

ARDEX Polyiso Boards

SUPERIOR ENERGY EFFICIENCY, SUPERIOR PROTECTION



ARDEX Total Roofing Systems

Since ARDEX entered the roofing industry in 1968 the company has produced and installed over 20,000,000m² of single-ply membrane. This performance has made ARDEX a leading manufacturer of Butynol and distributor of TPO roofing membranes.

ARDEX is however committed to offer a complete line of high performing roofing solutions as individual as your building. This commitment has resulted in the introduction of ARDEX Polyiso insulation boards.



A Winning Combination

ARDEX offers two types of Polyisocyanurate boards: **ARDEX Polyiso Insulation Board** and **ARDEX HD Cover Board**. Thanks to their physical properties, they bring added-value to the roofing system, prior to installation of a durable Butynol or TPO roofing membrane.

The **ARDEX Polyiso Insulation Board** offers high-energy efficiency for which PIR boards are renowned. Compatible with all types of commercial roofing systems, this lightweight, easy-to-handle insulation is suited for direct application onto steel roof, concrete or wood deck. It provides outstanding thermal resistance, dimensional and compressive strength.

ARDEX HD Cover Board is a high-density cover board that not only combines high impact resistance and ease of installation in a single durable product, but also enhances fire and wind resistance of the roof build-up, adds compressive strength to the entire roof system and provides a smooth surface in case of reroofing. With the highest thermal performance of any 12mm cover board product on the market and a superior resistance to extreme weather conditions, **ARDEX HD Cover Board** provides an added measure of protection for any roof.

Polyiso

Roof Insulation Board

ARDEX Polyiso consists of a closed-cell Polyisocyanurate foam core laminated on both sides to a glass reinforced mat facer. The foam technology does not contribute to the depletion of the earth's ozone layer (zero ODP) and uses a HCFC-free blowing agent.

Superior insulation solution

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

The installation of ARDEX Polyiso insulation boards as part of the ARDEX Total Roofing System provides you with a single source of quality design, quality materials and warranty responsibility.



Physical properties

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

Product data

R-values have been determined using the calculation method described in EN ISO 6946 standard based on the use of the ARDEX Polyiso 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 ² . K/W)
38.1	1.50	1.58
50.8	1.75	1.82
58.4	2.00	2.05

*Please contact ARDEX for availability of other thicknesses.

Method of application

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

Mechanically Attached single-ply Systems

Fasten the insulation with a minimum of 5 approved fasteners and plates per 1.22 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 single-ply Systems

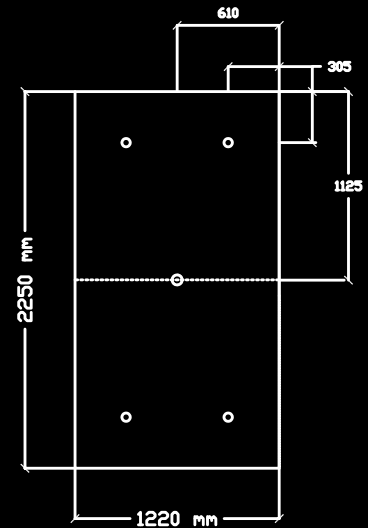
For ballasted systems, the top layer of ARDEX insulation may be loose laid or adhered. If mechanical attachment is specified, contact ARDEX Technical Department for specific guidelines.

Fully Adhered single-ply Systems

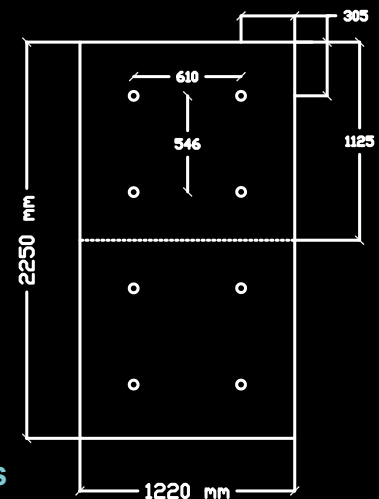
Number of fasteners per board needs to be determined based on a wind uplift calculation in accordance with local building codes and taking into account the following minimum requirements:

Thicknesses less than 50.8 mm: Fasten insulation with minimum 12 fasteners per 1.22 x 2.25m board.

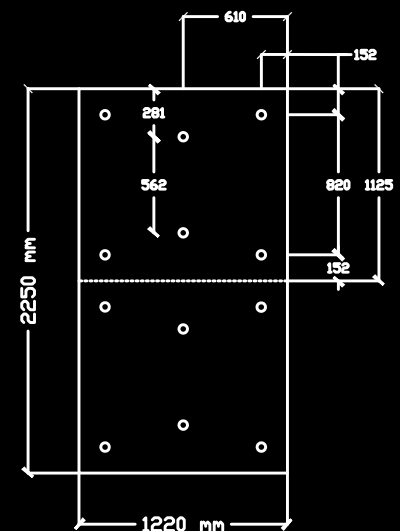
Thicknesses less than 101.4 mm: Fasten insulation with minimum 8 fasteners per 1.22 x 2.25m board.



5 fasteners



8 fasteners

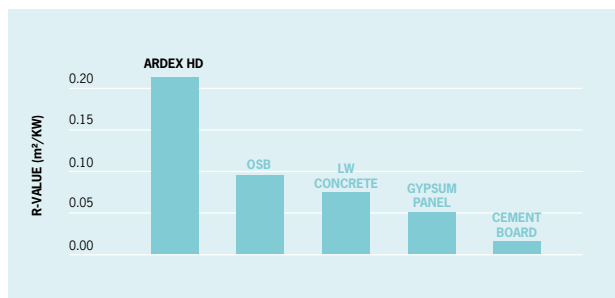


12 fasteners

ARDEX

HD Cover Board

ARDEX HD Cover Board is a 12.7mm thick Polyiso board designed for use as a cover board. It is a high-density, closed-cell, Polyiso foam core that has been manufactured with a coated fiberglass facer.



Features & benefits

Easy to use

ARDEX HD Cover Board is easy to cut and handle for quick fabrication around roofing elements such as drains or other penetrations, reducing installation time and labour costs. A single 1.22m x 2.25m sheet of ARDEX HD Cover Board weighs only 5 kg, meaning easy manipulation and placement.

Outstanding Performance Qualities

ARDEX HD Cover Board leads to superior wind uplift performance, lays flat and requires fewer fasteners per 1.22m x 2.25m board compared to 25mm insulation boards. ARDEX HD Cover Board has the highest thermal performance (determined by ASTM C518) of any 12mm cover board, and it is resistant to extremeweather conditions.

Environmentally friendly

ARDEX HD Cover Board is composed of mould-resistant material that does not support growth of damage-causing fungi and bacteria. The board is manufactured with a 100% fiberglass, mould and moisture resistant facer. ARDEX HD Cover Board contains 8% Post Industrial Recycled Content. It uses a HCFC-free blowing agent that does not contribute to the depletion of the ozone layer and there are insignificant amounts of global warming potential.

An added measure of protection

With a compressive strength of more than 700 kPa (5 to 6 times that of a normal PIR insulation board), ARDEX HD Cover Board adds structural strength to the entire roofing system and helps to absorb the effects of hail, worker traffic and other potentially damaging impacts. ARDEX HD Cover Board can also enhance fire performance of the roofing system. Contact the ARDEX Technical Department for further information.

Physical properties

Property	ASTM test	Value
Density	D-1622	80kg/m ³
Compressive strength	D-1621	827 kPa
Resistance to mold	D-3273	Pass
Foot traffic resistance	Rolling Load Emulator	> 6000 passes
Dimensional stability	D-2126	< 0.5%
Water absorption	D-209	< 3% (by volume)

Product data

Thickness (mm)	Thickness (inch)	Dimensions (m)
12.7	0.50	1.22 x 2.25

Protects. Conserves. Endures.

When foot traffic on the roof is heavy, mineral wood boards run the risk of being crushed or, in case of plastic foam insulations, the adhesion of the facer to the foam can be affected. The ARDEX HD Cover Board spreads the load and protects the boards underneath. It therefore often pays, from a life-cycle cost perspective, to protect the insulation boards with ARDEX HD Cover Boards. They combine impact resistance and ease of installation in a single durable product.

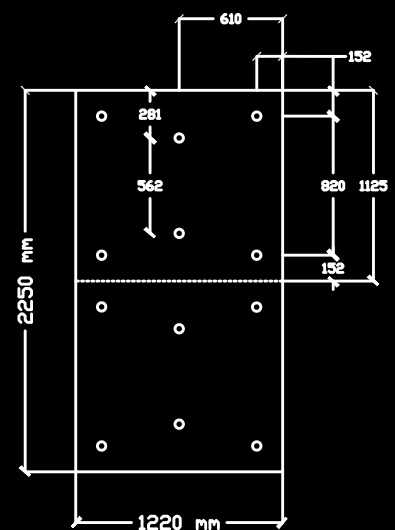
Method of application

ARDEX HD Cover Board shall be neatly fitted to all roof penetrations and projections. No more boards 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.

ARDEX HD Cover Board can be applied over existing roof surfaces and under adhered or mechanically attached single-ply roofing membranes. ARDEX HD Cover Board must be installed using approved fasteners and plates or insulation adhesives.

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 a minimum requirement of 12 fasteners per board. Please consult ARDEX Technical Department for information on fastening patterns.

DO NOT use hot asphalt with ARDEX HD Cover Board.
DO NOT install HD Cover Board under ballasted systems.





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