.

0.60mm DeltaCool-TPC Bracing Capacity

Panel Height (m)	2.4	1.2*	4.8*
Kn/m	5.0	10.0	2.5
Bracing Units (BU)	100	200	50

Delta Cool TPC Panel Span Tables (mm)

		Freestanding	1 Wall	2 Walls	3 Walls	Enclosed	Walls
N1	50mm	5400	5300	5300	4300	5200	3700
	75mm	7100	7100	5400	5100	6300	4600
	100mm	7800	7500	7000	5600	7000	5500
	150mm	9600	9600	7600	6400	8000	8400
	200mm	10500	10500	8300	6900	8400	10500
N2	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	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	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

The above table lists the ultimate wind load pressure for strength design and the pressure corresponding to a Span/150 single span deflection ratio for 0.60mm G300 steel skins bonded to a Thermosetting Phenolic Composite. The designer shall determine if Span/150 deflection ratio is appropriate for intended use. Loads for a more stringent deflection ratio can be determined by linearly proportioning the loads provided. Differential thermal effects are not incorporated in the loads provided.

As at the stated Version Date all of the information contained in this document is correct. Please check on our WebPage to ensure that you're referencing the current version.

