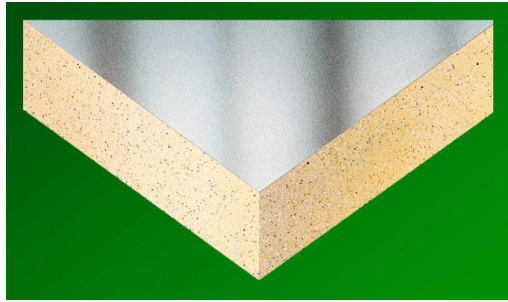


PARATHERM F



- **APPLICATION**

Moy Materials Paratherm F is a high performance insulation fully compatible with most mechanically fixed single-ply waterproofing membranes.

Please note: Paratherm F is not suitable for use with bitumen based built-up roofing systems or mastic asphalt unless isolated with a secondary layer such as Hunton Fibreboard.

- **PRODUCT DESCRIPTION**

Paratherm F is faced on both sides with a foil/kraft autohesively bonded to the insulation core during manufacture.

The core of Paratherm F consists of a high performance CFC-free rigid urethane insulant of typical density 32 kg/m³

- **CFC-FREE**

Paratherm F is manufactured using alternative blowing agents in compliance with the Montreal Protocol.

- **DIMENSIONS & TOLERANCES**

Paratherm F is available in the following standard sizes and thicknesses.

Dimension	Availability	Tolerance
Length (mm)	2400, 1200	±5mm
Width (mm)	1200	±3mm
Insulant Thickness* (mm)	25, 30,	±1.5mm
	35, 40, 45, 50,	±2mm
	55, 60, 65, 70, 75	±3mm
	80, 85	±4mm
Diagonals	The diagonals of any board do not differ by more than 0.3%	

*Other thicknesses are available subject to quantity.

- **INSULATION COMPRESSIVE STRENGTH**

Exceeds 150kPa at 10% yield when tested to British Standard 4370 Part 1 : 1988 (Methods of Test for Rigid Cellular Materials).

- **WATER VAPOUR RESISTANCE**

Modified to include board facings, the boards achieve a resistance greater than 100 MNs/g when tested in accordance with BS 4370 : Part 2 : 1993

- **THERMAL CONDUCTIVITY**

The thermal conductivity (K-value) of Paratherm F is 0.022W/mk.

- **TYPICAL U-VALUES**

The examples shown are based on the use of Paratherm F waterproofed using a single ply membrane. The board is laid over a polythene vapour control layer laid directly over the type of deck stated for each application. The suspended ceiling, where shown, is taken to be 12.5mm plasterboard with a cavity between it and the underside of the deck.

- **Metal Deck with no Ceiling**

Insulant Thickness (mm)	U-value (W/m ² K)
40	0.45
45	0.40
50	0.37
55	0.34
60	0.31
70	0.27
75	0.25
80	0.24

- **Dense Concrete Deck with Suspended Ceiling**

Insulant Thickness (mm)	U-value (W/m ² K)
40	0.38
45	0.35
50	0.32
55	0.30
60	0.27
65	0.26
70	0.24
75	0.23
80	0.22

- **Timber Deck with Suspended Ceiling**

Insulant Thickness (mm)	U-value (W/m ² K)
40	0.39
45	0.35
50	0.32
55	0.30
60	0.28
65	0.26
70	0.24
75	0.23
80	0.22

- **FIRE PERFORMANCE**

When subjected to British Standard fire tests the results are dependent on the roofing system adopted, however FAB is generally achieved.

Test	Result
BS 476 : Part 3 : 1958 (1975) (External Fire Exposure Roof Test)	Dependent on single ply membrane adopted.
BS 476 : Part 7 : 1987 (1993) (Surface Spread of Flame Test)	Class 1 Rating

- **DESIGN CONSIDERATIONS**

- **Wind Loading.**

Wind loading should be assessed in accordance with the British Standard Code of Practice CP3 Chapter V Part 2 : 1975 (or with BS 6399 : Part 2 : 1995)

- **Water Vapour Control.**

The need for a separate vapour control layer with Paratherm F in a warm roof construction should be assessed in accordance with BS 5250 : 1989 and as defined in BS 6229. A minimum vapour control layer should consist of a 1000 gauge polythene membrane.

PARATHERM F

Roof Loading.

Paratherm F is suitable for use on access roof decks subject to limited foot traffic. Where continuous or excessive foot traffic is liable to occur it is recommended that the roof surface is protected by specially constructed walk-ways. The roof must be adequately protected when building works are being carried out on or over the roof surface. The is best achieved by close boarding. The completed roof must not be used for storage of heavy building components such as bricks or air conditioning equipment.

Spanning on Metal Decks

The free-spanning distance of Paratherm F laid on to metal decks must not exceed the following:

Insulant Thickness (mm)	Spanning Distance (mm)
25	75
30	100
35	125
40	150
45	175
50	200

• FIXING DETAILS

Vapour Control Layer

The specified vapour barrier should have a minimum 150mm side and end laps which should be adequately sealed. The membrane should also be turned up, but not sealed, to all vertical surfaces, which abut the roof, to a minimum height of 250mm and should overhang the verge or gutter by the same amount. Before applying the roof finish, the projecting 250mm of the vapour control layer should be turned over the insulation and sealed down to form an envelope.

Metal Decks.

On metal decks Paratherm F should be laid over the vapour control layer. The boards are normally secured using mechanical fixings appropriate to substrate (see 'Mechanical Fixing'). Paratherm F should be laid break bonded with the long edges at right angles to the trough openings, or alternatively, diagonally across the corrugation line. Whichever system is chosen, care must be taken to ensure that all joints are supported by the deck. The joints should be lightly butted. Taping is not required.

Concrete Decks.

Concrete decks should be clean, dry, without large projections, steps or gaps, and should be graded to allow correct falls to all rain water outlets. The boards are normally laid over a vapour control layer and all secured using mechanical fixing and washers. The waterproofing is also mechanically fixed. (see 'Mechanical Fixing'). The boards should be laid break-bonded with all joints lightly butted. The boards can also be restrained through the use of ballast.

Timber Decks.

Timber decks should be clean and free of large projections steps or gaps and should be graded to allow correct falls to all rainwater outlets. On timber decks, Paratherm F should be laid over a vapour control layer, the side and end laps of which have been sealed. The boards are normally secured using mechanical fixing systems and washers (see 'Mechanical Fixing') The boards should be laid break-bonded with all joints lightly butted.

Mechanical Fixings.

The number of mechanical fixings required to fix Paratherm F will vary with the geographical location of the building, the topographical data, and the height and

the width of the roof concerned. Each fixing should incorporate a countersunk washer, having a minimum diameter of 50mm. The requirements for securing the waterproofing should be considered

A minimum of 11 No. fixings should be placed within the individual board area and be sited >50mm and <150mm from the edges and the corners of the board giving a minimum fixing rate of 3.8 fixings per square metre (2400mm x 1200mm board)

The requirement for additional fixings should be assessed in accordance with British Standard Code of Practice CP3 Chapter V : Part 2 or BS 6399 : Part 2 : 1995

• DAILY WORKING PRACTICE

The foil face of Paratherm F should not be considered as temporary waterproofing. Boards should be waterproofed as soon as possible after fixing.

At the completion of each days work, or whenever work is interrupted, a night joint must be made in order to prevent water penetration of the roof construction.

• CUTTING

Cutting should be carried out using a fine saw or by scoring with a sharp knife and snapping the board over a straight edge and cutting the foil on the other side.

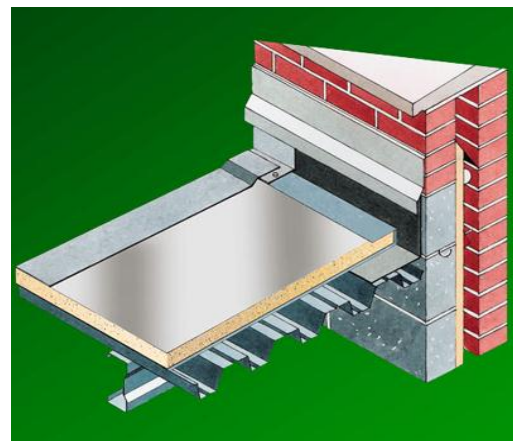
• PACKAGING & STORAGE

The boards are supplied in labelled packs shrink-wrapped in polythene. This packaging should not be considered adequate for long term outside protection. Boards should, where possible, be stored inside a building. If outside storage cannot be avoided that boards should be stacked clear of the ground and covered with a polythene sheet or weatherproof tarpaulin.

• SPECIFICATION CLAUSE

Paratherm F should be described in specifications as:-

The roof insulation shall be Paratherm F ___mm thick comprising of a CFC-free rigid insulation core with foil/kraft/foil tri-laminate facings on both sides, having a thermal conductivity of 0.020W/mK, manufactured to BS EN ISO 9002.



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