

# XtroLiner

Class 'O' Modified PIR Insulation

Fire Performance

Thermal Conductivity

Extensive Range

Product Specifications

## Class 'O' Modified PIR Insulation

# Walls

## XO/CW

Partial Fill Cavity

### Key Features

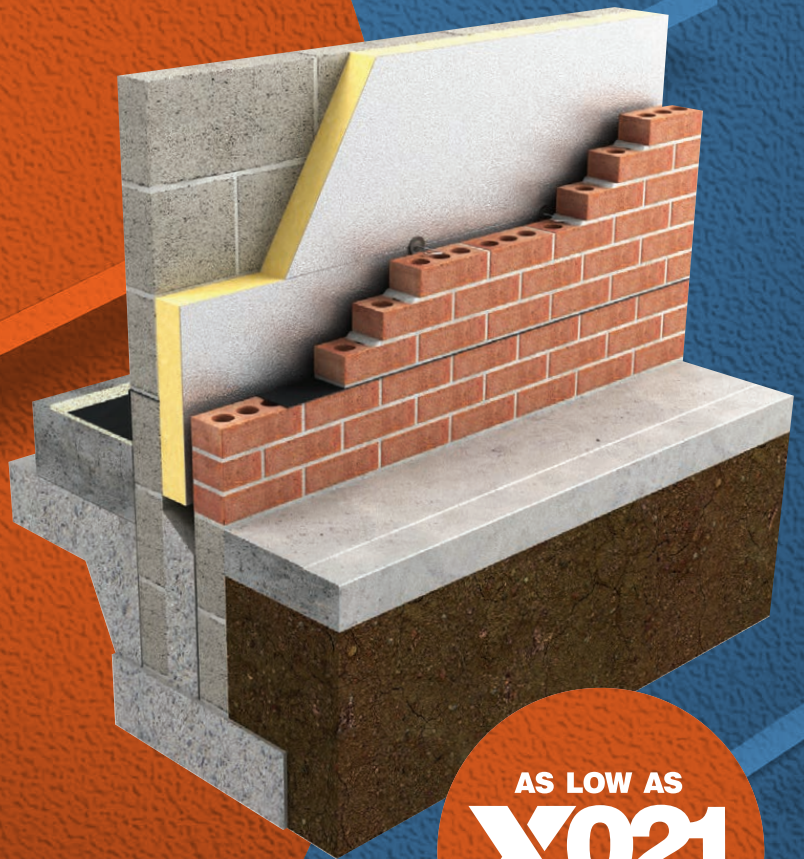
Class 'O' Modified PIR

Thermal Conductivity  
0.021 W/mK

HCFC/CFC Free Zero ODP

Class 'O'/Low Risk Fire Rating

For New Build or Refurbishment



AS LOW AS  
**X021**  
Xtratherm

# XtroLiner

Product Specifications

## XO Partial Fill Cavity

Our XtroLiner XO range of modified PIR offers excellent insulation performance with 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 has a core of modified polyisocyanurate (PIR) bonded to low emissivity textured aluminium foil facings.

### Partial Fill Cavity Insulation

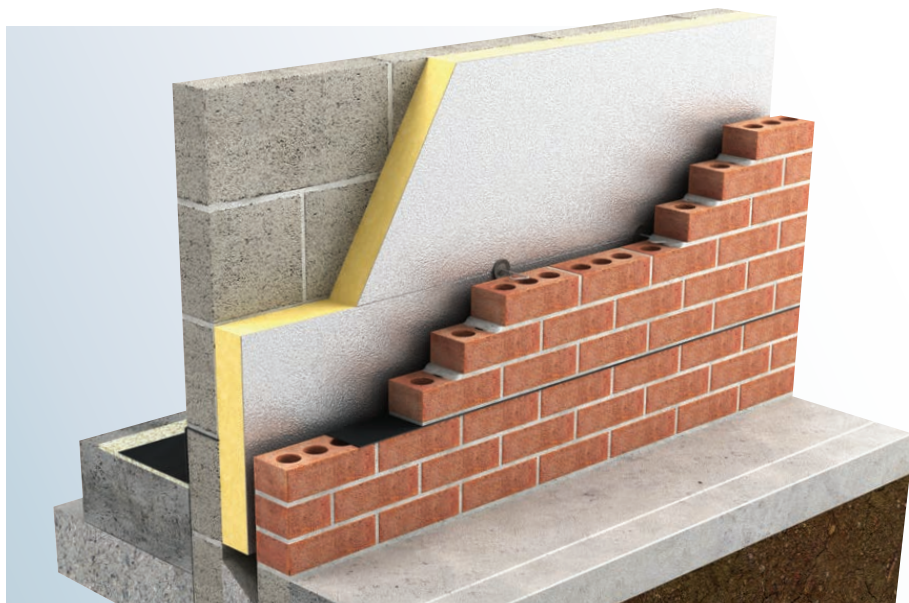
Xtratherm XO/CW Partial Fill Cavity Wall insulation is the solution of choice to achieve the lower U-values asked for under the building regulations whilst maintaining a residual cavity as a protection from wind driven rain. Masonry walls are the predominant construction method. The high performance to thickness ratio of XtroLiner allows for excellent U-values to be achieved within traditional constructions without increasing dramatically the overall width of the wall. Using XO/CW allows the residual cavity to be maintained, providing an effective method of preventing moisture ingress.

### Insulation value

XO/CW Partial Fill Cavity Wall insulation is a rigid modified polyisocyanurate (PIR) insulation with low emissivity foil facings having a thermal conductivity of 0.021 W/mK.

### Specification Clause

The Partial Fill Cavity Wall insulation shall be Xtratherm XtroLiner XO/CW 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/CW\_ \_ \_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, F30 12.



### 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/CW

Length (mm)  
1200

Width (mm)  
450

Thickness (mm)  
50, 60, 75, 80, 100

### XtroLiner XO/CW

#### 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

## Residual Cavity

A Residual cavity is the air space retained when the Xtratherm XO/CW Partial Fill Cavity Wall insulation is placed in the cavity of a wall. For wall heights up to 12m a minimum 25mm cavity is recommended, and a minimum 50mm cavity for wall height greater than 12m, and up to and including 25m.

The minimum residual cavity width allowed is 25mm with partial fill wall insulation, however 50mm may be required by the designer, NHBC or Zurich.

## Wall Ties

The insulation should be secured to the outer face of the inner leaf by a retaining clip on approved double drip type stainless steel wall ties that conform to BS EN 845-1:2003.

## Typical U-values

Safe-R Thickness						
Block	50	60	75	80	100	
<b>0.11</b>	0.24	0.21	0.18	0.18	0.15	
<b>0.51</b>	0.27	0.24	0.20	0.19	0.16	
<b>1.15</b>	0.28	0.24	0.21	0.20	0.17	

Dot and Dab plasterboard finish

## 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/CW 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/CW 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/CW 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.

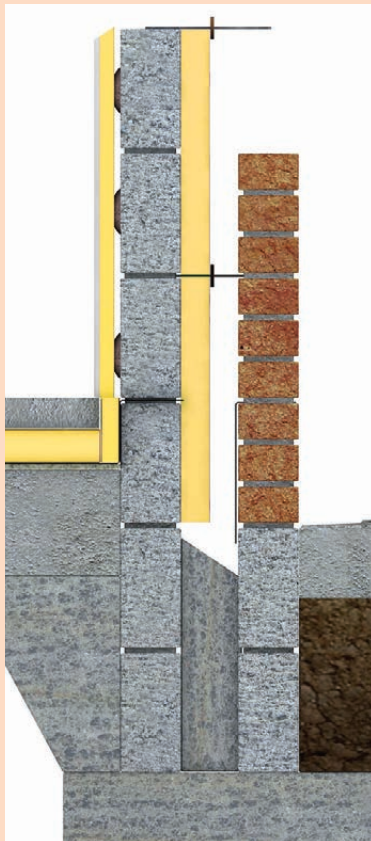
## CFC/HCFC Free

Xtratherm XO/CW 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.

## Installation Guidelines



### Cavity Wall

Insert wall ties max 600mm CS one block course below DPC. Secure cavity boards tight against inner leaf with retaining clip on approved stainless steel wall ties.

Maintain a 50mm residual cavity to suit all exposure zones. Ensure a minimum 25mm residual cavity is maintained. This may have to be increased to suit conditions. (e.g. NHBC) Place wall ties at max 900 x 450 centres; each board secured with a minimum of 3 wall ties.

Ensure block joints are fully bonded with unbroken mortar. Fix wall ties 225mm vertically and 150mm horizontally from face of unbonded jambs. Ensure wall ties (cavity) are kept clean of mortar and are sloped towards outer leaf. A cavity board should be used to keep cavity clean. Form XtroLiner boards to insulate reveal openings to provide robust detailing.

Lower U-values can be achieved with the addition of an internal lining of Xtratherm XT/TL on adhesive dabs or timber battens.

# XtroLiner

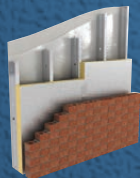
Class 'O' Modified PIR Insulation



## 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

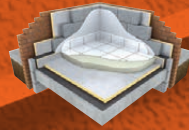
XtroLiner can be installed as a lining for timber or steel framing systems. The XtroLiner can be used to externally or internally line the frame and will dramatically cut thermal bridging.



## 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.

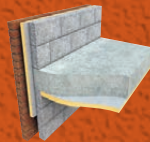


## XO/UF

### 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.