

**Xtratherm**<sup>®</sup>  
More than insulation

Fire Performance

Thermal Conductivity

Extensive Range

# Superior Performance Insulation

AS LOW AS  
**X020**  
Xtratherm

## Walls

### SR/FB

Insulation for  
Steel & Timber Framing

#### 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](http://www.xtratherm.com)

# Safe-R

Superior performance phenolic insulation

# Safe-R | SR Framing For Steel & Timber

Xtratherm SR/FB Framing Board is designed for use with timber frame and steel frame wall constructions. It is a superior performance rigid insulation with enhanced fire performance, consisting of a Class 'O' phenolic foam core with negligible smoke obscuration. Safe-R framing board is manufactured under the highest standards of ISO 9001 and 14001 Quality and Environmental Management Systems.

- Superior performance Phenolic insulation
- Class O fire rating
- Thermal conductivity as Low as 0.020W/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 Safe-R Framing Boards SR/FB 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 Safe-R SR/FB 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 F30 155, K10 15, K10 205, P10 210.



## Property & Units

Density (Foam Core)	45 (Kg/m <sup>3</sup> )
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/FB

Length (mm)	2400
Width (mm)	1200
Thickness* (mm)	40, 50, 60, 75, 100, 120

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

## Xtratherm Safe-R

Typical R-values (Steel Frame)	
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

## Installation Guidelines

### Timber Framed System

Glass fibre insulation or Xtratherm Safe-R 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 Safe-R SR/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 SR/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 Safe-R 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 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.

### Typical U-values

#### Timber Frame - Masonry Facing

##### Xtratherm Thickness of Sheathing (mm)

	50	60	75	80	100
<b>75</b>	0.16	0.15	0.13	0.13	0.11
<b>100</b>	0.16	0.15	0.13	0.13	0.11
<b>120</b>	0.14	0.13	0.12	0.12	0.10

Xtratherm Between Studs

#### Steel Frame - Masonry Facing

##### Xtratherm Thickness of Sheathing (mm)

	50	60	75	80	100
<b>75</b>	0.18	0.16	0.15	0.14	0.12
<b>100</b>	0.17	0.16	0.14	0.14	0.12
<b>120</b>	0.15	0.14	0.13	0.13	0.11

Xtratherm Between Studs

#### Timber Frame - Ventilated

##### Xtratherm Thickness of Sheathing (mm)

	50	60	75	80	100
<b>75</b>	0.17	0.15	0.14	0.13	0.12
<b>100</b>	0.16	0.15	0.14	0.13	0.11
<b>120</b>	0.15	0.14	0.12	0.12	0.10

Xtratherm Between Studs

#### Steel Frame - Ventilated

##### Xtratherm Thickness of Sheathing (mm)

	50	60	75	80	100
<b>75</b>	0.19	0.18	0.16	0.15	0.13
<b>100</b>	0.19	0.17	0.15	0.14	0.13
<b>120</b>	0.17	0.16	0.14	0.13	0.12

Xtratherm Between Studs



### 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

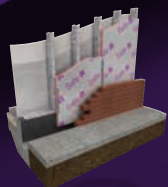
Insulation for  
Drylining Walls Mechanically  
Fixed to Battens



#### 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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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.