

Xtratherm® | Flat Roof Solutions

High performance PIR Flat Roof Insulation



Thermal Ply High Performance PIR and Plywood Composite for Flat Roofs **FR/TP**

Key Features

High Performance Rigid Insulation

Thermal Conductivity 0.022W/mK

Insulation and Decking in a Single Fix

Compatible with most
Waterproofing Systems

Non-deleterious Material

Manufactured without
the use of CFC's/HCFC's

Zero ODP and Low GWP

Suitable for New Build and
Refurbishment Projects



Flat Roof Board FR/TP

Thermal Ply High Performance PIR and Plywood Composite for Flat Roofs



Xtratherm FR/TP Thermal Ply is a composite insulated panel of Xtratherm Polyisocyanurate core with a composite foil face, bonded to 6mm WBP grade plywood. FR/TP is designed to provide high levels of thermal insulation and decking in one operation for new and refurbishment flat roof applications.

Insulation & decking in one fix

For new & refurbishment roofs

Rapid weather proofing



Xtratherm FR/TP Sheet Size (mm)

Length

2400

Width

1200

Thickness*

56, 76, 86, 96, 106, 116

*Thickness includes 6mm plywood

1

Xtratherm FR/TP is faced to the under side by a gas-tight foil membrane, bedding the panel onto a bed of mastic creates a continuous vapour control layer.

2

The Xtratherm FR/TP provides a high level of thermal insulation and decking in one application.

3

A second layer of Xtratherm may be added between the joists to increase the thermal performance of the roof or to allow a reduction in the thickness of material over the joists.

Roof Design

Consideration should be given to the recommendations of BS 4841: Part 3 1987 and the certification of the chosen membrane manufacturer.

Falls

The fall on a flat roof should be constant and steep enough to ensure that rainfall does not pond.

Fire Performance

The fire rating when tested to BS 476 Part 3: 2004 External Fire Exposure Roof Test' will be dependent upon waterproofing system specified.



Xtratherm's comprehensive range of BBA certified high performance flat and tapered roof insulation boards provide a guaranteed quality solution to flat roof specification.



Flat Roof Insulation

Xtratherm FR/TP should be fixed to a minimum of 50mm thick joists at 600mm centres max with the plywood uppermost.

Boards should be staggered and butted. Each edge should have a minimum bearing of 20mm on joist.

All edges should be supported - add noggings where necessary. Stagger fixings where boards are butted.

Boards should be embedded in vapour resistant mastic to provide a vapour control layer in conjunction with foil facing.

Mastic should be laid wide enough to facilitate 2 panel edges and be continuous around all edges.

FR/TP should be fixed with low profile screw fixings, placed at 200mm centres around the perimeter of the boards and at 300mm centres along any intermediate supports.

All fixings should penetrate the joists by a minimum of 35mm and be placed 12mm from the edge of the FR/TP, and no further than 50mm from any corners.

Care should be taken to ensure that the heads of any fixings are flush with the plywood surface and not over-driven.

The roof should be fire protected to the underside by plasterboard or other approved material.

FR/TP is suitable for maintenance traffic loadings only.

Typical Physical Characteristics

| Property | Units |
|--------------------------|---------------------------|
| Density (Foam Core) | 32kg/m ³ |
| Compressive Strength | >150kPa @ 10% Compression |
| Water Vapour Resistivity | >100MNs/gm |
| Thermal Conductivity | 0.022W/mK |

Typical U-values

FR/TP Over Timber Deck

| FR/TP (mm) | U-value (W/m ² K) |
|------------|------------------------------|
| 56 | 0.33 |
| 76 | 0.25 |
| 86 | 0.23 |
| 96 | 0.21 |
| 106 | 0.19 |
| 116 | 0.18 |



ISO 9001 | Quality Management Systems

ISO 14001 | Environmental Management

OHSAS 18000 | Occupational Health & Safety

Xtratherm® | Flat Roof Solutions

High performance PIR Flat Roof Insulation

The Xtratherm range of high performance flat roof boards provides the complete solution for new build and refurbishment.

TAPERED ROOF INSULATION

Tapered Insulation for Mechanically Fixed Single Ply Waterproofing Systems

TR/ALU



- High Performance Rigid Insulation
- Thermal Conductivity 0.022W/mK
- Practical Solution to Water Ponding with Insulation and Drainage in a Single System
- LPC/FM Approved
- Compatible with Single Ply Waterproofing Systems
- Non-deleterious Material
- Manufactured without the use of CFC's/HCFC's
- Zero ODP and Low GWP
- Suitable for New Build and Refurbishment Projects

Tapered Insulation for Single Ply Fully Adhered

TR/MG



- High Performance Rigid Insulation
- Thermal Conductivity as Low as 0.024W/mK
- Suitable for Fully Bonding with Approved Adhesive Systems
- Compatible with Adhesively Bonded Single Ply Roofing Membranes laid on Mechanically Fixed Boards
- Practical Solution to Water Ponding with Insulation and Drainage in a Single System
- LPC/FM Approved
- Non-deleterious Material
- Manufactured without the use of CFC's/HCFC's
- Zero ODP and Low GWP
- Suitable for New Build and Refurbishment Projects

Tapered Insulation for Partially Bonded, Torched-on, Built-up Bituminous Felt Systems

TR/BGM



- High Performance Rigid Insulation
- Thermal Conductivity as Low as 0.024W/mK
- Compatible with most Bituminous Based Roofing Systems
- Practical Solution to Water Ponding with Insulation and Drainage in a Single System
- Non-deleterious Material
- Manufactured without the use of CFC's/HCFC's
- Zero ODP and Low GWP
- Suitable for New Build and Refurbishment Projects

Rigid Insulation Flat Roof Solutions

FLAT ROOF INSULATION

Single Ply Mechanically Fixed

FR/ALU



- High Performance Rigid Insulation
- Thermal Conductivity 0.022W/mK
- LPC/FM Approved
- Compatible with Single Ply Waterproofing Systems
- Non-deleterious Material
- Manufactured without the use of CFC's/HCFC's
- Zero ODP and Low GWP
- Suitable for New Build and Refurbishment Projects

Insulation for Single Ply Fully Adhered

FR/MG



- High Performance Rigid Insulation
- Thermal Conductivity as low as 0.024W/mK
- Suitable for Fully Bonding with Approved Adhesive Systems
- Compatible with Adhesively Bonded Single Ply Roofing Membranes laid on Mechanically Fixed Boards
- LPC/FM Approved
- Non-deleterious Material
- Manufactured without the use of CFC's/HCFC's
- Zero ODP and Low GWP
- Suitable for New Build and Refurbishment Projects

Insulation for Partially Bonded, Torched-on, Built-up Bituminous Felt Systems

FR/BGM



- High Performance Rigid Insulation
- Thermal Conductivity as Low as 0.024W/mK
- Compatible with most Bituminous Based Roofing Systems
- Non-deleterious Material
- Manufactured without the use of CFC's/HCFC's
- Zero ODP and Low GWP
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Thermal Ply

FR/TP



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- Insulation and Decking in a Single Fix
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Standards

Xtratherm Flat Roof range is manufactured to EN ISO 13165 under quality systems approved to EN ISO 9001:2008 quality management, EN ISO 14001:2004 environmental management and BS OHSAS 18001 Health and Safety Management System.

Storage

Xtratherm insulation boards must be protected from weather conditions, (preferably in dry storage) on the site and during installation. The polythene wrapping on packs is not a suitable weather protection. If internal storage is not possible, boards must be protected by secured waterproof sheeting vented to the underside to avoid condensation build-up.

Cutting

Xtratherm FR/TP boards can be readily cut using a sharp knife or fine toothed saw. Ensure tight fitting of the insulation boards to achieve continuity of insulation as asked for in accredited details.

Packaging

Xtratherm FR/TP is wrapped in polythene packs and each pack is labelled with details of grade/type, size and number of pieces per pack.

Availability

Xtratherm products are available through builder's merchants and specialist distributors throughout the UK and Ireland. For the location of your nearest stockist contact Xtratherm.

CFC/HCFC Free

Xtratherm FR/TP is manufactured without the use of CFC's or HCFC's and has Zero Ozone Depletion Potential.

Durability

Xtratherm PIR Flat Roof insulation products are stable, rot proof and will remain effective for the life span of the building, depending on specification and installation. Care should be taken to avoid contact with acids, petrol, alkalis and mineral oil. Should contact be made, clean materials in a safe manner before installation. Solvent based adhesive containing methyl ethyl ketone should not be used.

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Good workmanship and appropriate site procedures are necessary to achieve expected thermal and airtightness performances. The example calculations are indicative only. Default values for components and cavities have been used. For specific U-value calculations please contact Xtratherm Technical Support. Comprehensive guidance on installation should be consulted. Xtratherm technical literature and Agrément certification is available for download on the Xtratherm website. The information contained in this publication is, to the best of our knowledge, true and accurate but any recommendations or suggestions which may be made are without guarantee since the conditions of use are beyond our control.