

INDICATIVE RENDER SHOWING  
PIR FLAT CORE

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

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ASPIRESPAN® 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

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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?

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

## FEATURES & BENEFITS

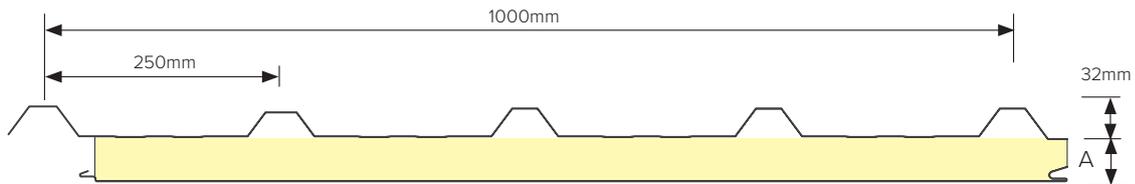
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Aspirespan® is a stressed skin sandwich panel, comprised of pre-painted steel skins continuously laminated over a fire retardant flat PIR core. Aspirespan® is available in a range of colours with a variety of profile finishes, providing greater strength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

# 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. Cross section indicative showing PIR flat core.

Panel Thickness = A  
50, 75, 100 & 150mm

## INNER PROFILE OPTIONS

Aspirespan® consists of a 0.59mm profiled roofing sheet bonded to an PIR flat core with a ceiling panel sheet bonded to the underside.

Aspirespan® has a fire retardant core and is available with a range of colour and ceiling profile finishes.

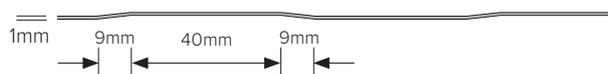
### FLAT FINISH - AVAILABLE INNER SKIN SIDE ONLY



### SILKLINE FINISH - AVAILABLE INNER SKIN SIDE ONLY



### MESA FINISH - AVAILABLE INNER SKIN SIDE ONLY



### RIBBED FINISH - AVAILABLE INNER SKIN SIDE ONLY



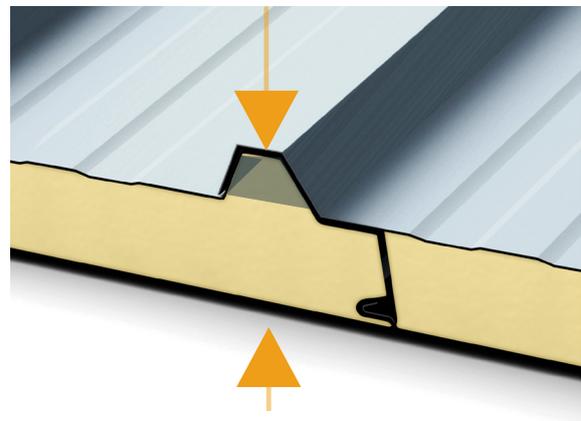
## MINIMUM PITCH

Roof pitches will vary depending on the site conditions, loads, purpose, configuration, snow loading and span requirements. Buildings designed with widely spaced purlins and portal frames may require a frame pitch increase of 1 or 2 degrees.

- Min. roof slope of 3 degree applies

## INTERLOCKING SLIP JOINT

Aspirespan® has a strong interlocking slip joint, providing greater resistance of downward forces.



INDICATIVE RENDER SHOWING INTERLOCKING SLIP JOINT

## COLOURS

Aspirespan® 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.

# ASPIRESPAN

## 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 <sup>2</sup> )	11.90	12.85	13.80	15.70
Thermal Resistance R Value (m <sup>2</sup> K/W) @15 degreeC	2.34	3.50	4.67	7.01

## PRODUCT PROPERTIES

Core	Polyisocyanurate (PIR) Density 37Kg/m <sup>3</sup>
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 and 150mm
Fire Retardant Core	Aspirespan® has a fire-retardant core.

## INTERNAL SPREAD OF FLAME

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

**Please note: Specific installation requirements are needed and available if required.**

## 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: 15-000215  
AWTA Product Testing

## ROOF NOISE

Metalcraft Insulated Panels advise the use of light colours and expansion detailing for long panels to mitigate potential noise issues that might arise with a Aspirespan® roof.

The homeowner, architect and designer should be aware that temperatures of dark colours are higher than those of lighter colours. Darker colours will thermally expand more.

Thermal expansion of metal roofs is covered in the NZMRM Code of Practice. The MBIE document on roof cladding advises that noise from thermal expansion is normal and should be expected. Refer to MBIE -Guide to tolerances, materials and workmanship in new residential construction 2015.

# ASPIRESPAN® 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	2.38	1.65	1.21	0.93	0.73	0.59	0.49	0.41	0.35	0.30	0.26
75	3.57	2.48	1.82	1.39	1.10	0.89	0.74	0.62	0.53	0.46	0.40
100	4.76	3.30	2.43	1.86	1.47	1.19	0.98	0.83	0.70	0.61	0.53
150	7.14	4.96	3.64	2.79	2.20	1.78	1.47	1.24	1.06	0.91	0.79

### SINGLE SPAN -SERVICEABILITY LIMIT STATE (SLS)

#### 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 deflection limited to L/150.

Panel Thickness (mm)	Span (mm)										
	2500	3000	3500	4000	4500	5000	5500	6000	6500	7000	7500
50	1.68	1.23	0.92	0.70	0.55	0.43	0.35	0.28	0.23	0.19	0.16
75	2.82	2.13	1.64	1.29	1.03	0.83	0.67	0.55	0.46	0.39	0.33
100	4.00	3.08	2.42	1.85	1.46	1.18	0.97	0.82	0.69	0.60	0.52
150	6.40	4.95	3.63	2.78	2.19	1.77	1.46	1.23	1.05	0.90	0.78

### 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

- Fixing with 14g tek screws (or equivalent) at each rib are required. Wall cladding is typically pan fixed. 40mm minimum embedment is required in timber and for steel a minimum three full threads into steel.

#### STRUCTURE.

- Min. roof slope of 3 degree applies.

#### NOTES:

- The maximum permissible pull-out load on a rib fixing is 1.8kN. Always check that adequate fixing capacity is provided.
- 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.
- The maximum overhang is 0.25 times the maximum span for the given conditions, provided this value does not exceed:
  - 600 mm for 50mm Aspirespan®
  - 1000 mm for 75mm Aspirespan®
  - 1200 mm for 100mm or thicker.

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

### NOTES:

- Always check that adequate fixing capacity is provided.
- Self weight of the panel has been allowed for, plus an allowance of up to 10kg/m<sup>2</sup> for light duty fittings (lights, etc.). No other dead loads permitted.
- 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).
- 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.
- The maximum overhang is 0.25 times the maximum span for the given conditions, provided this value does not exceed:
  - 600 mm for 50mm Aspirespan®
  - 1000 mm for 75mm Aspirespan®
  - 1200 mm for 100mm or thicker.

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# BRANCHES

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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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Image front cover used Thermospan, this profile is the same as AspireSpan®  
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Metalcraft Insulated Panels are members of the Roofing Association, New Zealand.

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For more information on IPCA visit:  
[www.insulatedpanelcouncil.org](http://www.insulatedpanelcouncil.org)

