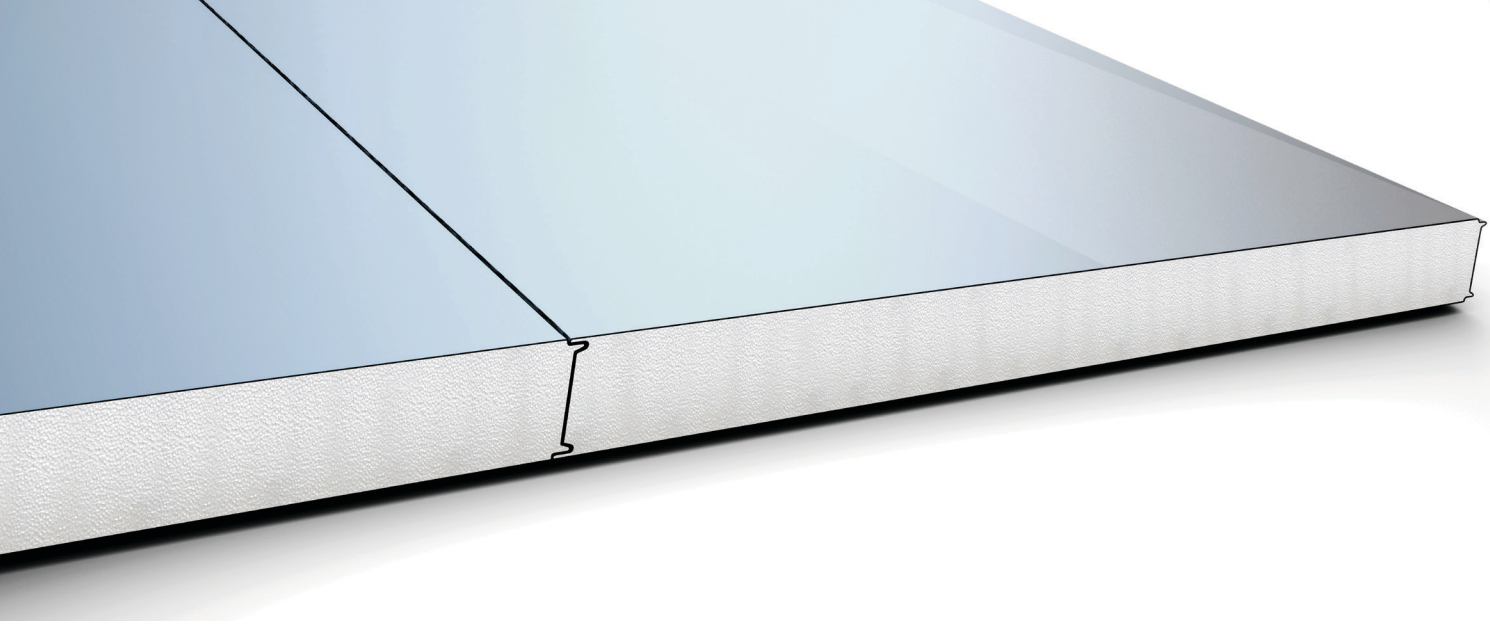
Metalcraft
Insulated Panels

THERMOPANEL

CodeMark
CERTIFIED



THERMOPANEL IS LOCALLY MADE IN NEW ZEALAND FOR LONGER LENGTHS AND QUICKER SUPPLY

THERMOPANEL IS MANUFACTURED IN NEW ZEALAND. WE BELIEVE THIS IS A GREAT ADVANTAGE AS SHEET LENGTHS CAN BE LONGER THAN LENGTHS TYPICALLY ASSOCIATED WITH IMPORTED PANEL REDUCING THE NEED OF END LAPS.

MAXIMUM MANUFACTURED SHEET LENGTH 24M.
LENGTHS ARE RESTRICTED BY TRANSPORTATION TO SITE. IF SHEET LENGTHS LONGER THAN 15M ARE REQUIRED, PLEASE CHECK WITH METALCRAFT INSULATED PANELS.

WHO WE ARE

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.

FEATURE AND BENEFITS:

ThermoPanel is a stressed skin sandwich panel, comprised of pre-painted steel skins continuously laminated over a polystyrene, EPS core treated with a flame retardant additive.

ThermoPanel is available in a range of colours with a variety of profile finishes.

ThermoPanel provides for greater strength in walls and a clean, smooth aesthetic look.

- NZ Made for longer sheet lengths and shorter lead times.
- EPS core treated with a flame retardant additive
- Thermally efficient
- A reduction of wet trades
- Efficient concealed fixing system
- Ease of cutting and trimming on site
- Minimal mess on site
- Compatibility with openings and design elements of the building
- NZ Steel - COLORSTEEL® colours for perfect colour match with flashings

CODEMARK®

ThermoPanel has been Codemark certified. Please refer to Metalcraft for specific Codemark installation requirements.

COMPLIANCE WITH NZBC

Where Metalcraft Insulated Panels are designed, installed and maintained in accordance with the conditions of CodeMark Certificate (No. GM-CM30078) the panel system will comply or contribute to compliance with the NZ Building Code.

METALCRAFT CODEMARK EXPLAINED

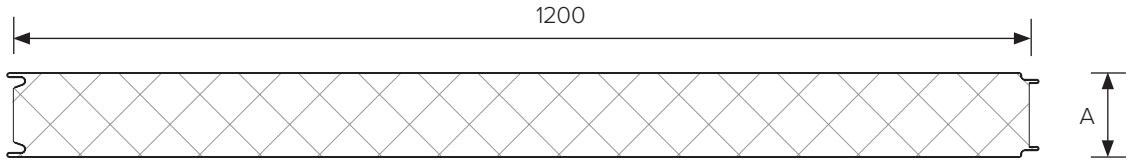
Metalcraft Insulated Panels is the certificate holder of CodeMark (GM-CM30078) for ThermoSpan and ThermoPanel Insulated EPS Panels. CodeMark is a third party certification, allowed for under the Building Act 2004. This means that under law, a Building Consent Authority must accept the specification of ThermoSpan and ThermoPanel EPS Insulated Panels (the panel and the installation details) as complying with the NZ Building Code, providing that all conditions of the certificate have been met.

Achieving CodeMark also focuses on the quality of ThermoSpan and ThermoPanel Insulated EPS Panels, and the quality and competence of the support provided by Metalcraft Insulated Panels.

This means that designers and installers can use ThermoSpan and ThermoPanel Insulated EPS Panels with confidence, providing all instructions are followed, ThermoSpan and ThermoPanel Insulated EPS Panels will result in building work complying with the NZ Building Code. CodeMark Certificate-GM-CM30078 issued by Global-Mark Pty.

STYLE & PERFORMANCE

PANEL DIMENSIONS



Dimensions, cover and sheet widths are all nominal and may vary with manufacturing and installation tolerances. Line drawings are indicative only and should not be scaled, if other dimensions are required please ask for them from Metalcraft Insulated Panels.

Panel Thickness Options = A
50, 75, 100, 125, 150, 175, 200 & 250mm

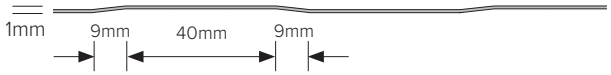
INNER PROFILE OPTIONS

ThermoPanel consists of 0.59mm steel bonded to an EPS core with a ceiling panel sheet bonded to the underside. ThermoPanel has a flame retardant additive to the EPS core and is available in a range of colour and ceiling profile finishes.

FLAT FINISH - AVAILABLE BOTH SIDES

SILKLINE FINISH - AVAILABLE 1 SIDE ONLY

MESA FINISH - AVAILABLE 1 SIDE ONLY



RIBBED FINISH - AVAILABLE BOTH SIDES

COLOURS

Aspirespan® is available in standard colours* from New Zealand Steel in COLORSTEEL® MAXAM®. Colour brochures and steel swatches are available on request.

*Excluding Ebony. This is due to heat build up on dark colours and in the worst case potential delamination of steel from the core.

PRODUCT PROPERTIES	
Core	EPS with flame retardant additive Class “S” Standard
External facing	0.59mm CP Grade Prepainted Galvanised Steel G300 Z275 consistent with AS 1397:2021. or 0.59mm COLORSTEEL® MAXAM® G300 AM150 consistent with AS 1397:2021. The correct steel is dependent on the environmental category and corrosion zone, please consult Metalcraft Insulated Panels.
Internal Facing	0.59mm CP Grade Prepainted Galvanised Steel G300 Z275 consistent with G300 AM150 consistent with AS 1397:2021. or 0.59mm COLORSTEEL® MAXAM® G300 AM150 consistent with G300 AM150 consistent with AS 1397:2021. Please consult Metalcraft Insulated Panels for corect selection for application.
Width	1200mm
Length	Manufactured in Auckland - Max length 24m Lengths are restricted by transportation to site.
Thickness	50mm, 75mm, 100mm, 125mm 150mm, 175mm, 200mm, 250mm
Flame retardant additive	Yes - Thermopanel’s EPS core has been treated with a a flame retardant additive

THERMOPANEL

THERMAL

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

Panel Thickness (mm)	50	75	100	125	150	175	200	250
Mass Kg/m²	11.30	11.60	12.00	12.30	12.70	13.0	13.30	14.00
U Value W/m²K	0.76	0.51	0.38	0.30	0.25	0.22	0.19	0.15
R Value m²K/W	1.32	1.97	2.63	3.29	3.95	4.60	5.26	6.60

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	75mm
3.0 down to -3.0	100mm
-3.0 down to -18.0	150mm
-18.0 down to -23.0	175mm
-23.0 down to -30.0	200mm

ISO 9705

ThermoPanel conforms to the requirements of the NZBC and has achieved a group 1S.

Specific installation requirements are needed and available if required, please consult Metalcraft Insulated Panels.

AS 2122.1-1993

Compliant to AS1366.3 Part 3
AWTA Test Report: 7- 561976-CO

LOADSPAN TABLE

THERMOPANEL LOADSPAN TABLE

FOR PERMISSABLE VALUE WIND PRESSURES (kPa)

Thickness (mm)	Span (mm)										
	2500	3000	3500	4000	4500	5000	6000	6500	7000	7500	800
50	1.61	1.12	0.82	0.63	0.49						
75		1.68	1.23	0.94	0.74	0.60					
100		2.24	1.64	1.26	0.99	0.80	0.56				
125		2.80	2.05	1.57	1.24	1.00	0.70	0.59			
150			2.46	1.89	1.49	1.20	0.84	0.71	0.61		
175			2.88	2.20	1.74	1.41	0.98	0.83	0.72	0.62	0.55
200				2.52	1.99	1.61	1.12	0.95	0.82	0.71	0.63
250					2.48	2.01	1.40	1.19	1.02	0.89	0.78

THERMOPANEL STRENGTH AND FIXING CAPACITIES

Metalcraft Panel Specification.
The panel strength data in this document applies to Metalcraft Panel with 0.59 mm steel skins structurally bonded to a core of "S" grade expanded polystyrene (EPS).

The steel has yield strength of 300 MPa.

Notes

1 Permissible pressure values incorporate a factor of safety of 1.8 on ultimate strength.
2 This table applies to live loads only. For dead loads (eg long term loads) the strength capacity is reduced – refer to Metalcraft in such cases.
3 Calculate Ultimate Limit State Value:
(kPa) = Permissible (kPa) Value from table x 1.8 (safety factor) x 0.9 (material factor).

METALCRAFT PANEL FIXINGS

- For Metalcraft Mushroom fixing with 10 mm threaded steel rod installed to Metalcraft details, Load Capacity perpendicular to face of the panel = 3 kN Permissible. Load Capacity parallel to and at the face of the panel = 1.0 kN Permissible.
- For 4mm (5/16") aluminium rivets attaching thin metal sections to Metalcraft panel skins, shear capacity of the connection = 0.45 kN Permissible per-rivet. For the shear capacity of a multi riveted connection, add the shear capacity of each rivet, provided the rivets considered are spaced at or more than 100 mm.
- For a 14 gauge Tek screw with 25 diameter steel washer fixed through the panel, the permissible live load fixing capacity in the Metalcraft panel part of the connection is:
- at 100 mm from the Metalcraft panel edge = 1.5 kN.
- at 50 mm from the Metalcraft panel edge = 0.6 kN.

BRANCH

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MEMBER OF ROOFING ASSOCIATION N.Z.

MRM
NZ METAL ROOFING MANUFACTURERS INC.

Metalcraft Insulated Panels are members of the Roofing Association, New Zealand and the New Zealand Metal Roofing Manufacturers Incorporated.

Metalcraft Insulated Panels

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