

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

Fire Performance

Thermal Conductivity

Extensive Range

# Superior Performance Insulation

AS LOW AS  
**X020**  
Xtratherm

## Walls

### SR/CW

Insulation for  
Partial Fill Cavity Wall

#### 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 Partial Fill Cavity

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.

## Partial Fill Cavity Insulation

Xtratherm SR/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.

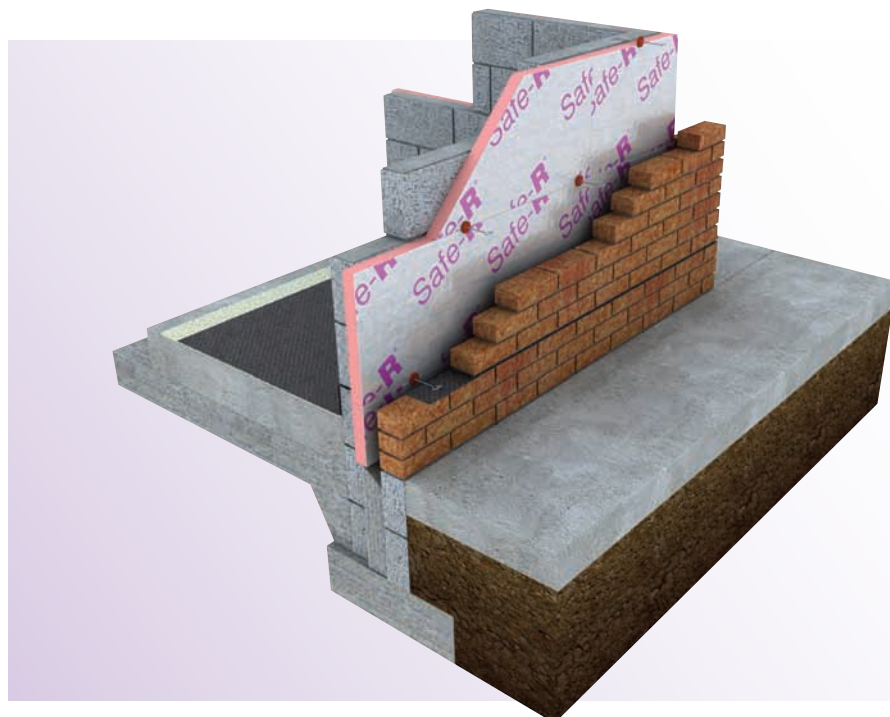
Masonry walls are the predominant construction method in the UK. Using superior performing Safe-R phenolic offers the solution when lower U-values are demanded. The high performance to thickness ratio of Safe-R allows for excellent U-values to be achieved within traditional constructions without increasing dramatically the overall width of the wall. Using SR/CW allows the residual cavity to be maintained, providing an effective method of preventing moisture ingression.

## Insulation value

SR/CW Partial fill cavity wall insulation is a rigid phenolic insulation with low emissivity foil facings having a thermal conductivity as low as 0.020W/mK.

## Specification Clause

The partial fill cavity wall insulation shall be Xtratherm Safe-R SR/CW \_\_\_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 F30 151, F30 12



## 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/CW

Length (mm)  
1200

Width (mm)  
450

Thickness (mm)  
40, 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

## Residual Cavity

A Residual cavity is the air space retained when the Xtratherm SR/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.

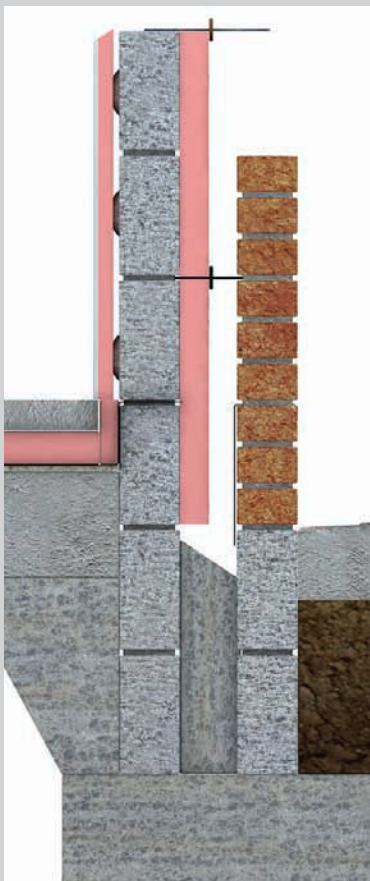
## Wall Ties

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 Cavity Walls               |             |      |      |      |      |      |
|-----------------------------------|-------------|------|------|------|------|------|
| Safe-R/CW Thickness Required (mm) |             |      |      |      |      |      |
|                                   | 50          | 60   | 75   | 80   | 100  |      |
| U-Value W/m <sup>2</sup> K        | <b>0.11</b> | 0.23 | 0.21 | 0.18 | 0.17 | 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 | 0.16 |

## 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 Xtratherm Safe-R boards to insulate reveal openings to provide robust detailing.

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

## 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 CFCs or HCFCs 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.

### 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

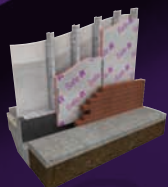
Insulation for  
Drylining Walls Mechanically  
Fixed to Battens



#### 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.