

# XtroLiner

Class 'O' Modified PIR Insulation

Fire Performance

Thermal Conductivity

Extensive Range

Product Specifications

## Class 'O' Modified PIR Insulation

# Walls

## XO/FB

Framing For  
Steel & Timber

### Key Features

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Class 'O' Modified PIR

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Thermal Conductivity  
0.021 W/mK

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HCFC/CFC Free Zero ODP

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Class 'O'/Low Risk Fire Rating

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For New Build or Refurbishment



AS LOW AS  
**X021**  
Xtratherm

Xtratherm XO/FB Framing Board is designed for use with timber frame and steel frame wall constructions. XtroLiner XO range of modified PIR offers excellent insulation performance with a thermal conductivity of 0.021 W/mK and a Class 'O' fire rating. XtroLiner is CFC & HCFC free and is manufactured under the highest standards of ISO 9001 and 14001 Quality and Environmental Management Systems. The XtroLiner board is a modified polyisocyanurate (PIR) bonded to low emissivity textured aluminium foil facings.

Class 'O' modified PIR insulation

Thermal conductivity 0.021 W/mK

HCFC/CFC Free

Suitable for use with timber frame or steel frame systems

For between studs or as an insulating sheathing

### Timber Framed System

Placing a lining of XO Framing Boards into the traditional cavity of the construction, and effectively insulating the thermal bridging caused by the timber studding drastically improves the insulation value of the walls over the traditional method of insulating between studs only.

### Steel Framed System

It is recommended that buildings constructed using a steel framed systems are insulated on the outer side of the construction creating a 'Warm Frame'.

### Specification Clause

The wall insulation shall be Xtratherm XtroLiner XO/FB manufactured to BS EN ISO 9001: 2000 by Xtratherm, comprising of CFC/HCFC free Class 'O' rigid modified polyisocyanurate (PIR) with textured low emissivity foil facings.

The XO/FB\_ \_ \_mm to achieve a U-value of \_ \_ \_W/mK for the wall element. To be installed in accordance with instructions issued by Xtratherm. Refer to NBS clause F30 155, K10 15, K10 205, P10 210.



### Property & Units

Compressive Strength  
>125 (kPa)

Water Vapour Resistivity  
>100 (MNs/gm)

Thermal Conductivity  
0.021 (W/mK)

Service Temperature  
-20 to +100 (°C)

### XtroLiner XO/FB

Length (mm)  
2400

Width (mm)  
1200

Thickness\* (mm)  
50, 60, 75, 80, 100, 120

*\*Other sizes available subject to quantity and lead time.*

### XtroLiner XO/FB

Typical R-values

50mm  
R-value: 2.38

60mm  
R-value: 2.86

75mm  
R-value: 3.57

80mm  
R-value: 3.81

100mm  
R-value: 4.76

120mm  
R-value: 5.71

## Installation Guidelines

### Timber Framed System

Glass fibre insulation or Xtratherm XtroLiner should be accurately cut to fit snugly between the timber studding. If partially filling, ensure the insulation is securely held in place by treated timber battens to provide a stop, boards can be positioned front or back of the stud.

When using the XtroLiner XO/FB as a sheathing board fix the insulation outside of any breather membrane or timber sheathing on the external surface (A second breather membrane may be added at this point for further protection) and temporarily fix with large headed clout nails. Ensure boards are closely butted and stagger jointed. Do not tape the outer surface of the XO/FB sheathing boards.

Place a sealed vapour control layer of polythene with lapped and sealed joints over the internal stud face.

Install cavity barriers into the cavity as normal practice.

Apply the internal finish as normal using fixings as recommended by timber frame supplier. Relevant accredited details should be followed to ensure calculated performance.

### Steel Framed System

As with timber framing, the XtroLiner should be fixed to the outer face of the steel frame ensuring that vertical joints meet over a metal stud. Fixings should be in accordance with the steel system manufacturers recommendations.

Place a sealed vapour control layer with lapped and sealed joints over the inner stud face.

Install cavity barriers into the cavity as normal practice.

Ensure boards are closely butted.

Apply the internal finish as normal.

Fix wall ties as recommended by steel frame supplier.

### Ventilated Cladding

Place the breathable membrane over the insulation sheathing.

Treated timber battens are fixed vertically to the wall through the breathable membrane and insulation layer, ensuring that the battens are fixed securely to the framing system. Fixings should be appropriate for the weight of the cladding system, seek advice from the fixing manufacturer. Horizontal tiling battens can be fixed to the vertical battens if the cladding system is to be tile hung, or the cladding fixed directly to the vertical battens. Cladding system should be fixed in accordance with the manufacturer's recommendations.

### Standards

Xtratherm XO range is manufactured to EN ISO 13165 under quality systems approved to EN ISO 9001:2000 quality management, EN ISO 14001:2004 environmental management and BS OHSAS 18001 Health and Safety Management System.

### Storage

Xtratherm XO/FB should be stored off the ground, on a clean, flat surface and must be stored under cover. The polythene wrapping is not considered adequate protection for outside exposure.

### Cutting

Xtratherm XO/FB 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 XO/FB 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 XO/FB is manufactured without the use of CFC's or HCFC's and has Zero Ozone Depletion Potential and a GWP of less than 5.

### Durability

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

## Typical U-values

### Timber Frame - Masonry Facing

Thickness of Sheathing (mm)

	50	60	80	100
Between Studs	0.17	0.16	0.14	0.12
60	0.15	0.14	0.12	0.11
80	0.14	0.13	0.12	0.10
100				

Breather membrane not included in calculation

### Timber Frame - Ventilated

Thickness of Sheathing (mm)

	50	60	80	100
Between Studs	0.19	0.17	0.15	0.13
60	0.17	0.15	0.13	0.12
80	0.15	0.14	0.12	0.11
100				

Breather membrane not included in calculation

### Steel Frame - Masonry Facing

Thickness of Sheathing (mm)

	50	60	80	100
Between Studs	0.19	0.17	0.15	0.13
60	0.17	0.16	0.14	0.12
80	0.16	0.14	0.13	0.11
100				

Breather membrane not included in calculation

### Steel Frame - Ventilated

Thickness of Sheathing (mm)

	50	60	80	100
Between Studs	0.21	0.19	0.16	0.14
60	0.19	0.17	0.15	0.13
80	0.17	0.16	0.14	0.12
100				

Breather membrane not included in calculation

# XtroLiner

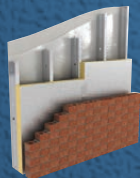
Class 'O' Modified PIR Insulation



## XO/CW

### Cavity Wall Partial Fill

XtroLiner XO/CW is an insulation for cavity walls where a residual cavity has to be maintained. The excellent thermal performance of the XtroLiner allows for very good U-values to be achieved whilst minimizing overall cavity wall thickness. XO/CW can be combined with Xtratherm Thermal Liner Boards to achieve U-values down to Zero Carbon fabric standards in traditional wall thicknesses.



## XO/FB

### Framing Board

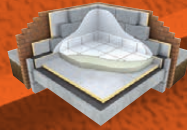
XtroLiner can be installed as a lining for timber or steel framing systems. The XtroLiner can be used to externally or internally line the frame and will dramatically cut thermal bridging.



## XO/RS

### Rainscreen

Xtratherm have developed the XtroLiner Rainscreen insulation board to bring the thermal performance of external Rainscreen cladding constructions methods towards the Zero Carbon standards aspired to in building regulations.

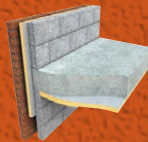


## XO/UF

### Floors

Solid & Suspended Systems

XtroLiner XO/UF under floor insulation boards are used to reduce the thermal transmittance of ground supported and suspended concrete floors. XtroLiner boards can also be used in suspended timber floors between the joists.



## XO/ST

### Soffit

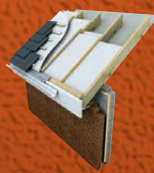
XtroLiner Soffit is for use in concrete soffit applications in exposed floors such as underground car parks with habitable space above.



## XO/STP

### Soffit Plus

XtroLiner Soffit Plus has an additional layer of 6mm magnesium silicate board auto-adhesively bonded to the insulation offering a facing with enhanced impact resistance with a surface that can be decorated.



## XO/PR

### Roofs

Pitched Roofs

Using Xtratherm XO/PR on sloped roof areas can provide the most efficient U-values with minimal intrusion into valuable living space. Creating a Warm Roof by placing XO/PR over the rafters is a particularly effective way of insulating roofs to the higher performance levels required for Zero Carbon targets.

## Rigid Insulation Flexible Solutions

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Good workmanship and appropriate site procedures are necessary to achieve expected thermal and airtightness performance. The example calculations are indicative only. Default values for components and cavities have been used, for specific U-value calculations 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.