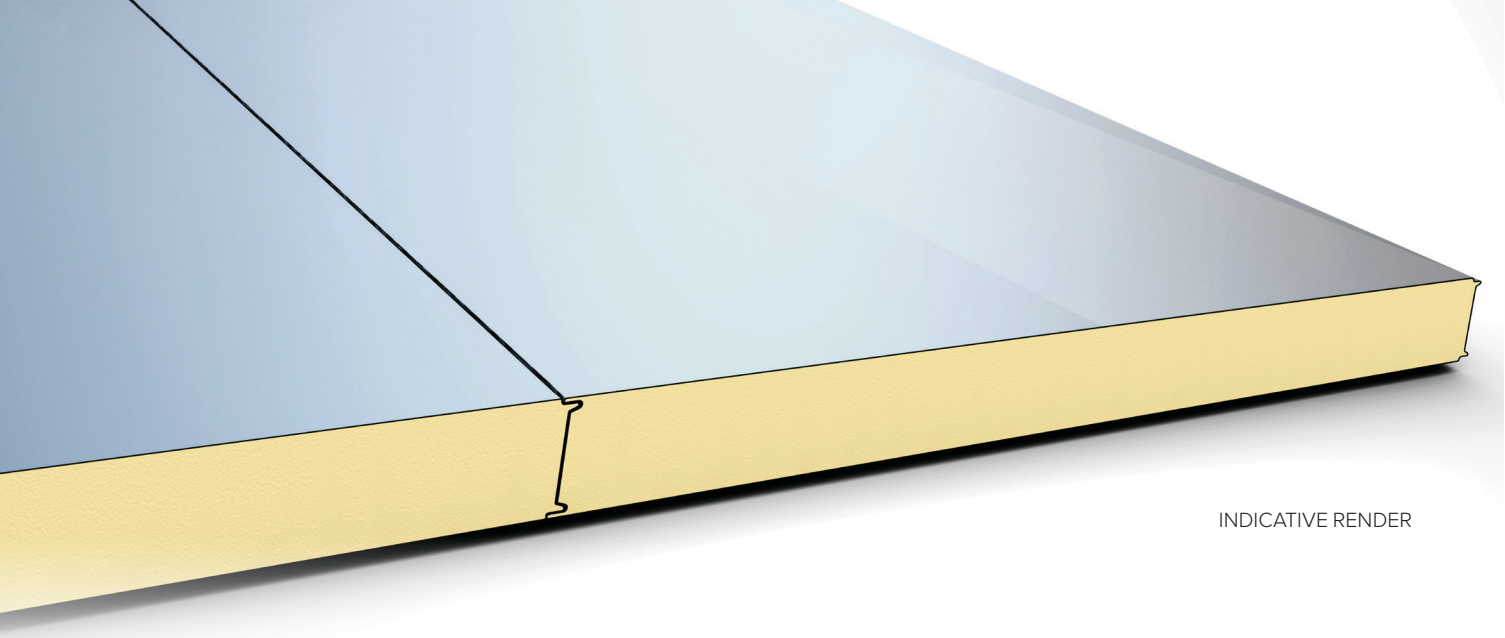
Metalcraft
Insulated Panels

ASPIREPANEL®

MADE IN NZ FOR LONGER LENGTHS AND QUICKER SUPPLY



INDICATIVE RENDER

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

ASPIREPANEL® 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.

WHAT IS PIR?

Polyisocyanurate (PIR) board is a thermoset, medium density, high strength foam, which will char when exposed to flame.

FEATURES & BENEFITS

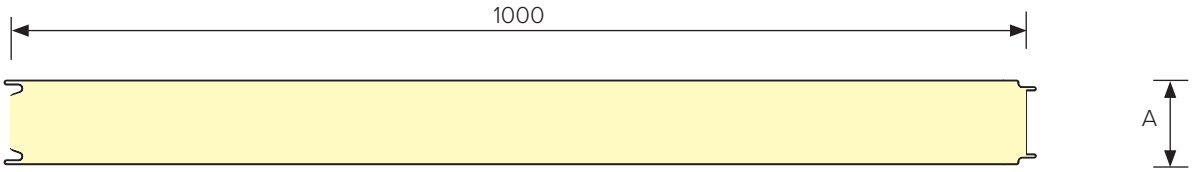
Aspirepanel® is a stressed skin sandwich panel, comprised of pre-painted steel skins continuously laminated over a fire retardant flat PIR core. Aspirepanel® is available in a range of colours with a variety of profile finishes, providing greater strength in walls and a clean, smooth aesthetic look.

- NZ Made for longer sheet lengths and shorter lead times
- Fire retardant PIR flat core
- Longer lengths
- Shorter lead times
- NZ Steel - COLORSTEEL® colours providing perfect colour match with flashings
- Thermally efficient
- Ease of cutting and trimming on site
- Minimal mess on site
- Compatibility with openings and design elements of the building

COLORSTEEL®

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 & 150mm

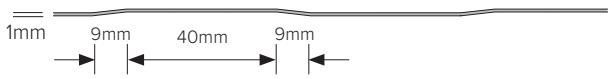
INNER PROFILE OPTIONS

Aspirepanel ® consists of 0.59mm steel bonded to a PIR core with a ceiling panel sheet bonded to the underside. Aspirepanel has a fire-retardant core and is available with a

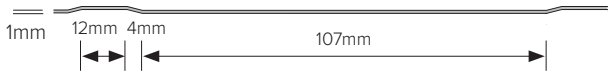
FLAT FINISH - AVAILABLE BOTH SIDES

SILKLINE FINISH - AVAILABLE 1 SIDE ONLY

MESA FINISH - AVAILABLE 1 SIDE ONLY



RIBBED FINISH - AVAILABLE BOTH SIDES



COLOURS

Aspirepanel® is available in 19 standard colours* from New Zealand Steel in trusted brands: COLORSTEEL® ENDURA® and COLORSTEEL® MAXX®. 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	Polyisocyanurate (PIR) Density 37Kg/m3
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 consult Metalcraft Insulated Panels.
Internal Facing	0.59mm CP Grade Prepainted Galvanised Steel
Cover Width	1000mm
Length	Manufactured in Auckland - Max length 24m Lengths are restricted by transportation to site.
Thickness	50mm, 75mm, 100mm, 150mm
Fire Retardant Core	Aspirepanel® has a fire-retardant core

PRODUCT PROPERTIES

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	150
Mass (Kg/m^2)	11.90	12.85	13.80	15.70
Thermal Resistance R Value (m^{2}K/W) @15 degreeC	2.34	3.50	4.67	7.01

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 (Degree C)	**Panel Thickness (mm)**
7.0 down to 3.0	50mm
3.0 down to -3.0	75mm
-3.0 down to -18.0	100mm
-23.0 down to -30.0	150mm

INTERNAL SPREAD OF FLAME

Aspirepanel has achieved a group 1S classifciation.

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

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 Testing

ASPIREPANEL LOADSPAN TABLES
AS/NZS 1170:1 2011

SINGLE SPAN -ULTIMATE LIMIT STATE (ULS)

Single span, wind pressure acting outwards.
Maximum uniformly distributed load (kPa) for the given span:
Please note: these loads are based on the load that will result in failure of the panels bending.

Panel Thickness (mm)	Span (mm)										
	2500	3000	3500	4000	4500	5000	5500	6000	6500	7000	7500
50	2.14	1.49	1.09	0.84	0.66	0.54	0.44	0.37	0.32	0.27	0.24
75	3.21	2.23	1.64	1.25	0.99	0.80	0.66	0.56	0.48	0.41	0.36
100	4.28	2.97	2.18	1.67	1.32	1.07	0.88	0.74	0.63	0.55	0.48
150	6.42	4.46	3.28	2.51	1.98	1.61	1.33	1.12	0.95	0.82	0.71

SINGLE SPAN -SERVICEABILITY LIMIT STATE (SLS)

Single span, wind pressure acting outwards.
Maximum uniformly distributed load (kPa) for the given span:
Please note: these laods are based on the load that will result in deflection limited to L/150.

Panel Thickness (mm)	Span (mm)										
	2500	3000	3500	4000	4500	5000	5500	6000	6500	7000	7500
50	1.53	1.12	0.84	0.64	0.50	0.39	0.31	0.25	0.21	0.17	0.14
75	2.57	1.94	1.49	1.17	0.93	0.75	0.61	0.50	0.42	0.35	0.30
100	3.64	2.80	2.17	1.66	1.31	1.06	0.87	0.73	0.62	0.54	0.47
150	5.82	4.45	3.27	2.50	1.97	1.60	1.32	1.11	0.94	0.81	0.70

LIMITATIONS TO SPAN TABLE

- The load span tables are suitable only for walls and roofs under wind loadings as defined below.
- Deflection limit of span L/ 150 for SLS has been applied.
- For long term loads such as snow, and for imposed loads when panels are used as floors, consideration of shear will be important and specific engineered design is required, please consult Metalcraft Insulated Panels.

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.
  40mm minimum embedment is required in timber and for steel a minimum three full threads into steel.

NOTES:

1. Always check that adequate fixing capacity is provided.
2. Self weight of the panel has been allowed for, plus an allowance of up to 10kg/m2 for light duty fittings (lights, etc.). No other dead loads permitted.
3. Non-trafficable maintenance access (concentrated load) of 140kg on any one panel has been allowed for (exceeding min. requirements of AS/NZS 1170.1:2002).
4. The spans are for single spans, i.e. panel supported at the ends. The spans in multi-span cases are no greater than for the single span case.
5. The maximum overhang is 0.25 times the maximum span for the given conditions, provided this value does not exceed:
   - 600 mm for 50mm Aspirepanel®
   - 1000 mm for 75mm Aspirepanel®
   - 1200 mm for 100mm or thicker.

Longer cantilevers can be expected on thicker panels and require specific engineered design, please consult Metalcraft Insulated Panels.

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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.

MEMBER OF ROOFING ASSOCIATION N.Z.

Metalcraft Insulated Panels are members of the Roofing Association, New Zealand.

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

Metalcraft Insulated Panels is part of United Industries Ltd. For more information on United Industries visit: www.unitedindustries.co.nz.

Insulated Panel Council Australasia Ltd (IPCA Ltd) is a not for profit and third party certification industry body for Manufacturers, Installers and Distributors of Insulated Sandwich Panel products throughout Australasia.

For more information on IPCA visit: www:insulatedpanelcouncil.org

Metalcraft Insulated Panels

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Image page 2 used ThermoPanel this profile is the same as AspirePanel™.
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