

# Safe-R

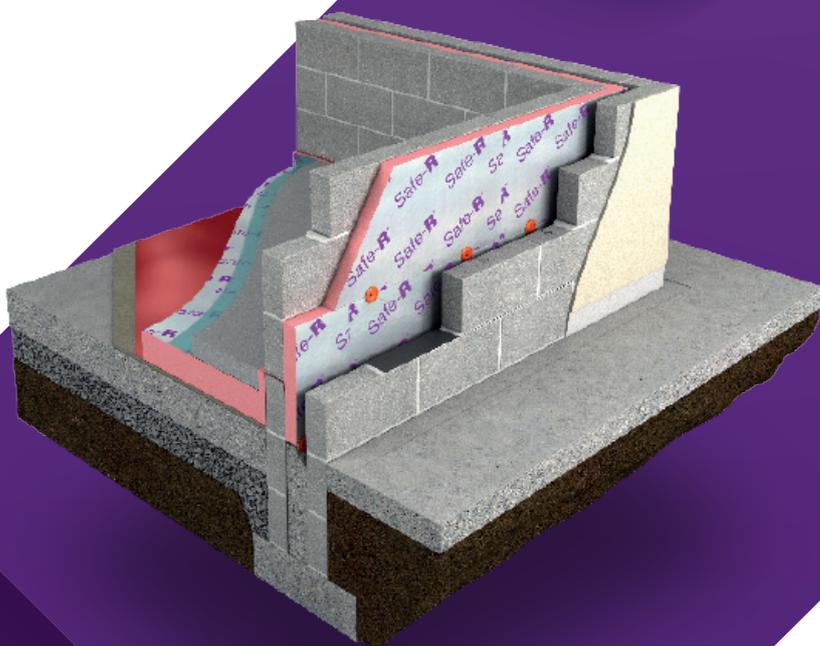
Superior  
Performance  
Phenolic  
Insulation

Walls

SR/CW  
Insulation for  
Partial Fill Cavity Walls



AS LOW AS  
**X020**  
Xtratherm®



**Xtratherm**®  
More than insulation



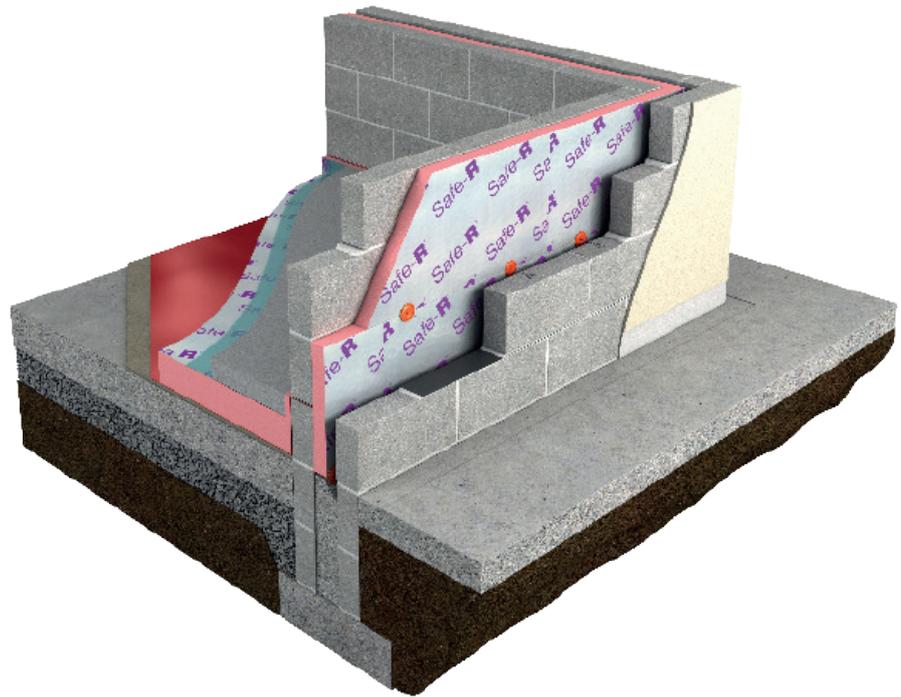
# Safe-R

Superior Performance  
Phenolic Insulation

# SR/CW

Insulation for  
Partial Fill Cavity Walls

**Safe-R SR/CW Partial Fill cavity insulation for traditional masonry walls, achieves excellent U-Values whilst maintaining a residual cavity, offering protection from wind driven rain.**



### Specification Clause

The partial fill cavity wall insulation shall be Xtratherm Safe-R SR/CW \_\_\_mm manufactured to EN 13166 by Xtratherm, comprising a rigid Phenolic core between low emissivity foil facings. The SR/CW \_\_\_mm with Agrément declared Lambda value as low as 0.020 W/mK to achieve a U-Value of \_\_\_W/m<sup>2</sup>K for the wall element. To be installed in accordance with instructions issued by Xtratherm.

Refer to NBS clause  
F30 150, F30 12



### Thermal Resistances

Thickness Phenolic	R-Value (m <sup>2</sup> K/W)
50	2.35
60	2.85
75	3.55
80	3.80
100	5.00

### Resistance 'R' Values

The resistance value of any thickness of Xtratherm insulation can be ascertained by simply dividing the thickness of the material (in metres) by its agrément declared lambda value, for example: Lambda 0.021 W/mk and thickness 80mm -> 0.080/ 0.021 -> R-Value = 3.80. In accordance with EN 13166, R-values should be rounded down to the nearest 0.05 (m<sup>2</sup> K/W).

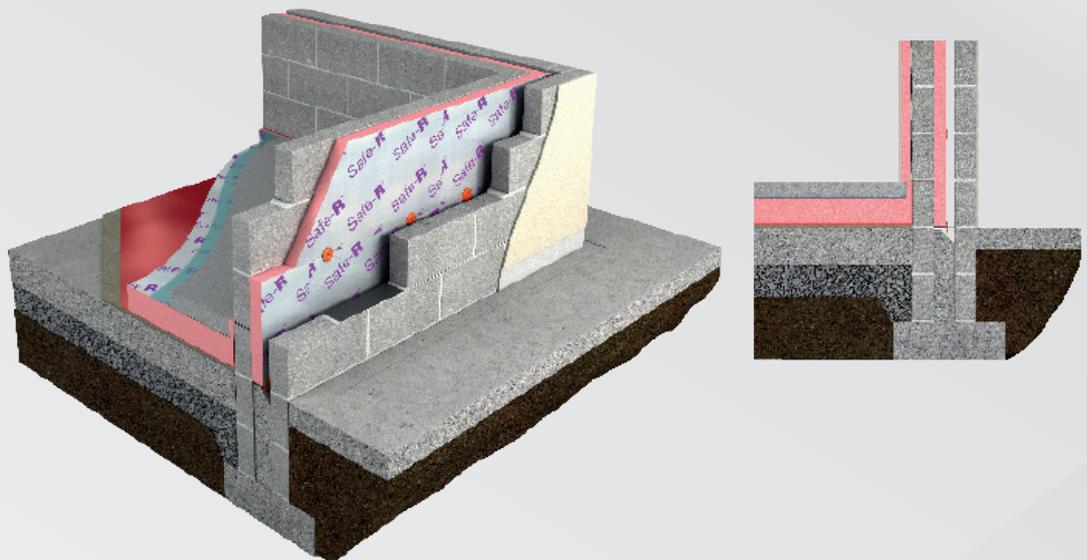
Superior Performance Phenolic Insulation

Clear Cavity Maintained

Protection from Wind Driven Rain

Lower Lambda Values for  
improved U-Values

**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.

Partial fill masonry walls are the predominant construction method for Traditional buildings. Using superior performing SR/CW phenolic insulation offers the solution when lower U-Values are demanded.

The high performance to thickness ratio of SR/CW allows for excellent U-Values to be achieved within traditional constructions without dramatically increasing the overall width of the wall. Using SR/CW allows the residual cavity to be maintained, providing an effective method of preventing moisture ingress.

#### SR/CW

<b>Length (mm)</b>	1200
<b>Width (mm)</b>	450
<b>Thickness (mm)</b>	50, 60, 75, 80, 100

Other thicknesses may be available depending on minimum order quantity and lead time.

#### Property & Units

<b>Thermal Conductivity</b>	0.020 – 0.021 (W/mK)
<b>Compressive Strength</b>	>100 (kPa)
<b>Reaction to Fire</b>	Euroclass D -s1, d0

Xtratherm CE Declaration of Performance (DoP) for this product is available for download from our website.

# Installation Guidelines

1. Under Eurocode 6 (and relevant national standards) it is recommended that no more than four courses of block are laid on the preceding skin before installation of the insulation. This allows for wall ties to be inserted accurately and without bending and thus distorting the physical characteristics of the wall ties. Ensure the wall is level and free of any protrusions before installing the insulation with all edges tightly interlocked.
2. Mortar should be struck from the inner cavity face of the block to ensure mortar squeeze is minimized on the cavity side. The two courses of blockwork can then be built, ensuring the mortar is struck back from the cavity face to prevent mortar squeeze.
3. Insert wall ties maximum 600mm centres one block course below DPC. Wall ties should incorporate retaining clips and be Agrément approved.
4. Secure cavity boards tight against inner leaf with retaining clip on wall ties. Joints should be tightly butted.
5. Ensure a minimum 150mm overlap with the floor insulation. The receiving block should be plumb to provide a flat surface to accept the insulation. As with setting out, installation should commence from adjacent corners. Stagger the board joints to create an offset brick bonded pattern.
6. Maintain a 50mm residual cavity to suit all exposure zones. In isolated circumstances where the cavity is obstructed, a minimum 25mm residual cavity should always be maintained and extra consideration should be given to fixings and weatherproofing. Any reduction in cavity width should be agreed with Building Control.
7. Place wall ties at maximum 900mm x 450mm centres, securing with a minimum of 3 wall ties per board.
8. 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 and cavity are kept clean of mortar. Wall ties should be sloped downwards towards outer leaf.
9. A cavity board should be used to keep the cavity clean.
10. Newly erected masonry should be protected to prevent the mortar being washed out of the joints by rain. Walls should be prevented from becoming saturated by covering the top of the wall with waterproof sheets; this is particularly important to minimise the incidence of efflorescence and lime bloom. When any working platform is not in use, the inner board should be turned away from the wall to prevent the splashing of the wall face.

## Handling, Cutting and Storage

Xtratherm insulation 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. Care should be taken to protect the insulation in storage and during the build process.

The insulation 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 within the ACDs. Appropriate PPE should be worn when handling insulation. Please refer to Health & Safety datasheets on our website.

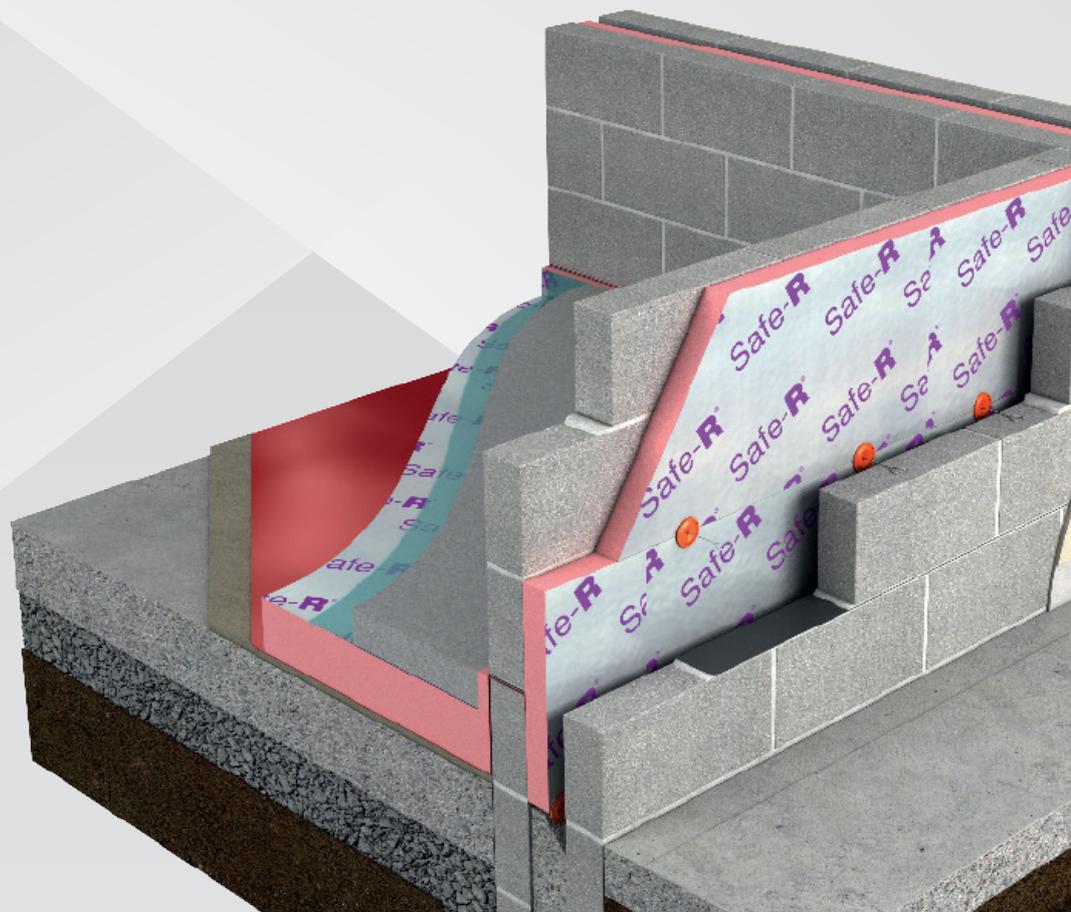
The boards are wrapped in polythene packs and each pack is labelled with details of grade/type, size and number of pieces per pack.

## Xtratherm®



## Durability

Xtratherm 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.



## Typical U-Values

**Table 1**

U-Value calculations to EN ISO:6946

**SR/CW** Insulation for Partial Fill Cavity Walls



<b>Cavity Wall</b>	- Plasterboard Dot & Dab
<b>Partial Fill:</b>	- 100mm Inner Leaf Blockwork
	- SR/CW
	- Low E Unventilated Cavity
	- 100mm outer Leaf Blockwork
	- 19mm Sand/Cement Render

Wet plaster finish: increase insulation thickness by 5mm

Wall ties taken as S/S wire at 3 ties per m<sup>2</sup>

		Xtratherm Thickness (mm)					
		40	50	60	70	80	100
Block Lambda	<b>0.11</b>	0.28	0.24	0.21	0.20	0.18	0.15
	<b>0.15</b>		0.24	0.22	0.20	0.18	0.15
	<b>0.46</b>		0.27	0.24	0.21	0.19	0.16
	<b>1.13</b>		0.28	0.24	0.22	0.20	0.16

# Expect More **KNOWLEDGE**

At Xtratherm we understand the importance of giving our customers the best technical advice.

We have taken the unique industry step of training every one of our technical team that deals directly with our customers, to the highest industry standards of competency in U-Value calculation and condensation risk analysis. We have Thermal Bridging covered also under the BRE/NSAI Thermal modelling competency scheme, using the most comprehensive 3D software available.

**Our team and products are certified in the UK and Ireland and through the following certifications bodies:**

- BRE Thermal bridging modelling competency certification
- NSAI Thermal modelling competency scheme
- TIMSA-BBA competency scheme for U-Value calculation and condensation risk analysis
- BBA and NSAI certification of the Xtratherm insulation boards
- SAP and DEAP energy assessment

**Our technical team can also provide:**

- Thermal calculations
- Technical advice on building regulations in the UK and Ireland
- Technical papers on a variety of topics
- Certified CPDs
- BIM modelling
- NBS Specifications
- Educational resources for technical secondary and tertiary colleges

**Please refer to the Resources section of our website for more details**



The **Xtratherm** Innovation Centre

The Xtratherm exhibition space and training academy has been developed to assist construction professionals in understanding the principles of specifying and achieving on-site, best practice insulation standards for new dwellings, commercial envelope solutions and refurbishment projects.



**Get in touch**

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Thermal Calculations, Technical  
Advice or to arrange a technical visit:  
**info@xtratherm.com**

# Xtratherm®

More than insulation

## The Sustainable Solution

Specifying Xtratherm is a real commitment to minimising energy consumption, harmful CO<sup>2</sup> emissions and their impact on the environment. Using our products is one of the most effective ways to reduce energy consumption – in fact, after just eight months the energy they save far outweighs the energy used in their production. In addition, our manufacturing facilities operate to an ISO 14001 certified Environmental Management System.

## The BRE Green Guide

The 2008 Green Guide to Specification produced by the BRE gives Xtratherm Insulation products a rating of A or A+. Green Guide ratings are used to gain credits in BREEAM (BRE Environmental Assessment Method) for non-residential buildings, and under 'Mat 4 – Insulation' the first credit requires the building to have an Insulation Index of 2 or greater – only achievable if the weighted average rating of the insulation is A or A+. This shows that all our products have been made with materials that have been responsibly sourced. The standard sets out organisational governance, supply chain management and environmental and social aspects that are verified and ensure responsible sourcing of materials.

## Responsible Sourcing

Xtratherm has BES 6001 certification for responsible sourcing. The second BREEAM credit under that category is based on responsibly-sourced materials – at least 80% of the total insulation used in roofs, walls, ground floors and services must meet any of tier levels 1 to 6 in the BREEAM table of certification schemes. Our Environmental Management System is certified under EN ISO 14001, and our raw materials come from companies with similarly-certified EMS (copies of all certificates are available for BREEAM assessments). This level of responsible sourcing meets tier level 6 in the BREEAM table.

## Global Warming and Ozone Depletion

All Xtratherm Insulation products use CFC- and HCFC-free materials, and are manufactured using a blowing agent with a low GWP and zero ODP.

Good workmanship and appropriate site procedures are necessary to achieve expected thermal and airtightness performance. Installation should be undertaken by professional tradespersons. The example calculations are indicative only, for specific U-Value calculations contact Xtratherm Technical Support. Xtratherm technical literature, Agrément certifications and Declarations of Performance are available for download on the Xtratherm websites. The information contained in this publication is, to the best of our knowledge, true and accurate at the time of publication but any recommendations or suggestions which may be made are without guarantee since the conditions of use are beyond our control. Updated resources may be available on our websites. All images and content within this publication remain the property of Xtratherm.

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ISO 9001 | Quality Management Systems

ISO 14001 | Environmental Management Systems



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