

Xtratherm[®]
More than insulation

Fire Performance

Thermal Conductivity

Extensive Range

Superior Performance Insulation

AS LOW AS
X020
Xtratherm

Roofs

SR/PR

Insulation for
Pitched Roofs

Key Features

Superior Performance Phenolic

Thermal Conductivity
as low as 0.020W/mK

Low Smoke Obscuration

HCFC/CFC Free Zero ODP

Class 'O'/Low Risk Fire Rating

For New Build or Refurbishment

Fast Response Heating



www.xtratherm.com

Safe-R

Superior performance phenolic insulation

Safe-R | SR Pitched Roofs

Xtratherm Safe-R is a superior performance rigid insulation with enhanced fire performance, consisting of a Class 'O' phenolic foam core with negligible smoke obscuration. Safe-R is faced with low emissivity aluminium facings both sides, and has a thermal conductivity as low as 0.020W/mK.

Using Xtratherm Safe-R SR/PR on sloped roof areas can provide the most efficient U-values with minimal intrusion into valuable living space. **Warm Roof** construction is a particularly effective way of insulating complex roofs. Insulating above and between the roof timbers ensures that the structure is kept at, or near the internal environmental conditions, reducing thermal stress and condensation risk.

Placing Xtratherm Safe-R between and/or below the rafter creates a **Ventilated Roof**. A continuous 50mm ventilation space is required between the insulation and the roof tile underlay to allow any moisture to be vented out of the construction. The high performance to thickness ratio of Xtratherm Safe-R gives the maximum insulation values with minimal intrusion into the living area below.

The **Hybrid Roof** follows the same construction as the Ventilated Roof - but an approved Vapour Permeable underlay is used above the rafter allowing the 50mm ventilation space to be dispensed with. A 25mm unvented void should be maintained.

In a ceiling, typically fibre glass is placed between and over the joists - this hides the top of the joist and may lead to health and safety concerns when the roof space is being accessed. An Xtratherm solution to insulate the thermal bridge through the joists is to place a layer of Xtratherm SR/PR to the underside of the joist before the plasterboard is fixed. This allows for the roof space to be accessed in a safe manner - leaving the top of the joists exposed, allowing the roof space to be used for storage.

Specification Clause

The pitched roof insulation shall be Xtratherm Safe-R SR/PR ___mm manufactured to BS EN 13166:2008 by Xtratherm, comprising a CFC/HCFC free rigid Phenolic core between low emissivity foil facings. To be installed in accordance with instructions issued by Xtratherm. Refer to NBS clause P10 140, K11 695, K11 55.



Property & Units

Density (Foam Core)
45 (Kg/m³)

Compressive Strength
>125 (kPa)

Water Vapour Resistivity
>100 (MNs/gm)

Thermal Conductivity
0.020 – 0.023 (W/mK)

Service Temperature
-20 to +100 (°C)

Xtratherm SR/PR

Length (mm)
2400

Width (mm)
1200

Thickness (mm)
25, 50, 60, 75, 80, 100, 120

Xtratherm Safe-R

Typical Values

40mm
R Value: 1.739

50mm
R Value: 2.381

60mm
R Value: 2.857

75mm
R Value: 3.752

80mm
R Value: 3.810

100mm
R Value: 5.000

120mm
R Value: 6.000

Ventilated Roof

Allow for ventilation gaps normally 50mm. (May be reduced depending on breather membrane certification).

Cut Xtratherm SR/PR boards to fit tightly between rafters flush with rafter bottom.

An additional 2nd layer should be added to the underside of the rafter.

Run second layer transverse to the first.

Temporarily fix with nails.

Provide vapour control layer (Aluminium tape joints).

Finish with 12.5mm plasterboard fixed with drylining screws. Screw fix every 150mm, 12mm from edge of boards.

All board edges should be supported.



Typical U-Values (Warm Roof)

Safe-R Thickness	Rafter Centres	
	600mm	400mm
Between/Over Rafters	0.17	0.18
60mm/60mm*	0.17	0.18
75mm/75mm*	0.14	0.15

*Insulation thickness only

Typical U-Values (Vented Roof)

Safe-R Thickness	Rafter Centres	
	600mm	400mm
Between/Under Rafters	0.18	0.19
75mm/50mm*	0.18	0.19
100mm/50mm*	0.15	0.16

*Insulation thickness only

Typical U-Values (Hybrid Roof)

Safe-R Thickness	Rafter Centres	
	600mm	400mm
Between/Under Rafters	0.17	0.18
75mm/50mm*	0.17	0.18
100mm/50mm*	0.14	0.15

*Insulation thickness only

Standards

Xtratherm Safe-R range is manufactured to EN ISO 13166 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 Safe-R 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 Safe-R 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.

Work Interruptions

During breaks in the build process and at the end of each working day, board edges and joints should be protected from inclement weather. Boards that have been allowed to get wet should not be used.

Packaging

Xtratherm Safe-R is wrapped in polythene packs and each pack is labelled with details of grade/type, size and number of pieces per pack. The packaging should not be considered as protection from the elements.

Availability

Xtratherm products are available through builder's merchants and specialist distributors throughout the UK and Ireland. For the location of your nearest stockist please contact Xtratherm.

Environmental

Xtratherm Safe-R is manufactured under ISO 14001:2004 Environmental Management with all major components sourced under 14001 accredited suppliers. It 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 Safe-R 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

Warm Roof

Ensure cavity wall insulation has continued to roof height to engage with roof insulation. Fix a timber stop rail to end of rafter at eaves.

Lay Xtratherm SR/PR insulation stagger jointed over rafters ensuring joints are supported by rafters.

Ensure boards are tightly butted fill any gaps with expanding foam.

A vapour permeable underlay should be fitted; refer to manufacturers Agrément certification.

Providing an unvented void under the membrane can improve the thermal performance.

Fix counter batten with approved fixings.

Ventilation may have to be provided subject to certification.

A second layer of insulation may be added between the rafters.

Provide vapour control layer in the form of aluminum taped joints or polythene sheeting.

Current Building Regulations/Standards should be considered with regard to the requirements for and/or provision of fire stops.



Xtratherm Technical Services

All the members of our technical team are individually BBA accredited to help you reach your low energy goals. BBA qualified in U-value calculation, condensation risk and also Thermal Bridging 3D analysis backed by BRE accreditation – when you call Xtratherm, you can be assured you're speaking to a qualified person.



SR/CW

Walls

Insulation for
Partial Fill Cavity Wall



SR/RS

Rainscreen

Insulation for
Rainscreen Application



SR/TB

Walls

Insulation for
Drylining Walls
Dot & Dab



SR/PR

Roofs

Insulation for
Pitched Roofs



SR/TB-MF

Walls

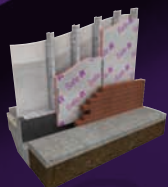
Insulation for
Drylining Walls Mechanically
Fixed to Battens



SR/STP

Soffit Plus

Insulation Composite for
Structural Ceiling Applications



SR/FB

Walls

Insulation for
Steel & Timber Framing



SR/UF

Floors

Insulation for
Ground Supported and
Suspended Floors

Rigid Insulation Flexible Solutions

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