

Product Data Sheet

HYTHERM FM Insulation

High performance rigid PIR insulation for warm roofs (flat board or tapered) under mechanically fixed single-ply or bitumen membranes

Hytherm FM PIR insulation board is designed to provide optimum stability and structural integrity in warm roofs with mechanically-fixed single ply PVC-p or single layer reinforced bitumen waterproof membranes on concrete, timber or metal decks.

The board comprises a fibre-free, rigid polyisocyanurate (PIR) core with aluminium foil composite facing on both sides.

Hytherm FM is available in both flat and tapered boards, for use on new roofs, refurbished roofs or for upgrading the thermal performance of existing roofs.



Key benefits

- Lightweight, moisture tolerant board
- Excellent thermal performance - 0.022 W/mK lambda (dependent on thickness)
- Compression strength >150kPa at 10% compression
- Manufactured to ISO 14001 and ISO 9001

- Easy handling and installation
- Flat board size: 1200mm x 1200mm; thicknesses available 25mm – 150mm
- Environmental performance, GWP < 5, ODP zero
- 2008 Green Guide Summary Rating of A as certified by the BRE
- BBA Approved

Description

Dimensions	Flat boards	Tapered boards	
Width	1200mm	Tapered scheme details are confirmed on a project by project basis	
Length	2400mm		
Thickness	25 / 50 / 60 / 70 / 80 90 / 100 / 110 / 120mm*		
Area	2.88m ²		

*Greater thicknesses of insulation may be achieved with two layers of insulation boards.

Roof waterproofing system

Hytherm FM is suitable for use with most mechanically fixed waterproofing membranes - PVC, TPO, EVA, EPDM - as well with Axter mechanically fixed single layer reinforced bitumen waterproofing membranes.

Thermal Conductivity

The thermal conductivity (lambda value) of the insulation is 0.022 W/mk.

Thermal resistances will vary according to the insulation thickness. Lambda and thermal resistance documents given in this document are in accordance with BS EN 13165:2012 Thermal insulation products for buildings – factory made rigid polyurethane foam products – Specification.

Compressive Strength

Typically exceeds **150 kPa** at 10% compressions when tested to BS EN 826:1996 Thermal insulating products for building applications. Determination of compressive behaviour.

Resistance to Solvents

Hytherm FM resists attack from alkalis, dilutes acids, mineral oil and petrol. The insulation core is not resistant to ketonic solvents. Damaged boards should not be used.

Durability

PIR insulation is rot proof and durable, stable (will not sag or shrink), resists attack by mould and microbial growth and will not provide any food value to vermin. It will remain effective as an insulation system for at least the lifetime of the waterproof covering.

Durability is dependent on the application method, the supporting structure and conditions of use.

Environmental

The insulation core of Hytherm FM is manufactured with a blowing agent that is CFC / HCFC free, zero ODP and <5 GWP. Hytherm FM has a 2008 Green Guide Summary Rating of A as certified by BRE and is manufactured to ISO 1400 and ISO 9001.

Fire Performance

The fire rating of any roof containing Hytherm insulation boards will depend heavily on the type of deck and waterproofing system installed. The designation of the roof covering must meet or satisfy the requirements of national Building Regulations. For further details, contact Axter Ltd.

Roof loading

Hytherm FM is suitable for roof decks exposed to limited maintenance foot traffic, depending on the waterproofing system being used. A walkway should be provided on a roof where there is regular pedestrian access. The roof should be boarded out with protective boarding whenever site work is to take place after the roofboard has been laid and the roof made watertight.

Design considerations

Consideration should also be given to BS 5250: 2011 Code of Practice for control of condensation in buildings and BS 6229: 2018 Flat roofs with continuously supported flexible waterproof coverings – Code of Practice. Mechanical fixings should be specified as recommended in the BRUFMA information document ID/1/2009.

Standards and Approvals

BBA approved
Manufactured to ISO 14001, ISO 9001

Wind loading

Wind loads should be assessed in accordance with BS EN 1991-1-4:2005 + A1: Eurocode 1, Actions on structures, General Actions, Wind Actions and the UK national Annex. For information on wind uplift calculations please call Axter.

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