Xtratherm®

Flat Roof Solutions
High performance PIR Flat Roof Insulation

Insulation for Partially or Fully Bonded, Torched-on, Built-up Bituminous Felt Systems
FR/BGM

Key Features

High Performance Rigid Insulation

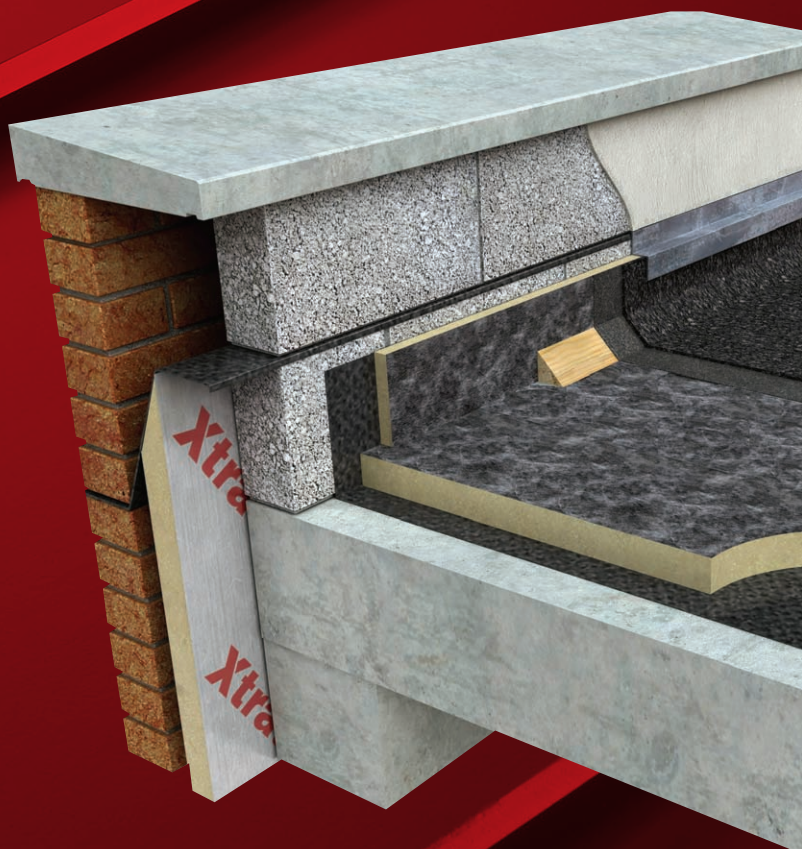Thermal Conductivity as Low as 0.024W/mK

Compatible with Most bituminous based Roofing Systems

Non-deleterious Material

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

Zero ODP and Low GWP
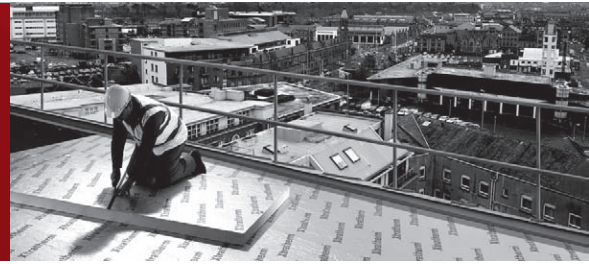
Suitable for New Build and Refurbishment Projects

Xtratherm®
More than insulation

Xtratherm® | Flat Roof Solutions
High performance PIR Flat Roof Insulation

Flat Roof Board FR/BGM
Insulation for Partially Bonded, Torched-on,
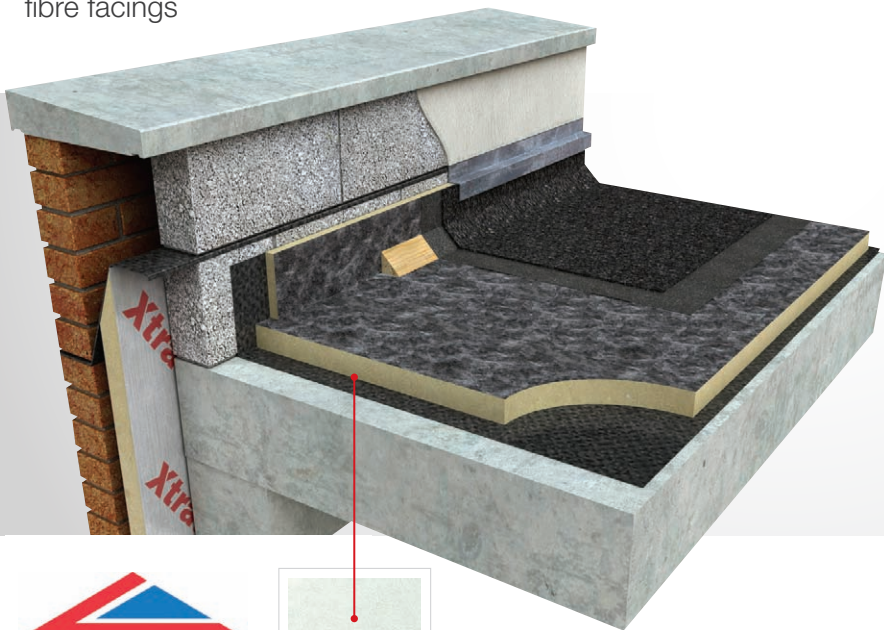Built-up Bituminous Felt Systems

FR/BGM is faced with a polypropylene fleece finished bitumen/glass fibre working surface and a mineral glass facing to the under side. FR/BGM is part of Xtratherm's comprehensive range of high performance flat roof boards providing total solutions for flat roof projects.

High Thermal Performance

Compatible with most bituminous based roofing systems

Fleece finished bitumen/glass fibre facings

Mineral glass facing to the under side of BGM board.

BBA APPROVAL INSPECTION TESTING CERTIFICATION
11/4878

Xtratherm FR/BGM Sheet Size (mm)

Length
1200

Width
600

Thickness
50, 60, 70, 80, 90, 100, 120

Other sizes are available subject to quantity and lead time.

Roof Loading
Xtratherm FR/BGM is suitable for use on roof decks that are subject to limited maintenance foot traffic. Walkways should be provided on roofs requiring regular pedestrian access. When the roof is complete, protective boarding should be laid if additional site work is to be carried out.

Roof Finish
Built up roofing systems should be finished with a suitable reflective layer such as chippings.

Fire Performance
Built-up roofs using Xtratherm FR/BGM as part of a 3-layer system, with mineral chippings on the cap sheet will attain an FAA rating when tested to BS 476, Part 3: 2004 external fire exposure roof test.

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

Note: FR/BGM can also be used in mechanically fastened or loose laid ballasted bituminous roofing systems.

Roof Design
Xtratherm FR/BGM is suitable for use with most bitumen based, partially bonded water proofing systems typically including a BS 747 type 3G perforated base layer or proprietary system.

Xtratherm FR/BGM, (Fleece side upper most) may also be fully bonded. Guidance in regard to moisture and condensation should be in accordance with BS 8217: 2005 (Reinforced bitumen membranes for roofing.

* During the construction process, the construction should be protected from rain penetration during breaks in the process.

* With fully bonded applications additional care is required to ensure that the construction remains free from moisture. Failure to protect will result in blistering of the waterproof layer.

Falls
The fall on a flat roof should be designed to ensure that rainfall does not pond.

Flat Roof Insulation

Vapour Control Layer
Decks should be primed before the application of the hot bitumen used to bond the vapour control layer. Reference should be made to BS 8217:1994 when applying the vapour control layer. Carry the VCL past the insulation and seal with the parapet wall.

Laying (Metal Deck)
On metal decks, Xtratherm FR/BGM should be laid break bonded into hot bitumen (max temperature 240°C) mopped or poured over the vapour control layer. The board can also be mechanically fixed. Ensure all edges of the boards are supported.

Laying (Concrete Deck)
Ensure concrete decks are laid to provide correct falls to outlets and are clean, dry, without projections. Primer should be laid in accordance with the manufacturer's instructions. The vapour control layer should be fully bonded to the deck and the Xtratherm FR/BGM should be laid into hot bitumen on the vapour control layer in a break bonded pattern. The boards can also be mechanically fixed.

Laying (Timber Deck)
On plywood decks, Xtratherm FR/BGM should be fully bedded in hot bitumen over a continuous vapour control layer which has been nailed or bonded to the deck. The boards can also be mechanically fixed, fixing heads should be sealed with bitumen.

Fixing
The specification for fixing Xtratherm roof boards will vary with the location, roof height/width and topographical data. Architectural specification should be consulted. Generally with 1200mm x 600mm boards, a minimum of 4 fixings are adequate, located between 50mm and 150mm from all edges, additional fixings may be placed along the centre line. Counter sunk washers, 50mm in diameter should be used with each fixing. However, BS 6399: Part 2 1995 should always be consulted. In two layer systems, all layers should be fixed in accordance with fixing manufacturers instructions.

Bitumen Based Built Up Roofing Systems
Technical guidance from the appropriate bitumen waterproofing manufacturer should be sought as to assure proper installation of the bonded BUR system.

Fire
Each contract should be assessed for suitability of torch on applications. The suitability of materials, substrates and specifications should be assessed before commencement. Application of the torch on system should be undertaken only by fully trained personnel with appropriate fire precautions and fire extinguishing equipment available at hand. All timber roof components, and most insulation materials are combustible, and will be vulnerable to a naked flame. These materials may be hidden from view, due attention should be given and all precautions taken. This is the responsibility of the operatives.

Typical Physical Characteristics

Property	Units
Density (Foam Core)	32kg/m^3
Compressive Strength	>150kPa @ 10% Compression
Water Vapour Resistivity	>100MNs/gm
Thermal Conductivity*	0.024 - 0.026W/mK

Typical U-values
FR/BGM Over Concrete Deck

FR/BGM (mm)	U-value (W/m^{2}K)
80	0.29
90	0.26
100	0.23
120	0.20
60+80 (140)	0.17

Spanning
Xtratherm FR/BGM insulation boards laid over metal decks should be in accordance with BS 4841: Part 3

FR/BGM	Trough Openings
25	≤ 75
30	76-100
40	101-150
50	151-200

BRE ENP 336·415·429 ENVIRONMENTAL RATING

<5 GLOBAL WARMING POTENTIAL GREEN GUIDE A RATED

ZERO CARBON FABRIC STANDARD

Zero O D P

NFRC THE NATIONAL FEDERATION OF ROOFING CONTRACTORS LIMITED

BBA APPROVAL INSPECTION TESTING CERTIFICATION COMPETENT PERSON CS/1005-1-4

ISO 9001 | Quality Management Systems
ISO 14001 | Environmental Management
OHSAS 18001 | Occupational Health & Safety

The given U-values are indicative only. The effect of fixings has been assumed to have had no effect on the U-value. For comprehensive calculations on all deck types, please contact Xtratherm Technical Support.
*Thermal conductivity is dependent on facings and product thickness.

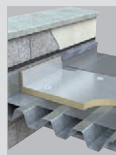# Xtratherm® | Flat Roof Solutions
High performance PIR Flat Roof Insulation

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

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/BGM 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/BGM 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/BGM 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.

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

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
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Insulation for Single Ply Fully Adhered
FR/MG

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— Thermal Conductivity as low as 0.024W/mK
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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
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Thermal Ply
FR/TP

— 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
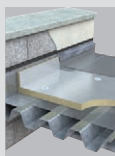
Rigid Insulation
Flat Roof Solutions