

Evatherm L – PIR Insulation for Warm Flat Roofs

A high performance rigid polyisocyanurate (PIR) foam board for use in warm roofs under a Liquid Applied Waterproofing system, such as the ICB Mariseal system.

Description.

The board is tongue and grooved but taping the joints may provide a better finish with less ghosting of the joints being visible. For tapered roofing, we recommend normal tapered system using Evatherm A is installed with a finishing 50mm layer of Evatherm L. Currently Evatherm L is only available in thicknesses of 50mm, 90mm, 110mm, 130mm, 150mm in 2.4m x 1.2m. These boards are bonded using a PU adhesive such as ICB Instastick.

Benefits of Evatherm L warm flat roof insulation boards

- **Wider choice:** Evatherm L in a wide range of thicknesses, will assist in meeting the appropriate Building Regulation standard with any form of warm flat roof construction.
- **Quality:** Outstanding product quality manufactured to ISO 9001 Quality Systems. All of our products carry the CE Mark to show compliance with the harmonised European Standard BS EN 13165.
- **Ozone friendly:** Zero ozone depletion potential.
- **Global Warming:** CFCs, HCFCs and HFCs are all powerful greenhouse gases. Pentane on the other hand satisfies the "Green Guide to Specification" and the Intergovernmental Panel on Climate Change (IPCC) confirming a Global Warming Potential of below 5. All our products have a global warming potential of below 5.
- **Low thermal conductivity:** The declared thermal conductivity value of 0.023 W/mK is some 30% more efficient than most other insulation materials.
- **Fire safe:** Evatherm L has Factory Mutual (FM) approval. It achieves a Class 1 rating in approved FM systems. Evatherm L has LPCB LPS 1181 approval.
- **Compatibility:** Fully compatible with most synthetic (PVC, EPDM etc) and bitumen based single-ply membrane waterproofing systems.
- **Warm roof construction:** No requirement for roof ventilation and inherently safe from harmful interstitial condensation.
- **Reduced risk of condensation:** Condensation within the roof structure is avoided as it is maintained at the same temperature as the inside of the building.
- **Handling:** Evatherm L is lightweight yet tough and resilient. The boards are easily cut using a knife or fine-toothed saw..
- **Durability:** Evatherm L boards are rot-proof, durable and maintenance free.
- **Lap joint edge profile:** Evatherm L is available with a Tongue and Groove edge detail to prevent thermal bridging at board joints.

Product Features

Length (mm):
1160

Width (mm):
1160

Thickness (mm):
50*, 90, 120

Some thicknesses may be subject to minimum order quantities. Other sizes available on request. Evatherm L is also available as a tapered board through our specialist single layer tapered insulation division Gradient Insulation Limited.* This thickness comes in bigger boards 1190x1190mm

Specifications Clause:

The flat roof insulation shall be...mm thick Evatherm L and HCFC-free, rigid PIR foam with multi-layer, coated aluminium foil, facings to both sides. Insulation to be installed as work proceeds in accordance with BBA Certificate No. 95/3113 and Recticel Insulation Products instructions.

Compressive Strength:

The compressive strength exceeds 150kPa at yield.

Thermal Conductivity:

The declared thermal conductivity, D-value of Evatherm L is 0.023 W/mK when tested using BS EN 13165: 2001.

Designation Code.

PUR - EN 13165 - T2 - DS(TH)8 - DLT(2)5 - CS(10/Y)150 - TR80 - WL(T)2

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Moisture Vapour Transmission:

The foil faces of the Evatherm L board give it an almost infinite water vapour resistance value. The joints between boards however will facilitate the passage of moisture vapour under normal conditions of temperature and humidity; a practical value for the moisture vapour resistance of the system is 100 MNs/g.

Specific Heat Capacity:

The specific heat capacity is 1.4 kJ/kgK.

Durability:

When correctly installed, Evatherm L boards are maintenance free and have an indefinite life at least equal to that of the building.

Storage:

Evatherm L boards are supplied wrapped in polythene to provide short term protection. On site the boards should be stored in dry conditions, clear of the ground, on a clean level surface.

Resistance to Solvents:

The foam is not resistant to ketonic solvents. Boards that have been in contact with harsh solvents, petrol, mineral oil, or acids, should not be used.

Reaction to Fire:

Euroclass F (BS EN 13501-1)
Class 1 (BS 476, Part 7)
FM Approval Class 1 (FM Standard 4450)
LPCB LPS 1181 approval.

Built-up waterproofing systems

Description

Evatherm L boards are recommended for use with liquid applied waterproofing systems from ICB

- **Condensation:** The requirement for a vapour control layer must be assessed with reference to BS 5250 and BS 6229. If required, a minimum 1000g polythene sheet should be used.
- **Roof Loading:** EvaTherm L boards are suitable for loads associated with the pedestrian maintenance traffic on the roof; for areas of heavier pedestrian traffic extra precautions should be taken such as the use of specially designed walkways (consult the membrane manufacturer for specific details). Care must be taken to avoid damage to boards by impact or by concentrated loads during installation. When using ballasted systems the roof structure must be designed to accept the additional dead load, minimum 80 kg/m².
- **Roof Drainage:** To ensure adequate drainage the roof should have a minimum finished fall of 1:80. This may mean designing for twice the minimum finished fall to account for building inaccuracies, roof deflection and building settlement.
- **Thermal Bridging:** With increasing levels of insulation it is vitally important to ensure continuity of the insulation at the junction of elements. At the junction of the roof and the wall packing the eaves with compressible mineral fibre insulation will both prevent thermal bridging and close the cavity. At upstands and parapets the cavity wall insulation should be continued above the level of the roof to ensure continuity of the wall and roof insulation (See Figures 1 and 2).
- **Wind Uplift:** The wind uplift force exerted on the roof will vary according to geographical location, site location and building height. Reference should be made to BS 6399 and the membrane manufacturer's recommendations for the number of fixings and the fixing pattern.
- **Fire Performance:** The fire performance of EvaTherm L depends upon the choice of waterproofing system. Generally an external fire rating of FAB will be achieved with mechanically fixed systems, whilst ballasted systems are deemed to achieve a fire rating of FAA. EvaTherm L is FM Approved to FM Standard 4450. The board achieves a Class 1 rating in these full scale fire tests - a performance comparable to that of mineral fibre. EvaTherm L has LPCB LPS 1181 approval.



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