ARDEX Polyiso Insulation

Closed cell PIR Foam Insulation Board

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

Provides outstanding thermal resistance, dimensional and compressive strength

Compatible with ARDEX recommended bonding adhesives

Variety of thicknesses available

Made in New Zealand

ARDEX New Zealand Ltd
15 Alfred Street
Onehunga, Auckland 1061
Phone: 0800 227 339
info@ardexnz.com
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 glass reinforced mat facer on both surfaces. ARDEX POLYISO insulation provides outstanding thermal performance on commercial and domestic 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 1.2m x 2.4m and in thicknesses ranging from 20mm to 140mm.

Thickness (mm)	R-Value @ 23° C (mK/W)	Weight (kg/m^2)
20	0.93	0.97
25	1.17	1.19
30	1.40	1.41
40	1.87	1.85
50	2.34	2.29
60	2.80	2.73
70	3.27	3.17
75	3.50	3.39
80	3.74	3.61
90	4.21	4.05
100	4.67	4.49
140	6.54	6.25

FIRE PERFORMANCE

ARDEX POLYISO has been classified to NZBC verification method C/VM2 (Group 2-S)

- Manufactured in an ISO 9001 Registered Facility
- Manufactured & tested to AS1366.2/ASTM 2498.3

PIR will self-extinguish as soon as cause of fire is removed.

PACKAGING, STORAGE AND PRECAUTIONS

1. Shrink-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 SDS 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 1.2m x 2.4m 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 NZ for specific guidelines.

ARDEX Polyiso Insulation

Closed cell PIR Foam Insulation Board

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 below 52mm: Fasten Insulation with a minimum of 16 Fasteners per 1.2m X 2.4m Board
- Thickness Above 52mm: Fasten Insulation in accordance with the following table

Fixings per square metre for NZS 3604 wind zones:

Sheet	Fixing	L	M	H	VH	EH	Fixing capacity for SED (kN)
Polypropylene faced sheets, polyiso core, min. 52 mm thick	Plastic washers (EJOT HTK 2G 16), minimum 48 mm dia	2	2	3	4	5	0.82
Aluminium faced sheets, polyiso core, min. 52 mm thick	Plastic washers (EJOT HTK 2G 75), minimum 73 mm dia. Or Steel washers (Elevate Insulation Fastening Plates), minimum 75 mm dia.	1	1	2	2	3	1.47

Notes: Thicker sheets or steel washers are allowed

Fixings per sq. m are for use in buildings within scope of NZS 3604

Fastener spacings for SED to be determined by structural engineer

Screw holding into substrate must equal or exceed stated fixing capacity

VAPOUR BARRIER

For a timber, metal deck, or concrete sub-strates, ARDEX 3000X or WPM 117 vapour barrier shall be installed prior to the insulation material. WPM 300 may be used as a vapour barrier/moisture control on concrete sub-strates only. It is important the edges are terminated correctly and any penetrations are sealed to prevent moisture entering the insulation envelope. Alternative vapour barriers are available. Contact your ARDEX representative for more details.

INSTALLATION METHODS

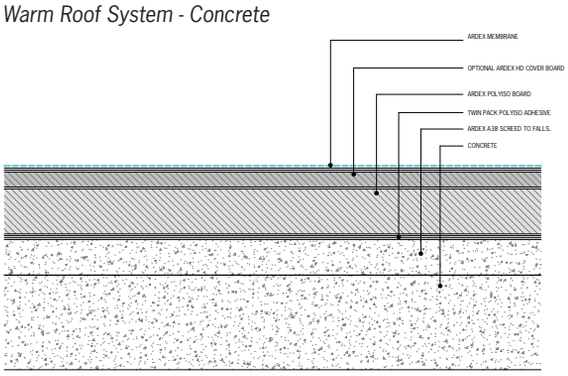
FULLY ADHERED

1. Ensure the concrete has been installed to the manufacturers specifications
2. Install ARDEX WPM 3000X, directly to the concrete substrate, to ARDEX requirements.
3. Adhere the ARDEX insulation boards to the fully adhered vapour barrier using a brick bond pattern.
4. If required, adhere the approved HD cover board at right angles to the adhered ARDEX insulation board using a brick bond pattern.
5. Install the ARDEX membrane (to requirements) to the fully adhered insulated roof system components.

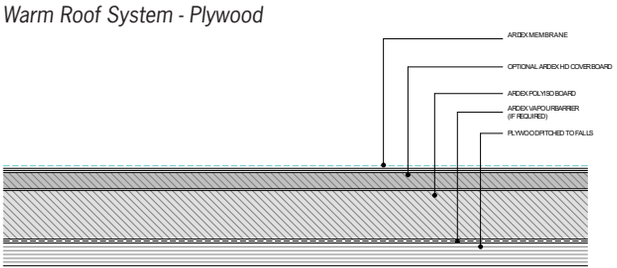
MECHANICALLY FIXED

1. Ensure the chosen substrate material has been installed to manufacture's specification.
2. Install the vapour barrier directly to the chosen substrate to ARDEX requirements.
3. Place the ARDEX insulation board to the fully adhered vapour barrier using a brick bond pattern.
4. If required, place the approved cover board at right angles to the ARDEX insulation board using a brick bond pattern.
5. Mechanically fix the cover board and ARDEX insulation board through to the substrate using an approved fastener plate and appropriately sized fixing.
6. The amount of required fixings will be determined by the specified wind zone requirement for the project.
7. Consult with ARDEX with respect to the required amount of fixings needed based on the predetermined wind-uplift calculations.
8. Install the ARDEX membrane type to ARDEX requirements to the fully adhered insulated roof system components.

Warm Roof System - Concrete



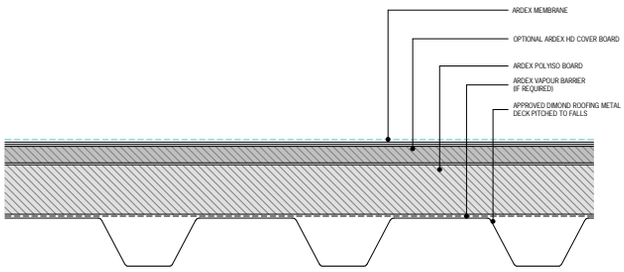
Warm Roof System - Plywood



ARDEX Polyiso Insulation

Closed cell PIR Foam Insulation Board

Warm Roof System - Metal Deck



PROFILED CUT ROOF INSULATION

1. ARDEX Insulation profiled cut roof board is bespoke, designed to match any profiled roof and is suitable for new or refurbishment applications and will improve the thermal performance of an existing profile roof and of the building.
2. The insulation boards are designed to the profile of the roof to eliminate air gaps between the insulation and the roof system that could cause condensation.
3. Profiled cut roof insulation boards are mechanically fixed on top of existing profiled cladding sheet and covered by an ARDEX weatherproofing membrane.
4. This installation method extends the life of an old roof, provides a good surface for a new waterproof membrane, is durable, lightweight and easy to handle, fast installation, improves the aesthetic appearance of old roofs.

TECHNICAL PROPERTIES

Property	Value
Density	38 ~ 42 kg/m³
Compressive Strength	≥0.09 MPa
Shear Strength	≥0.11 MPa
Thermal Conductivity @ 15° C	0.0205 W/m.K
Thermal Conductivity @ 23° C	0.0214 W/m.K
Dimensional Stability	≥3% (70° C @ 95%RH for 20hrs)
	≥1% (-10° C @ 95%RH for 20hrs)
Width	900 ~ 1,200 mm
Length	Up to 6,000 mm
Water Vapour Transmission Rate	10-15g/m2.24hours

For the latest technical or health and safety information on this product, consult the current product or safety data sheet online at: ardex.co.nz

LIMITATIONS

ARDEX Polyiso board is not considered suitable for continuous traffic.

If ARDEX polyisoboard is to be incorporated into a deck/balcony over habitable space a suitable overlayment system such as ARDEX UD 150 or tiles on support pedestals must be used on top of the membrane.

Ensure that the correct thresholds are maintained and minimum clearances to abutting materials are in accordance with NZBC E2/AS1.

Gutter bases should have ARDEX HD Cover board incorporated if they are used as main roof access points.

Toll Free Technical Services:

0800 227 339 (New Zealand)

v26.03.24