XtroLiner

Class ‘O’ Modified PIR Insulation

Fire Performance

Thermal Conductivity

Extensive Range

Product Specifications

Class ‘O’ Modified PIR Insulation

Walls

XO/RS

Rainscreen

Key Features

- Class ‘O’ Modified PIR
- Thermal Conductivity 0.021W/mK
- HCFC/CFC Free
- Approved for use in buildings over 18m in height.
- BBA Approved

BBA BRITISH BOARD OF AGREMENT

10/4803

Xtratherm®

More than insulation

www.xtratherm.com

XtroLiner | Product Specifications XO Rainscreen

Xtratherm XO/RS Rainscreen insulation is manufactured to strict EN13165 standards assuring product performance with an excellent thermal conductivity of 0.021 W/mK. It is suitable for use in buildings over 18m in height complying with criteria set out in BR135 having been successfully tested to BS8414, this coupled with the excellent thermal conductivity and robust foil facings delivers ultimate performance in Rainscreen applications.

Modern method of construction offer many advantages on site. The speed and efficiency of the construction methods allow buildings to be erected faster, with precision components offering highly energy efficient wall floor and roof elements.

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.

Using Xtratherm XtroLiner can provide the most efficient U-values with minimal thickness of insulation providing effective thermal and fire performance in buildings using a Rainscreen façade.

The lightweight product achieves a thermal conductivity of 0.021 W/mK and addresses the stringent safety requirements with a Class 'O' fire rated insulation core and negligible smoke obscuration.

Specification Clause

The Rainscreen insulation shall be Xtratherm XtroLiner XO/RS _ _ _mm manufactured to BS EN ISO 9001: 2000 by Xtratherm, comprising a CFC/HCFC free Class 'O' rigid modified polyisocyanurate (PIR) with textured low emissivity foil facings. To be installed in accordance with instructions issued by Xtratherm. Refer to NBS clause M21 210, M21 220, M21 230.

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/RS
Length (mm) 2400
Width (mm) 1200
Thickness (mm) 50, 60, 75, 80, 100, 120, 140

XtroLiner XO/RS 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

General

XtroLiner XO/RS Rainscreen board is a high performance external insulation system where a façade system is used as an external finish to the construction. The façade may consist of stone, ceramic, cementatious, metal or other material behind which the cavity may be ventilated.

Fixings

XtroLiner XO/RS boards can be fixed using a number of proprietary fixing systems including rail and brackets type systems. Thermal bridging can be minimized by the inclusion of thermal breaks (supplied by some manufacturers), advice should be sought from system suppliers. Fixings should be installed in accordance with the manufacturer's recommendations and appropriate for fixing of Rainscreen insulation. Thermal performance can be greatly improved by the inclusion of a second layer of insulation to the inner face of the wall construction.

U-values

The calculation of U-values should be done in accordance with BR443 2006 conventions for U-value calculation. Because proprietary systems are used, Information from system suppliers should be passed onto Xtratherm Technical Support for U-value calculation.

Vapour Control

Condensation control in highly insulated buildings is an important factor in the design and should be considered in relation to the heating and ventilation systems specified, as well as the U-values achieved within the building elements. An adequate vapour control layer to the inner face of the wall is recommended. Calculation should be carried out in accordance with BS5250:2002 (Code of practice for the control of condensation in buildings).

The provision of firestops should be in accordance with current building regulations and standards.

Sitework

Fixing should be in accordance with fixing suppliers recommendations. Approved Rainscreen cladding tape should be used to joint board edges to weatherproof the system.

BR135

For projects over 18m in height, prior to installation, it is a requirement the specifier/façade designer ensures that the relevant warranty provider is satisfied that the proposed system specification and the performance has been considered as part of the overall risk assessment of the finished building. Contact Technical Support for more information on BR135 Tests Certification.

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/RS 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/RS 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/RS 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

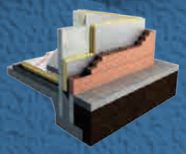
Xtratherm XO/RS is manufactured without the use of CFC's or HCFC's and has Zero Ozone Depletion Potential with a GWP of less than 5.

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 keytone, should not be used.

XtroLiner

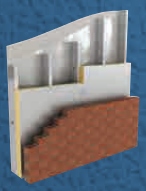
Class ‘O’ Modified PIR Insulation



XO/CW (T&G)

Cavity Wall
Partial Fill

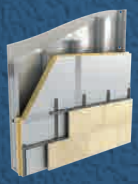
XtroLiner XO/CW is an insulation for cavity walls where a residual cavity has to be maintained. The excellent thermal performance of the XtroLiner allows for very good U-values to be achieved whilst minimizing overall cavity wall thickness. XO/CW can be combined with Xtrathem Thermal Liner Boards to 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

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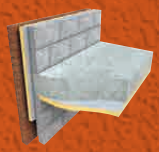
XO/UF

Floors
Solid & Suspended Systems

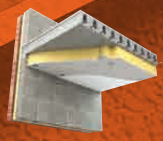
XtroLiner XO/UF under floor insulation boards are used to reduce the thermal transmittance of ground supported and suspended concrete floors. XtroLiner boards can also be used in suspended timber floors between the joists.



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.

Xtratherm UK Limited
Park Road Holmewood
Chesterfield Derbyshire
S42 5UY

Tel
+ 44 (0) 371 222 1055
Fax
+ 44 (0) 371 222 1044

Xtratherm Limited
Liscarton Industrial Estate
Kells Road, Navan
Co.Meath, Ireland

Tel
+ 353 (46) 906 6050
Fax
+ 353 (46) 906 6090

Contact
info@xtratherm.com

www.xtratherm.com

UKBSRRSA4