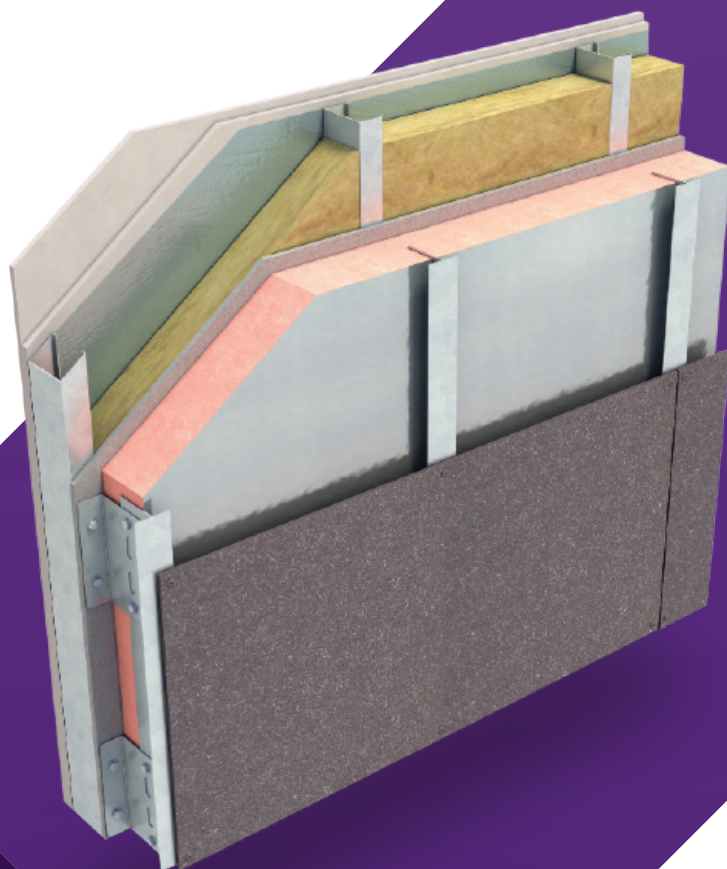


# Safe-R

Superior  
Performance  
Phenolic  
Insulation

Walls

**SR/RS**  
Insulation for  
Ventilated Rainscreen Cladding



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



10/4803

## Safe-R

Superior Performance  
Phenolic Insulation

## SR/RS

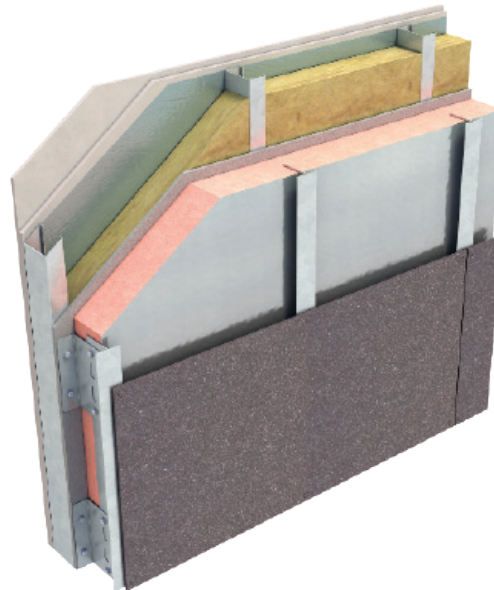
Insulation for  
Ventilated Rainscreen Cladding

**SR/RS Rainscreen Board provides ultimate thermal performances in rainscreen applications.**

SR/RS has been tested to BS 8414 (Parts 1 & 2) in a number of compliant system specifications. SR/RS is BBA certified and has received LABC Assured Product status. For comprehensive guidance and copies of reports contact technical support.

For compliance with the latest Building Regulations and Standards in other jurisdictions, consult your system supplier and local building control authorities.

Xtratherm SR/RS is not suitable for use on high-rise buildings in England where; the building contains one or more dwellings, in an institution or a room for residential purposes (excluding any room in a hostel, hotel or boarding house), student accommodation, care homes, sheltered housing, hospitals and dormitories in boarding schools, with a storey at least 18m above ground.



### Specification Clause

The rainscreen insulation shall be Xtratherm Safe-R SR/RS \_\_\_ mm manufactured to EN 13166 by Xtratherm, comprising a rigid Phenolic core between low emissivity foil facings. The SR/RS \_\_\_ 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  
M21 210, M21 220

NBS Plus

### Thermal Resistances

Thickness (mm)	R-Value (m <sup>2</sup> K/W)
50	2.35
60	2.85
75	3.55
80	3.80
100	5.00
120	6.00

### 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 0.020 W/mk and thickness 100mm -> 0.100/ 0.020 -> R-Value = 5.00. In accordance with EN 13166, R-values should be rounded down to the nearest 0.05 (m<sup>2</sup>K/W).

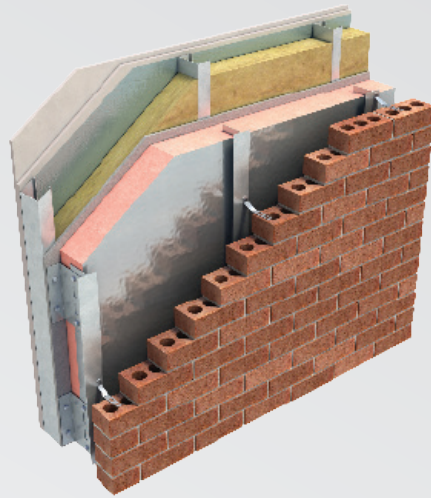
Tested under BS8414 (Part 1 & 2) meeting criteria for BR135 (system specific)

**Xtratherm®**

Superior Lambda Value as low as 0.020W/mK

Euroclass B Fire Classification

BBA Certified - Certification Number 10/4803



## 1 Thermal Performance.

Rainscreen façade systems are bespoke and configuration and specification of those systems are specific to individual buildings. System supports and fixings will have an effect on the thermal performance of that system. Thermal performances and patterns of fixings should be sought from the system manufacturer or supplier. Advice given in BR443 'Conventions for U-Value Calculation' should be followed.

## 2

### Technical Assessments

In specifications where no large scale test data is available a Technical Assessment undertaken by a suitably qualified person, normally UKAS approved, and based upon actual test data, can be used to demonstrate compliance with BR135. Xtratherm have a number of technical assessments completed by UKAS approved bodies. For further information or copies of assessments, contact the Xtratherm Technical Team.

#### SR/RS

Length (mm)	2400
Width (mm)	1200
Thickness (mm)	50, 60, 75, 80, 100, 110, 120

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

#### Property & Units

Thermal Conductivity	0.020 - 0.021 (W/mK)
Compressive Strength	>100 (kPa)
Reaction to Fire	Euroclass B s1 d0

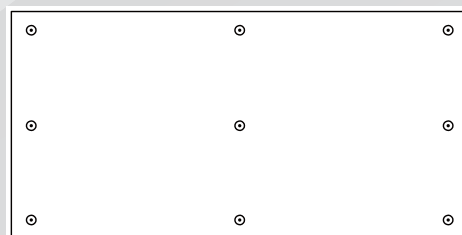
Xtratherm CE Declaration of Performance (DoP) for this product is available for download from our website.

For rainscreen facades Building Regulations ask for strict requirements to be met. Full wall specification should be considered to ensure compliance with Building Regulations in relation to thermal and fire performances.

Rainscreen systems are proprietary and can be built up in different variations. If following completed test reports, specification and installation must reflect those specifications stated within test data, including fire stops.

In general, installation techniques will vary and full guidance should be obtained from the system manufacturer/supplier.

1. Install insulation in a break-bonded pattern with edges tightly butted. Where required, cut boards to allow space for fixings and brackets, ensuring no gaps in the insulation layer. The provision of firestops should be in accordance with current Building Regulations and standards. If required the specification should match that within the 8414 test results for that system.
2. The amount of fixings required will depend on a variety of factors (geographical location, building height, etc.) and should be determined in the design specification. Typically a minimum of 9 fixings per board is required - 2 fixings being of metal type. Distribute fixings evenly across the board, at a minimum of 50mm from the board edge and a maximum of 150mm.



9 fixings per board  
(3.12 fixings / m<sup>2</sup>)

3. Approved Rainscreen Cladding tape (aluminium faced) should be used to seal all board joints and board edges to weatherproof the system. Fixing heads should also be covered and sealed with similar tape.

### U-Values

The calculation of U-Values should be done in accordance with BR443 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.

## 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 websites.

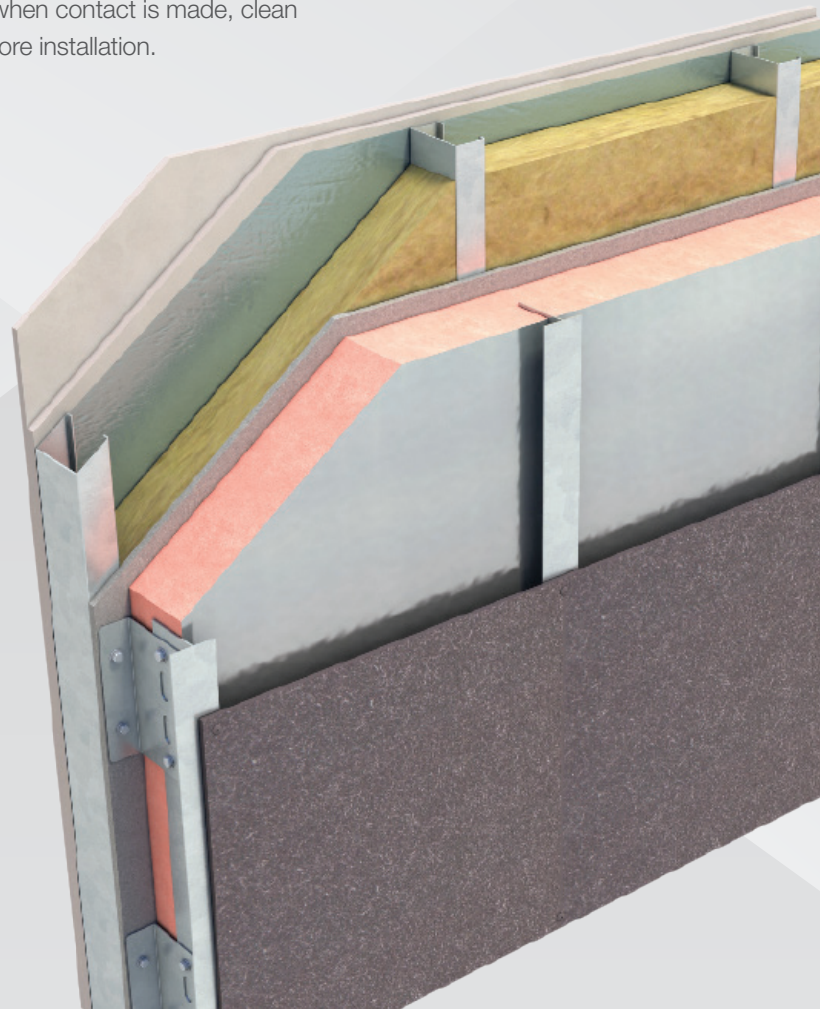
The boards are wrapped in polythene packs and each pack is labelled with details of grade/type, size and number of pieces per pack.

# 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.



## 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**

Dedicated  
Technical Team:  
**UK: +44 (0) 371 222 1055**  
**ROI: +353 (0) 46 906 6050**

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



Xtratherm, part of UNILIN group.