



## EVATHERM T

### PIR INSULATION FOR WARM FLAT ROOFS

#### PROFILE

Evatherm T is a high performance rigid polyisocyanurate (PIR) foam board for use in warm flat roofs under torch-on, bituminous waterproofing systems

Description: Evatherm T is a closed cell, CFC and HCFC-free (zero ozone depletion), rigid polyisocyanurate foam core faced board, with a Bituminous coated glass fleece on both sides. It has an exceptionally low thermal conductivity of 0.024 W/mK.\*

#### BENEFITS OF EVATHERM T

- Wider choice: Evatherm T is available in a wide range of thicknesses and 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 achieves an A rating in 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 0.024 W/mK\* is some 30% more efficient than most other insulation materials.
- Compatibility: Fully compatible with torch-on, bituminous waterproofing systems.
- Warm roof construction: No requirement for roof ventilation and inherently safe from harmful interstitial condensation.
- Tapered systems: Evatherm T boards are available in a tapered format to assist roof drainage.
- 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 T is lightweight yet tough and resilient. It is easily cut using a knife or fine-toothed saw.
- Durability: Evatherm T is rot-proof, durable and maintenance free.



PRODUCT FEATURES
Use(s): Flat Roofs
Thermal Conductivity: 0.024-0.026 W/mk*
Compressive Strength: 150 kPa
Facing(s) - Top & Bottom: Bituminous coated glass fleece
Material Core: CFC & HCFC Free (Zero ODP & GWP <5) Rigid PIR Foam
Standard Board Size: 1200mm x 600mm
Designation Code: PUR - EN 13165 -T2 -DS(TH)8 - DLT(2)5 - CS(10/Y)150 - TR80 - WL(T)2
Compressive Strength. Compressive strength exceeds 150 kPa at yield Designation Code CS(10/Y)150

## DESIGN - SINGLE PLY MEMBRANE WATERPROOFING SYSTEMS

Evatherm T boards are compatible with most proprietary bitumen based torch on waterproofing systems.

- Condensation:** To reduce the risk of interstitial condensation, an air and vapour control layer (AVCL) should be installed on the warm side of the insulation. The AVCL can also control air and heat leakage from within the building. Reference should be made to BS 5250:2021 and BS 6229:2018 for the condensation assessment and adequate bonding to the deck.
- Roof Loading:** Evatherm T 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 promenade tiles. Care must be taken to avoid damage to boards by impact or by concentrated loads during installation.
- Roof Drainage:** To ensure adequate drainage the roof should have a minimum finished fall of 1:80 as BS6229. This means designing with a fall of 1:40. This will take into account for building tolerances, permitted deviations, deflections under load and possible deflections/settlement.
- Tapered Systems:** Tapered Evatherm T boards are available where it is not desirable or technically possible to create the falls in the roof structure. In refurbishment projects they offer a simple solution to ponding problems whilst at the same time upgrading the thermal insulation of the roof.
- 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 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.
- 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 6229:2018 for adequate bonding of the vapour control layer to the deck to help resist wind uplift. Calculations relating to the bonding and any supplementary fixings should be made with reference to BS 6399-2:1997.

### \*Thermal Conductivity.

The declared thermal conductivity,  $\lambda$ D-value of Evatherm T is: 0.026 W/mK for thicknesses below 80mm. 0.025 W/mK for thicknesses of 80mm to 119mm. 0.024 W/mK for thicknesses of 120mm and above. when tested using BS EN 13165: 2001.

### Moisture Vapour Transmission.

The mineral coated glass fibre fleece facings of the Evatherm T board give it a vapour resistance value in excess of 15 MNs/g. When bedded in hot bitumen the board joints will be further sealed; a practical value for the moisture vapour resistance of the system is 40 MNs/g.

### Specific Heat Capacity.

The specific heat capacity is 1.4 kJ/kgK.

### Durability.

When correctly installed, Evatherm T board is maintenance free and has an indefinite life at least equal to that of the building.

### Storage.

Evatherm T 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.

### Reaction to Fire.

Euroclass F (BS EN 13501-1)

### EVATHERM T BOARD IS AVAILABLE IN THE FOLLOWING DIMENSIONS:

Length (mm)	1200
Width (mm)	600
Thickness (mm)	30,40,50,60,70,80,90,100,120,130,140,150

Some thicknesses may be subject to minimum order quantities. Other sizes and thicknesses are available on request. Please contact ICB Customer Services for more information. Other sizes available on request Evatherm T insulation is also available as a tapered board through our specialist single layer tapered insulation division Gradient Insulation Limited.

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