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# ARDEX Polyiso Insulation

## Closed-cell PIR Foam Insulation Board

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Compatible with ballast, fully adhered and mechanical attached single-ply systems

Provides outstanding thermal resistance, dimensional and compressive strength

Compatible with ARDEX recommended water based bonding adhesives

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ARDEX Australia Pty Ltd  
20 Powers Road  
Seven Hills NSW 2147  
Phone: 1300 788 780  
Fax: 1300 780 102  
Email: [technicalservices@ardexaustralia.com](mailto:technicalservices@ardexaustralia.com)  
Internet: [www.ardexaustralia.com](http://www.ardexaustralia.com)

ARDEX New Zealand Ltd  
32 Lane Street  
Woolston, Christchurch 8241  
Phone: 0800 227 339  
Fax: (03) 384 9779  
Email: [info@ardexnz.com](mailto:info@ardexnz.com)  
Internet: [www.ardex.co.nz](http://www.ardex.co.nz)

# ARDEX Polyiso Insulation

## Closed-cell PIR Foam Insulation Board

### DESCRIPTION

ARDEX POLYISO flat board roofing insulation consists of a closed-cell polyiso foam core laminated to black glass reinforced mat facer on both surfaces. ARDEX POLYISO insulation provides outstanding thermal performance on commercial roofing applications.

All ARDEX POLYISO insulation boards incorporate a HCFC-free blowing agent that does not contribute to the depletion of the ozone (ODP-free).

The ARDEX POLYISO is suitable for adhered, ballasted and mechanically fastened single-ply roofing systems. It provides outstanding thermal resistance, dimensional and compressive strength.

### FEATURES AND BENEFITS

- Compatible with ballasted, fully adhered, and mechanically attached single-ply systems.
- Available in flat boards of 1.22m x 2.25m and in thicknesses ranging from 25.4mm to 101.6mm.
- ARDEX TPO roofing systems installed over ARDEX POLYISO obtain BROOF(t1) fire rating, contact ARDEX Technical Services Department for further information.

R-values have been determined using the calculation method described in EN ISO 6946 standard based on the use of the ARDEX ISO 95+ insulation board waterproofed using a single-ply membrane and taking into account the surface resistances, both inside and outside.

If you require a more detailed R or U-value calculation, please contact the ARDEX Technical Department.

Thickness (mm)	Thickness (inch)	R-Value (m <sup>2</sup> .K/W)	LTRR R-Value *	Flute Spanability (mm)
25.4mm	1.00	1.11	6.0	57.53mm
31.7mm	1.25	1.35	7.5	93.34mm
38.1mm	1.50	1.58	9.0	111.12mm
44.5mm	1.75	1.82	10.5	111.12mm
50.8mm	2.00	2.05	12.1	111.12mm
58.4mm	2.30	2.26	14.0	111.12mm
63.5mm	2.50	2.44	15.3	111.12mm
71.1mm	2.80	2.71	17.2	111.12mm
76.2mm	3.00	2.89	18.5	111.12mm
82.6mm	3.25	3.02	20.1	111.12mm
88.9mm	3.50	3.24	21.7	111.12mm
95.3mm	3.75	3.45	23.4	111.12mm
101.6mm	4.00	3.68	25.0	114.30mm

\*Long Term Thermal Resistance (LTRR)

### CODE COMPLIANCE

ARDEX POLYISO bears a variety of code body compliances noted below:

- CE marked according to EN 13165
- ASTM C-1289, Type II, Class 1
- UL Classified
- FM Class 1 Approved (insulated steel deck construction)
- Manufactured in an ISO 9002 Registered Facility

### PACKAGING, STORAGE AND PRECAUTIONS

1. Tuff-wrap packaging provides a durable protective covering to the top and four sides of the bundle, as well as a portion of the bottom board.
2. Keep insulation dry at all times. Insulation bundles need to be elevated above the water line to prevent moisture infiltration from the bottom side.
3. Combustible. Refer to MSDS for more information.
4. Before insulation is placed on the roof deck, the substrate must be clean, dry, free of debris, water, ice or snow, and suitably prepared by removing all defects that might affect the quality of the application. Any unusual deck conditions or defects should be brought to the architect or building owner's attention prior to installation.
5. No more insulation shall be installed than can be covered with membrane and completed before the end of each day's work or before the onset of inclement weather.
6. ARDEX POLYISO is non-structural, non-load-bearing material. The finished roof assembly should be protected from excessive roof traffic with proper walkway materials.

### METHOD OF APPLICATION

ARDEX POLYISO insulation boards must be installed using fasteners and plates, hot bitumen or ARDEX approved insulation adhesives. Insulation shall be neatly fitted to all roof perimeters, penetrations and abutments. The ARDEX POLYISO board is suitable for adhered, ballasted and mechanically fastened single-ply roofing systems.

#### Mechanical attached single-ply systems

Fasten the insulation with a minimum of 5 approved fasteners and plates per 1.22m x 2.25m board. Additional fasteners may be required in areas of high wind loads or around the perimeter of the roof. Please refer to local wind uplift requirements and/or contact the ARDEX Technical Department.

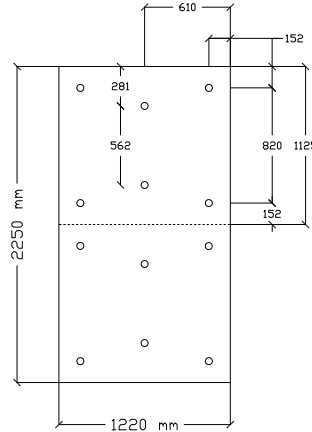
#### Ballasted single-ply systems

For ballasted systems, the top layer of ARDEX insulation may be loose laid or adhered. If mechanical attachment is specified, contact ARDEX Building Products for specific guidelines.

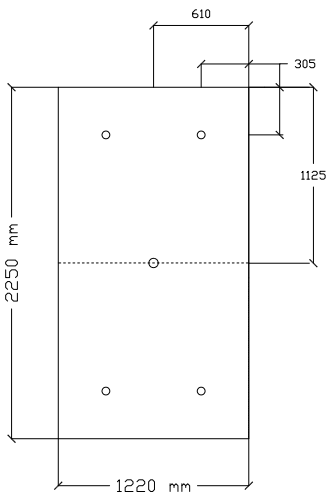
### Fully adhered single-ply systems

Number of fasteners per board needs to be determined based on a wind uplift calculation in accordance with local building codes and taking into account the following minimum requirements:

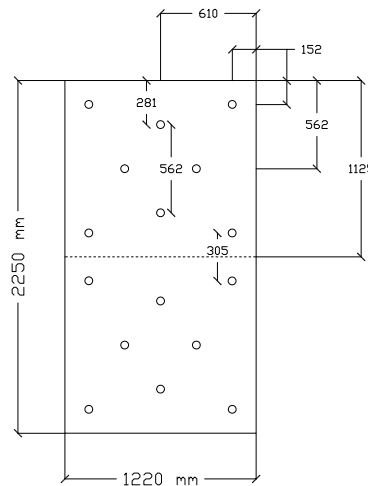
- Thicknesses less than 38.1 mm: Fasten insulation with minimum 16 fasteners per 1.22m x 2.25m board.
- Thicknesses less than 50.8 mm: Fasten insulation with minimum 12 fasteners per 1.22m x 2.25m board.
- Thicknesses less than 101.4 mm: Fasten insulation with minimum 8 fasteners per 1.22m x 2.25m board.



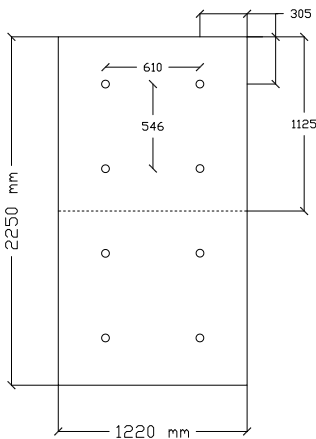
12 fasteners



5 fasteners



16 fasteners



8 fasteners

### TECHNICAL PROPERTIES

Property	ASTM test	Typical Value	EN test	Typical Value
Density	D-1622	32 kg/m <sup>3</sup>	823	32 kg/m <sup>3</sup>
Compressive strength	D-1621	> 138 kPa	826	> 138 kPa
Dimensional stability	D-2126	< 2%	9.0	111.12mm
Water absorption	C-209	< 1% (by volume)	12087	< 3% (by volume)
Service temperature		-73°C to 121 °C		

## GUARANTEE

ARDEX Australia Pty Ltd (“we” or “us”) guarantees this product (“our goods”) is free from manufacturing defects and will perform to any applicable specification published by us for 10 years from the date of purchase. Our liability under this guarantee is limited at our option to replacement of the product, repair of any damage to the immediate surface or area of application of the product, or compensation, in each case if we are satisfied loss or damage was due to a breach of this guarantee.

This guarantee does not apply if damage or loss is due to failure to follow published instructions or any act or circumstance beyond our control, including shade variations and efflorescence. If you wish to make a claim under this guarantee you must notify us (ARDEX Australia Pty Ltd, 20 Powers Road, Seven Hills NSW 2147; Toll Free: 1800 224 070; Email: [technicalservices@ardexaustralia.com](mailto:technicalservices@ardexaustralia.com)) and provide evidence of your purchase of the product within 30 days of any alleged loss or damage occurring. We reserve the right to ask you for satisfactory evidence of any alleged loss or damage. Any claim under this guarantee is at your cost. This guarantee is in addition to any rights or remedies you may have as a “consumer” under the Australian Consumer Law and to that extent you need to be aware that: “Our goods come with guarantees that cannot be excluded under the Australian Consumer Law. You are entitled to a replacement or refund for a major failure and for compensation for any other reasonably foreseeable loss of damage. You are also entitled to have the goods repaired or replaced if the goods fail to be of acceptable quality and the failure does not amount to a major failure”.

## DISCLAIMER

The technical details, recommendations and other information contained in this data sheet are given in good faith and represent best of our knowledge and experience at the time of printing. It is your responsibility to ensure that our products are used and handled correctly and in accordance with any applicable Australian Standard, our instructions and recommendations are only for the uses they are intended. We also reserve the right to update information without prior notice to you to reflect our ongoing research and development program. Country specific recommendations, depending on local standards, codes of practice building regulations or industry guidelines may affect specific installation recommendations.

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### **ARDEX Australia Pty Ltd**

Phone: 1300 788 780  
Fax: 1300 780 102

### **Toll Free Technical Services:**

1800 224 070 (Australia)

### **ARDEX New Zealand Ltd**

Phone: 0800 227 339  
Fax: (03) 384 9779