

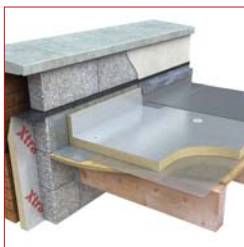
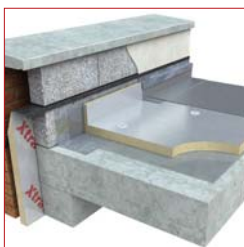
EU ISSUE 1
MARCH 2008

Xtratherm®

High performance PIR flat roof insulation

Mechanically Fixed or Loose Laid
Ballasted Roofing
XT/FR ALU

www.xtratherm.eu



More than insulation



Quality



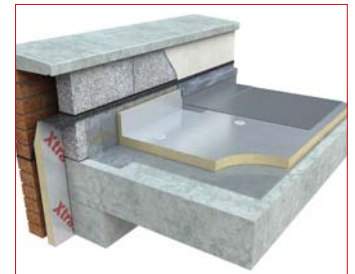
Environmental



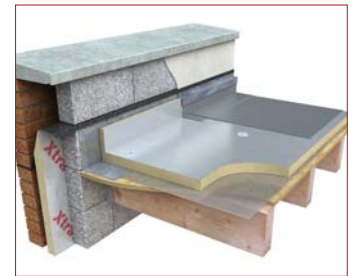
Flat Roof Board XT/FR ALU

Single Ply Mechanically Fixed or Loose Laid Ballasted Roofing

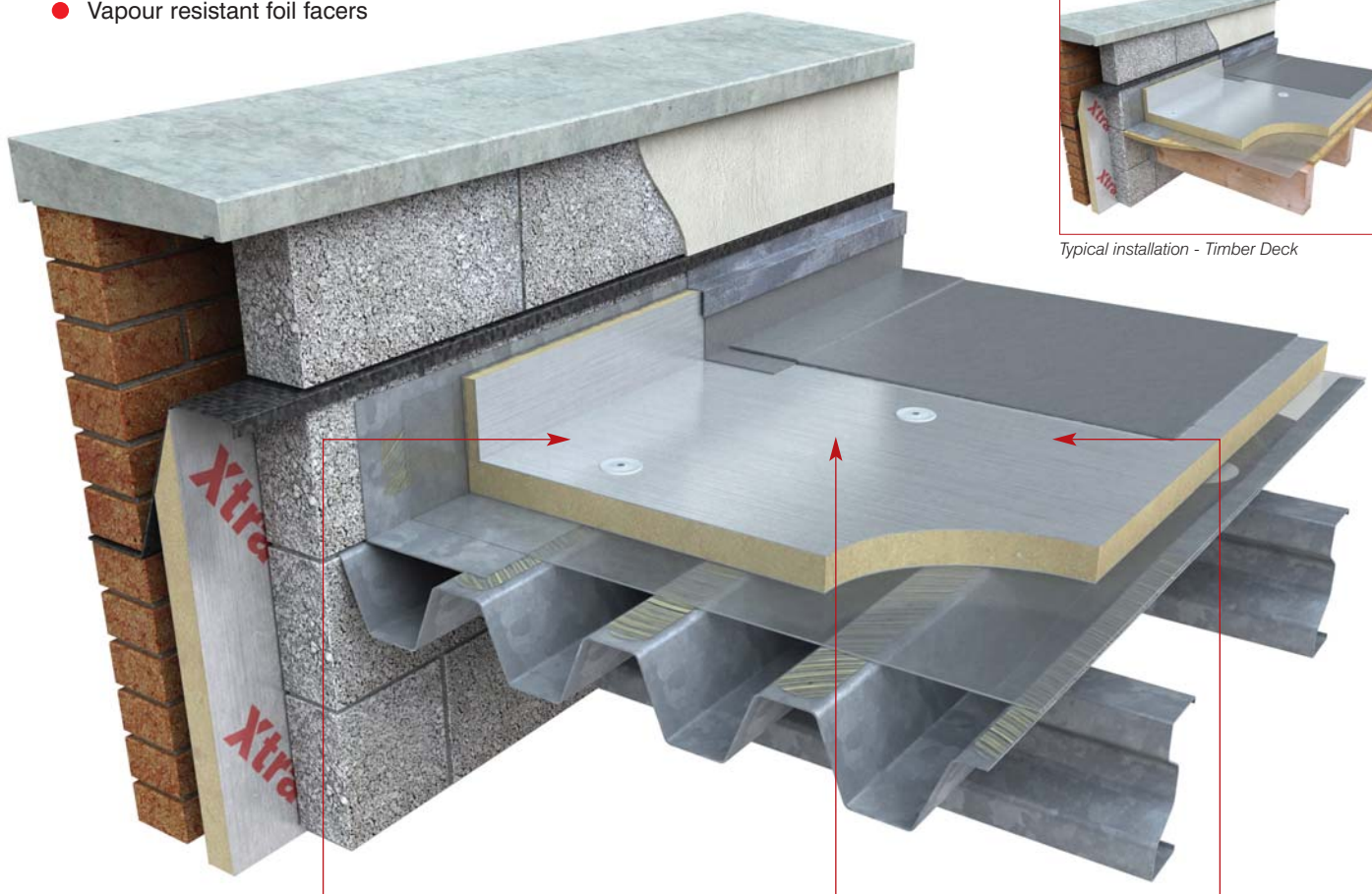
- High Thermal Performance
- Compatible with - mechanically fixed single ply systems. - Loose laid ballasted roofing systems
- Vapour resistant foil facers



Typical installation - Concrete Deck



Typical installation - Timber Deck



Xtratherm XT/FR ALU insulation boards should be laid over the vapour control layer in a break bonded pattern. The long edges of the boards should be laid at right angles to the direction of the substrate and all edges must be fully supported by the deck. The XT/FR ALU insulation boards are secured by approved mechanical fixings or loose laid under ballast.

The requirement for a separate water vapour control layer should be assessed in accordance with National Regulations. When a vapour control layer is necessary, 1000 gauge polythene should be used. Any fixings that penetrate it must be sufficiently self sealing as to guarantee the properties of the vapour control layer.

Roof Finishes: Consideration should be given to the recommendations of the local Roofers Association and those of the local Waterproofing Manufacturers Associations.

Falls: The fall on a flat roof should be constant and steep enough to ensure that rainfall does not pond. Care must be taken to provide adequate falls ie not less than 1-80 to rain water outlets.

Fire: The fire rating when tested to ENV 1187 'External Fire Exposure Roof Test' will be dependent upon waterproofing system specified. Xtratherm XT/FR ALU will typically achieve Euroclass E Fire Rating.

Xtratherm XT/FR ALU foil faced insulation boards are suitable for use on roof decks that are subject to maintenance traffic. Walk ways 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. The completed roof should not be used for storage of heavy materials or air conditioning plant.

Xtratherm XT/FR ALU is faced with a gas-tight foil face.

Xtratherm XT/FR ALU foil faced roof boards are suitable for use below single ply mechanically fixed roof membranes and loose laid ballasted roofing systems.

Note: XT/FR ALU is not suitable for direct contact applications with built-up bitumen based roofing or mastic asphalt systems.

XTRATHERM XT/FR ALU SHEET SIZE

DIMENSIONS	SIZE (mm)	
Length	2400	1200
Width	1200	1000
Thickness	50/60/70/80/90/100/ 120/140	

Other sizes are available subject to quantity and lead time. Optional boards can be supplied with T&G edge finish.

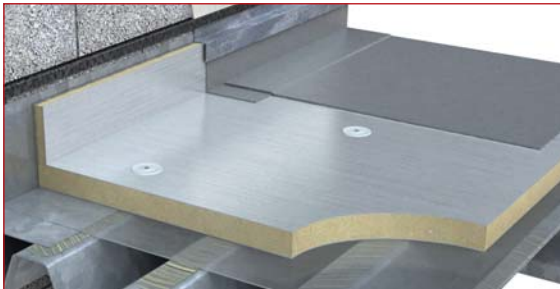
Xtratherm XT/FR ALU

Xtratherm XT product range is CFC/HCFC free (Zero Ozone Depletion Potential)

Flat Roof

Xtratherm XT/FR ALU foil faced boards are suitable for use below PVC, TPO or EPDM single ply roof membranes and loose laid ballasted roofing.

Note: XT/FR ALU is not suitable for direct hot contact applications with built-up bitumen based roofing or mastic asphalt systems.



Installation Guidelines

Flat Roof Insulation

Vapour Control Layer

The water vapour control layer should be laid with 150mm laps, which are turned up at any vertical upstand. When the insulation boards have been positioned the laps are turned over and sealed, prior to the roof finish being completed.

Laying - Metal/Timber Deck

Xtratherm XT/FR ALU foil faced boards should be laid over the vapour control layer in a break bonded pattern. The long edges of the boards should be laid at right angles to the corrugations and all board joints must be supported by the deck. The XT/FR ALU insulation boards are generally secured by approved mechanical fixings.

Laying - Concrete Deck

Xtratherm XT/FR ALU boards are laid over the vapour control layer in a break bonded pattern and secured with approved mechanical fixings, or secured under ballasted system. Care should be taken to ensure that the concrete deck is graded to the correct falls, is dry, clean and free from any projections or gaps.

Fixing

The specification for temporary fixing of Xtratherm roof boards will vary with the location, roof height/width and topographical data, architectural specification should be consulted.

Generally with 1200 x 1000 boards, a minimum of 3 fixings are adequate, located between 50mm and 150mm from sides or edges, additional fixings may be placed along the centre line. 6 fixings per 2.4 x 1.2m sheet is recommended. Counter sunk washers, > 70mm in diameter should be used with each fixing. However, National Regulations should always be consulted. During the construction process, the construction should be protected from rain penetration during breaks in the process.

TYPICAL PHYSICAL CHARACTERISTICS

PROPERTY	UNITS
Density (Foam Core)	>30 Kg/m ³
Compressive Strength	>150 kPa @ 10%
Thermal Conductivity	0.023 W/mK
Service Temperature	-50°C to +110°C
Reaction to fire	Euroclass E

SPANNING

Xtratherm XT/FR ALU insulation boards laid over metal decks should be in accordance with UEAtc Guide par. 4.5.2

THICKNESS (mm)	THROUGH OPENING (mm)
25	75
30	>75
35	>100
40	>125
45	>150
50	>175

TYPICAL 'U' VALUES and 'R' VALUES

XT/FR ALU Flat Roof Insulation Board		
THICKNESS (mm)	Ud-Value (W/m ² K)	Rd-Value (m ² K/W)
50	0.46	2.17
60	0.38	2.60
70	0.32	3.04
80	0.28	3.47
90	0.26	3.91
100	0.23	4.34
120	0.20	5.21
140	0.17	6.08

Rd and Ud values given are for insulation material only, for comprehensive calculations on all deck types and including any fixings contact Xtratherm Technical Support.

TOLERANCE

DIMENSIONS	SIZE (mm)	TOLERANCE
Length	2400, 1200	+/- 5mm
Width	1200, 1000	+/- 3mm
Thickness	<60	+/- 2 mm
	≥60	+/- 3 mm
Diagonals	Do not differ more than	0.3%

The Xtratherm range of high performance insulation boards provides the complete solution for newbuild and refurbishment.

Thin-R® Flat Roof Mechanically Fastened or Ballasted



XT/FR ALU

High Thermal Performance
Compatible with mechanically fixed single ply roofing and loose laid ballasted roofing systems.
Vapour resistant foil facers

Suitable for insulating:
New Flat Roof
Refurbished Flat Roof

Thin-R® Flat Roof Fully Adhered



XT/FR MG

High Thermal Performance
Compatible with fully adhered single ply roofing and mechanically fastened or loose laid ballasted roofing systems.

Suitable for insulating:
New Flat Roof
Refurbished Flat Roof

Thin-R® Roof Built Up Bonded



XT/FR BG

High Thermal Performance
Compatible with bonded bituminous based roofing systems and mechanically fastened or loose laid ballasted bitumen roofing systems.

Suitable for insulating:
New Flat Roof
Refurbished Flat Roof

Thin-R® Flat Roof Thermal Ply



XT/TP Plywood

Insulation & decking in one fix
High Thermal Performance
Vapour Resistant Foil Facer
Rapid weather proofing

Suitable for insulating:
New Flat Roof
Refurbished Flat Roof

Technical Support

The Xtratherm Technical Support team provide a single point of contact to offer assistance on a wide range of issues for both the Designer and Builder and can be contacted by phone, fax or e-mail. Full details of all Xtratherm products, along with full technical literature can be downloaded from the website or requested by e-mail at:

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