

MetecnoPanel®

METALCRAFT INSULATED PANELS SPECIALISES IN THE MANUFACTURE AND SUPPLY OF INSULATED PANELS.

All our products are backed by solid warranties and the range of insulated panels, supplied by us can be used in a variety of applications from industrial and commercial coolstore to Agricultural and Architectural buildings.

MetecnoPanel® is suitable for all insulated panel applications including cold stores and freezers. It is also used in developments such as supermarkets, bulk goods, fast food and retail outlets as well as commercial and industrial premises. It is ideal where superior thermal performance and FM approval for insurance purposes is required. The manufacturing process involves expanding PIR (rigid foam) between two skins of Colorbond® steel, forming an exceptionally strong and durable panel.

MetecnoPanel® uses pentane as the blowing agent which has zero ozone depleting potential. Panel thicknesses of 50, 75, 100, 150 and 200mm provide varying levels of thermal, fire and span performance to meet the most stringent design criteria. The panel's exceptional strength allows greater spans and a substantial reduction in the buildings support structure.

FM APPROVAL

MetecnoPanel® is manufactured by our sister company: Metecno in Brisbane who is the FM Approved product owner.

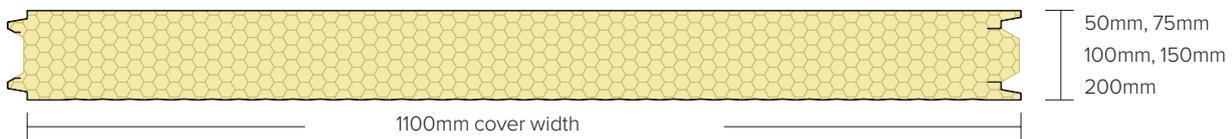
FM 4880 Approved Class 1 - Unlimited Height.

FM 4881 Approved Class 1 - Unlimited Height.



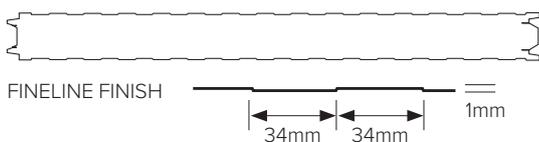
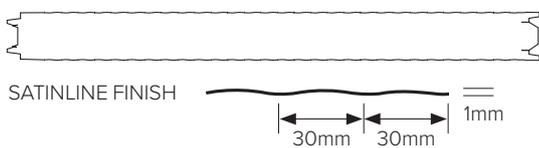
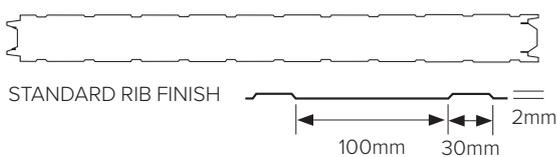
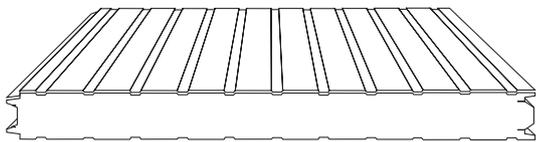
STYLE & PERFORMANCE

PANEL DIMENSIONS



INNER PROFILE OPTIONS

MetecnoPanel® is available with different inner skins.



WIDTH AND AVAILABLE LENGTHS

The MetecnoPanel® is 1100mm wide and available with different inner skins. The maximum length of the panels are restricted to 11.9m without a lap or jointing detail.

PRODUCT PROPERTIES

Core	Polyisocyanurate (PIR) foam. FM Approved. Unlimited height.
External facing	0.60mm G300, Z275 coated steel to AS 1397 formed with Micro V Rib, Satinline or Fineline inner skin.
Internal Facing	0.60mm G300S, Z275 coated steel to AS 1397 formed with Standard Rib, Satinline or Fineline inner skin finish.
Width	1100mm
Length	11.9m max without a lap or joint detail. this is due to restrictions associated with importing.
Thickness	50mm, 75mm, 100mm 150mm, 200mm

MINIMUM ORDER

Please ask Metalcraft Insulated Panels if the skin you prefer is available for your project as minimum order quantities might apply.

METECNO PANEL®

THERMAL

The below total R-values are for insulation average temperature of 15°C. Contact us for other temperatures.

Panel Thickness	50 mm	75 mm	100 mm	150 mm	200 mm
'R' (mK/W)	2.7	4.0	5.3	7.9	10.5
'U' (m ² k/W)	0.41	0.27	0.20	0.14	0.19
Mass (Kg/m ²)	12.03	13.00	13.99	15.49	17.39

ACOUSTIC

Rw value for MetecnoPanel® ranges from 25 to 27 depending on thickness.

THICKNESSES FOR CHILLERS & FREEZERS

Allow an additional 50mm thickness for walls and roofs exposed to direct sunlight.

- * Consideration should be given to insulating floor detail.
- * Values are guides only and are given for cool rooms operating under average ambient conditions.

CHILLERS / FREEZERS	
Temperature Degrees C	Panel Thickness
7.0 down to -3.0	50mm
3.0 down to -3.0	75mm
-3.0 down to -18.0	100mm
-18.0 down to -23.0	150mm
-23.0 down to -30.0	150mm

FIRE HAZARD PROPERTIES

AS 1530.3 INDICES

Ignitability Index	0
Spread of Flame Index	0
Heat Evolved Index	0
Smoke Index	1

AS/ISO 9705

BCA Group Number (Spec C1.10a)

MetecnoPanel® PIR steel skinned insulated building panels conform to the requirements of the BCA Specification C1.10a as Group 2. This has been approved by a NZ engineer who has given it a Group 2S classification for the New Zealand Building Code.

GROUP 2S NZBC

Panel up to 200mm or less with an aluminium 'wall-wall' and 'wall-ceiling' angles (1.5mm) fixed with aluminium rivets or screws is classified as Group 2S.

Panel up to 200mm or less with a steel 'wall-wall' and 'wall-ceiling' angles (0.5mm) fixed with steel rivets or screws is classified as Group 2S.

AS 2122.1-1993

Compliance to AS 1366.2-1992 Clause 10 Table 2 - Flame Propagation Characteristics Requirement:

- Median flame duration (max) 1 second
- Eighth value (max) 1.5 seconds
- Median mass retained (min) 80 %
- Eighth value (min) 75 %

Complies - Refer test report:
AWTA Product Testing7-593352-CQ

LOADSPAN TABLE

3 STEP PANEL SELECTION

- 1 Determine thermal and fire performance requirement
- 2 Determine worst case fully factored design wind load that applies to any panel (kPa) in ULS (Ultimate limit state)
- 3 Select appropriate span versus thickness for single or multi-span from tables. Note spans can be reduced at building edges by appropriate building design.

SINGLE SPAN-NON-CYCLONIC REGION A&B (WALL APPLICATIONS ONLY) PIR CORE AND 0.6MM STEEL SKINS

Single span, wind pressure acting inwards/outwards

Maximum uniformly distributed ultimate wind load (kPa) for the given span:

MULTI SPAN-NON-CYCLONIC REGION A&B (WALL APPLICATIONS ONLY) PIR CORE AND 0.6MM STEEL SKINS

Multi-span, wind pressure acting inwards/outwards

Maximum uniformly distributed ultimate wind load (kPa) for the given span:

SPAN (mm)	SINGLE SPAN Wind pressure acting inwards / outwards				
	50	75	100	150	200
1500	2.93	4.39	5.86	8.79	11.72
2700	1.63	2.44	3.25	4.88	6.51
3900	1.10	1.65	2.20	3.29	4.39
5100	0.64	0.96	1.28	1.93	2.57
6300	0.37	0.63	0.84	1.26	1.68
7500	-	0.45	0.59	0.89	1.19

SPAN (mm)	MULTI SPAN Wind pressure acting inwards / outwards				
	50	75	100	150	200
1500	2.34	3.53	4.69	7.03	9.37
2700	1.30	1.95	2.60	3.91	5.21
3900	0.90	1.35	1.80	2.70	3.61
5100	0.64	0.96	1.28	1.93	2.57
6300	0.42	0.63	0.84	1.26	1.68
7500	0.30	0.45	0.59	0.89	1.19

NOTES

- 1 Pressures specified are for wind gusts only per AS/ NZS 1170.
- 2 Deflection limit of span/150 applies, and in accordance with Serviceability Limit State criteria per AS1170 – TABLE C1.
- 3 14g tek screws (x4 off) or mushroom head bolts (x2 off) minimum per fixing point are required.
- 4 Extended span tables including cyclonic regions C&D are also available. Refer Metalcraft Insulated Panels.

BRANCHES

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DISCLAIMER

As part of Metalcraft Insulated Panels policy of continued improvement, final specifications may vary from those contained in this publication. The company reserves the right at any time and without notice to change the design, materials or features and withdraw products from the market without incurring any liability whatsoever. This publication is issued as a general guide only and should not be treated as a substitute for technical advice. Contact with your nearest Metalcraft branch is recommended to confirm current specifications and availability.



For more information on Metalcraft Insulated Panels visit:
www.metalcraftgroup.co.nz.

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