

ThermoPanel

## 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.

ThermoPanel is a stressed skin sandwich panel, comprised of pre-painted steel skins continuously laminated over a fire retardant Polystyrene (EPS) core. The EPS core is fire retardant.

ThermoPanel is available in a range of colours with a variety of profile finishes, providing greater strength in walls and a clean, smooth aesthetic look.

- 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

## COMPLIANCE WITH THE NEW ZEALAND BUILDING CODE

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.

## CODEMARK®

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

## METALCRAFT CODEMARK EXPLAINED

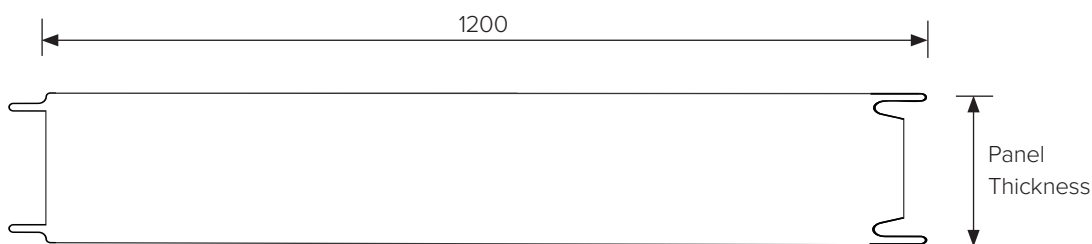
Metalcraft Insulated Panels is the certificate holder of CodeMark (GM-CM30078) for ThermoSpan and ThermoPanel Insulated EPS Panels. CodeMark is a third party certification, allowed for under the Building Act 2004. This means that under law, a Building Consent Authority must accept the specification of 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 that, 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



## INNER PROFILE OPTIONS

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

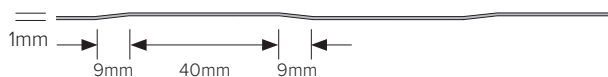
### FLAT FINISH



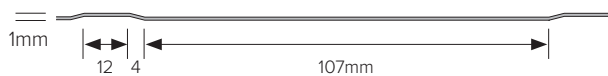
### SILKLINE FINISH



### MESA FINISH



### RIBBED FINISH



## PRODUCT PROPERTIES

Core	EPS with flame retardant additive Class S Standard
External facing	0.59mm CP Grade Prepainted Galvanised Steel or Colorsteel® Endura® or Colorsteel® Maxx® The correct steel is dependent on the environmental category and corrosion zone, please refer to Metalcraft.
Internal Facing	0.59mm CP Grade Prepainted Galvanised Steel
Width	1200mm
Length	Manufactured in Auckland so lengths are restricted by transportation to site. If longer than 15m check with Metalcraft.
Thickness	50mm, 75mm, 100mm, 125mm 150mm, 200mm, 250mm
Fire Rated	No
Fire Resistant	No
FM Approved	No

# THERMO PANEL

## THERMAL

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

Panel Thickness (mm)	50	75	100	125	150	200	250
Mass (Kg/m <sup>2</sup> )	11.30	11.60	12.00	12.30	12.70	13.30	14.00
U Value (W/m <sup>2</sup> K)	0.76	0.51	0.38	0.30	0.25	0.19	0.15
R Value (m <sup>2</sup> K/W)	1.32	1.97	2.63	3.29	3.95	5.26	6.58

## 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.

## 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.

## AS 2122.1-1993

Compliant to AS1366.3 Part 3

AWTA Test Report: 7- 561976-CO

### 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

# LOADSPAN TABLE

## THERMOPANEL LOADSPAN TABLE

FOR PERMISSABLE VALUE WIND PRESSURES (KPA)

SPAN (mm )	Permissible Uniform Pressure Values (kPa) for various panel thicknesses							
	50	75	100	125	150	175	200	250
2500	1.61							
3000	1.12	1.68	2.24	2.80				
3500	0.82	1.23	1.64	2.05	2.46	2.88		
4000	0.63	0.94	1.26	1.57	1.89	2.20	2.52	
4500	0.49	0.74	0.99	1.24	1.49	1.74	1.99	2.48
5000		0.60	0.80	1.00	1.20	1.41	1.61	2.01
6000			0.56	0.70	0.84	0.98	1.12	1.40
6500				0.59	0.71	0.83	0.95	1.19
7000					0.61	0.72	0.82	1.02
7500						0.62	0.71	0.89
8000						0.55	0.63	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 (Saf. 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.



# BRANCHES

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## AUCKLAND

139 Roscommon Road, Wiri, Auckland

T: 09 277 8844

[sales@metpanels.co.nz](mailto:sales@metpanels.co.nz)

## HAMILTON

9 Earthmover Cres, Burbush, Hamilton

07 849 3807

[sales.hamilton@metpanels.co.nz](mailto:sales.hamilton@metpanels.co.nz)

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For more information on Metalcraft Insulated Panels visit:  
[www.metalcraftgroup.co.nz](http://www.metalcraftgroup.co.nz).

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