



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.

Profiles Available

- Smooth
- Ribbed
- 5V
- SatinLine
- Mesa
- SingleV

Recommendations

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

Fire Test Certificate - AS ISO 9705

Group 1 Classification in accordance with NCC Volume One Specification BCA2005 Cl.10 clause 4 determined in accordance with AS 5637.1:2015 as per BRANZ Test Report FI 6323-TT - issued 18th May 2018

Early Fire Hazard Properties AS 1530.3 1999

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	
Thermal Conductivity	0.0295 W/mK @22.5°C	
Core Density	32/34 kgs/m ³	
0.6mm Skin Weight (kg/m²)	50mm Panel	11.5
	75mm Panel	12.5
	100mm Panel	13.2
	125mm Panel	14.2
	150mm Panel	15.2
	175mm Panel	16.2
	200mm Panel	17.2
R Value @ 22.5°C	50mm Panel	1.7
	75mm Panel	2.5
	100mm Panel	3.3
	125mm Panel	4.2
	150mm Panel	5.0
	200mm Panel	6.8
Sheet Coverage	1200mm	
Length (mm)	Cut to length. Min. of 1800mm	
Thickness (mm)	35, 50, 75, 100, 125, 150, 175, 200	
Flatness Standards	0.40mm 0.60mm	Surface deformations can be apparent to the naked eye when observed in certain lighting conditions

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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

0.6mm DeltaCool-TPC Ultimate Load Capacity / Deflection Load Table (kPa)

		Panel Thickness (mm)						
		50	75	100	125	150	175	200
Span (m)	1.0							
	1.5							
	2.0	4.32 / 1.84						
	2.5	2.75 / 1.32	4.14 / 2.44	5.53 / 1.43				
	3.0	1.90 / 0.97	2.87 / 1.86	3.83 / 2.12	4.40 / 3.49	5.60 / 4.33		
	3.5	1.39 / 0.74	2.10 / 1.45	2.81 / 2.12	3.42 / 2.81	4.11 / 3.51	4.80 / 4.22	5.49 / 4.93
	4.0	1.06 / 0.56	1.60 / 1.15	2.14 / 1.71	2.61 / 2.29	3.14 / 2.89	3.67 / 3.50	4.20 / 4.11
	4.5	0.83 / 0.61	1.26 / 0.92	1.69 / 1.39	2.06 / 1.89	2.47 / 2.41	2.89 / 2.90	3.31 / 3.32
	5.0	0.67 / 0.35	1.01 / 0.74	1.36 / 1.14	1.66 / 1.57	2.00 / 2.01	2.34 / 2.68	2.67 / 2.68
	5.5	0.54 / 0.27	0.83 / 0.61	1.12 / 0.95	1.37 / 1.32	1.65 / 1.66	1.93 / 1.94	2.21 / 2.22
	6.0	0.45 / 0.22	0.69 / 0.50	0.94 / 0.80	1.14 / 1.12	1.38 / 1.39	1.61 / 1.62	1.85 / 1.86
	6.5		0.59 / 0.42	0.79 / 0.67	0.97 / 0.95	1.17 / 1.18	1.37 / 1.38	1.57 / 1.58
	7.0		0.50 / 0.35	0.68 / 0.57	0.83 / 0.81	1.00 / 1.01	1.18 / 1.19	1.35 / 1.36
	7.5			0.59 / 0.30	0.72 / 0.70	0.87 / 0.88	1.02 / 1.03	1.17 / 1.18
	8.0			0.51 / 0.41	0.63 / 0.61	0.76 / 0.77	0.89 / 0.90	1.03 / 1.04
	8.5				0.55 / 0.53	0.67 / 0.68	0.79 / 0.80	0.91 / 0.92

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.



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