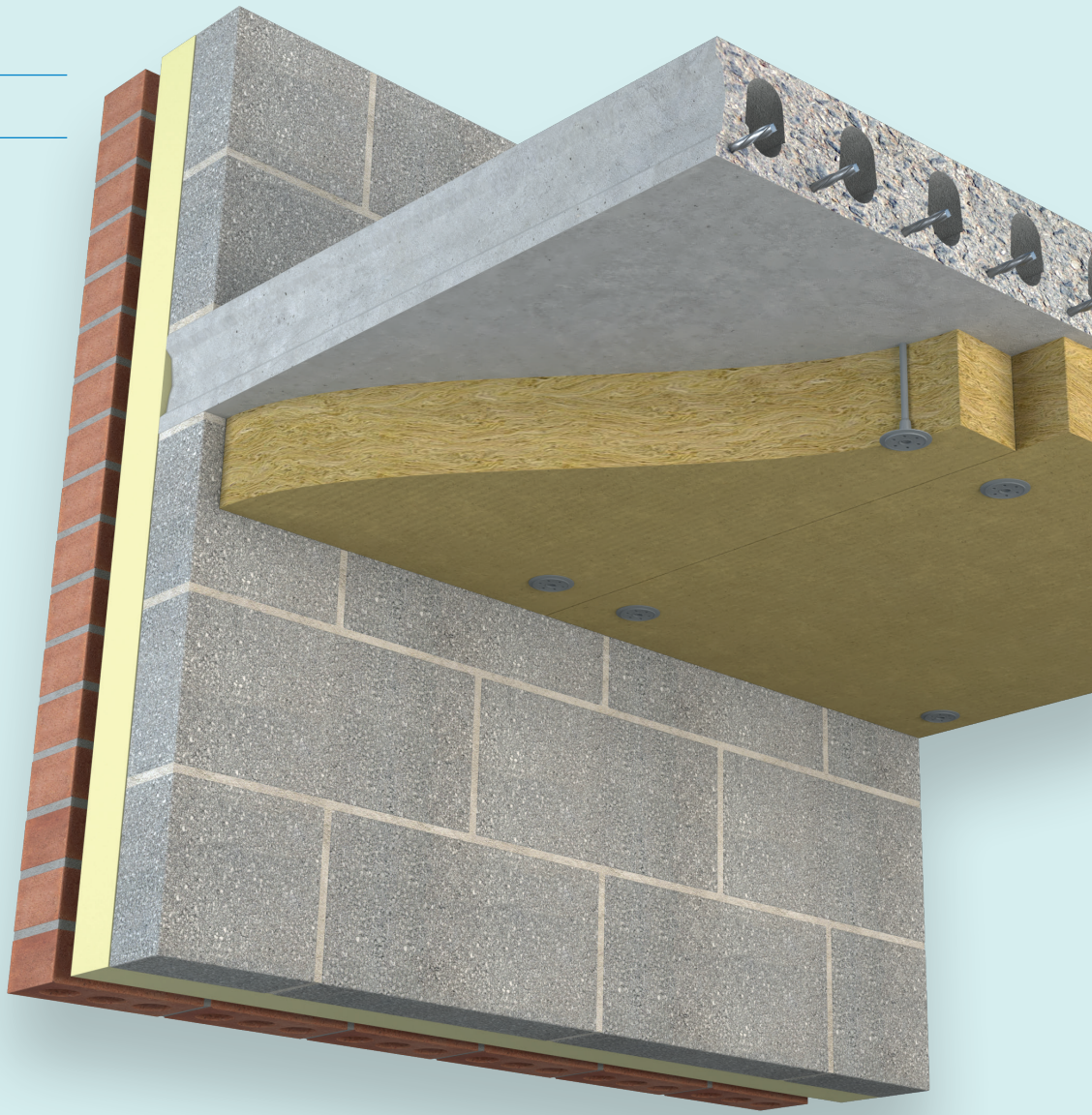
STONEWOOL NON-COMBUSTIBLE INSULATION

Soffit Application

SW/ST

- Euroclass A1 Fire classification
- Robust high density
- Improved acoustic performance



UNILIN INSULATION

Euroclass A1 Fire classification

STONEWOOL NON-COMBUSTIBLE INSULATION
Soffit Application

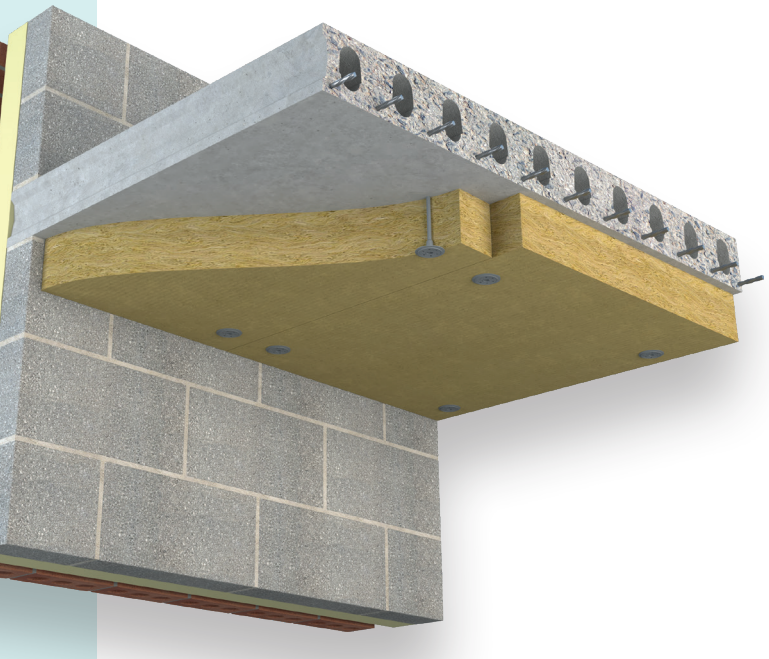
SW/ST

Unilin's range of non-combustible, Euroclass 'A1' Stonewool Insulation provides surety when the highest fire performance is required. **Stonewool Soffit** provides effective fire performance in structural ceiling applications in both residential and commercial buildings.

Our Stonewool Insulation provides a robust, uniform, high density insulation solution suitable for mechanically fixing to concrete substrates.

Benefits

- Euroclass A1 Fire Classification
- Robust high density
- Improved acoustic performance



Specification Clause

The soffit insulation shall be Unilin Insulation Stonewool _ _ _mm manufactured to BS EN 13162. The Unilin Insulation Stonewool_ _ _mm with a Declared Lambda value of 0.035 W/mK to achieve a U-Value of_ _ _W/m²K for the ceiling element. To be installed in accordance with instructions issued by Unilin Insulation.

Thermal Resistances

Board sizes 1200 x 600mm (Edge Profile SE)

Thickness* (mm)	R-Value (m²K/W)
100	2.85
125	3.55
150	4.25

*Other sizes available dependent on quantity and lead time

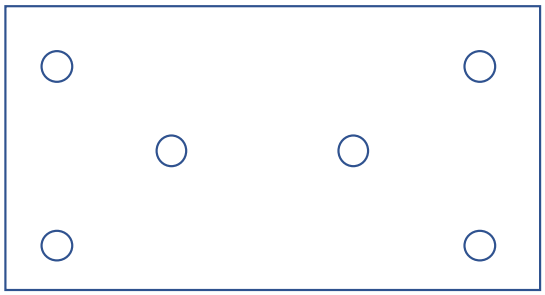
Resistance 'R' Values

The resistance value of any thickness of Unilin insulation can be ascertained by simply dividing the thickness of the material (in metres) by its declared lambda value, for example: Lambda 0.035 W/mK and thickness 100mm -> 0.100/ 0.035 -> R-Value = 2.85. In accordance with EN 13162 R-Values should be rounded down to the nearest 0.05 (m²K/W).

SW/ST

Installation

- Stonewool Soffit can be fixed directly to the concrete slab, to provide an even surface. The lightweight rigid product is convenient to handle and allows for fast and easy fixing.
- Using Stonewool Soffit on soffit areas, whether new build or refurbishment situations, provides the most efficient fire performance. The product achieves a thermal conductivity of 0.035 W/mK and has a Euroclass A1 fire classification.
- Where applicable, ensure cavity wall insulation has continued past the soffit insulation to reduce Thermal Bridging.
- Install Stonewool Soffit onto the substrate ensuring all joints are supported. The boards should be tightly butt jointed, laid staggered in a break bonded pattern and fitted tightly at edges and around any service penetrations. Any gaps or service penetrations should be addressed with propriety fillers and components in accordance with fire engineer specifications.
- Fix Stonewool Soffit to substrate with approved fixings*, ensuring the fixings penetrate the substrate by a minimum of 40mm. Generally, 6 fixings (min shank diameter of 5.2mm) per board are required. Fixings should have a head diameter of at least 50mm. Distribute fixings evenly across the board, at a maximum of 300mm across and 400mm along. It is recommended to seek advice from the fixing manufacturer for specific guidance.



6 fixings per board

- For advice on soffit fixings, contact the system specifier, ensuring all fixings are accounted for when modelling thermal performance.
- Suitable Board Fixing Manufacturers- Hilti/EJOT/Fischer

*Fixing type and specification should be verified by the fixing manufacturers design, to take account of topographical and fire considerations. Account should be taken of any Thermal Bridging through the fixings as should the effect of any supporting beams. Fixing manufacturers: Ejot or Fischer.

U-Values

U-Value calculation Guidelines given in BR443 "Conventions for U-Value calculations" and EN ISO 6946:2017 Building components and building elements - Thermal resistance and thermal transmittance - Calculation methods should be followed. Contact Unilin Technical Support for advice.

Typical U-Values

Table 1

U-Value calculations to EN ISO: 6946
SW/ST insulation for Soffit Application

Build up:

- 100mm concrete
- SW/ST

	Thickness*		
SW/ST	160	180	220
Solid Concrete 100mm	0.21	0.18	0.15

*May require two layers

HANDLING, CUTTING & STORAGE

- Unilin Stonewool is delivered in packs, wrapped in polythene, suitable for short term storage in the open. The high density panels are robust enough to endure a reasonable length of time exposed during installation, however, as with all building processes, protection during the build process should be provided, where possible. Each pack is labelled with details of grade/ type, size and number of pieces per pack.
- Panels are lightweight and easily cut to any shape with a fine tooth saw or a sharp knife. Neat fitting to adjoining boards and around any penetrations is essential to achieve good thermal performances.
- Tight abutment with adjoining boards allows for continuity.
- Boards should be applied in a break-bonded pattern, with all joints tightly butted.
- Using a combination of metal and polypropylene 'mushroom' type fixings with a minimum diameter of 50mm will provide adequate fix.
- All penetrations, through the insulation layer should be detailed to the fire engineers specifications.

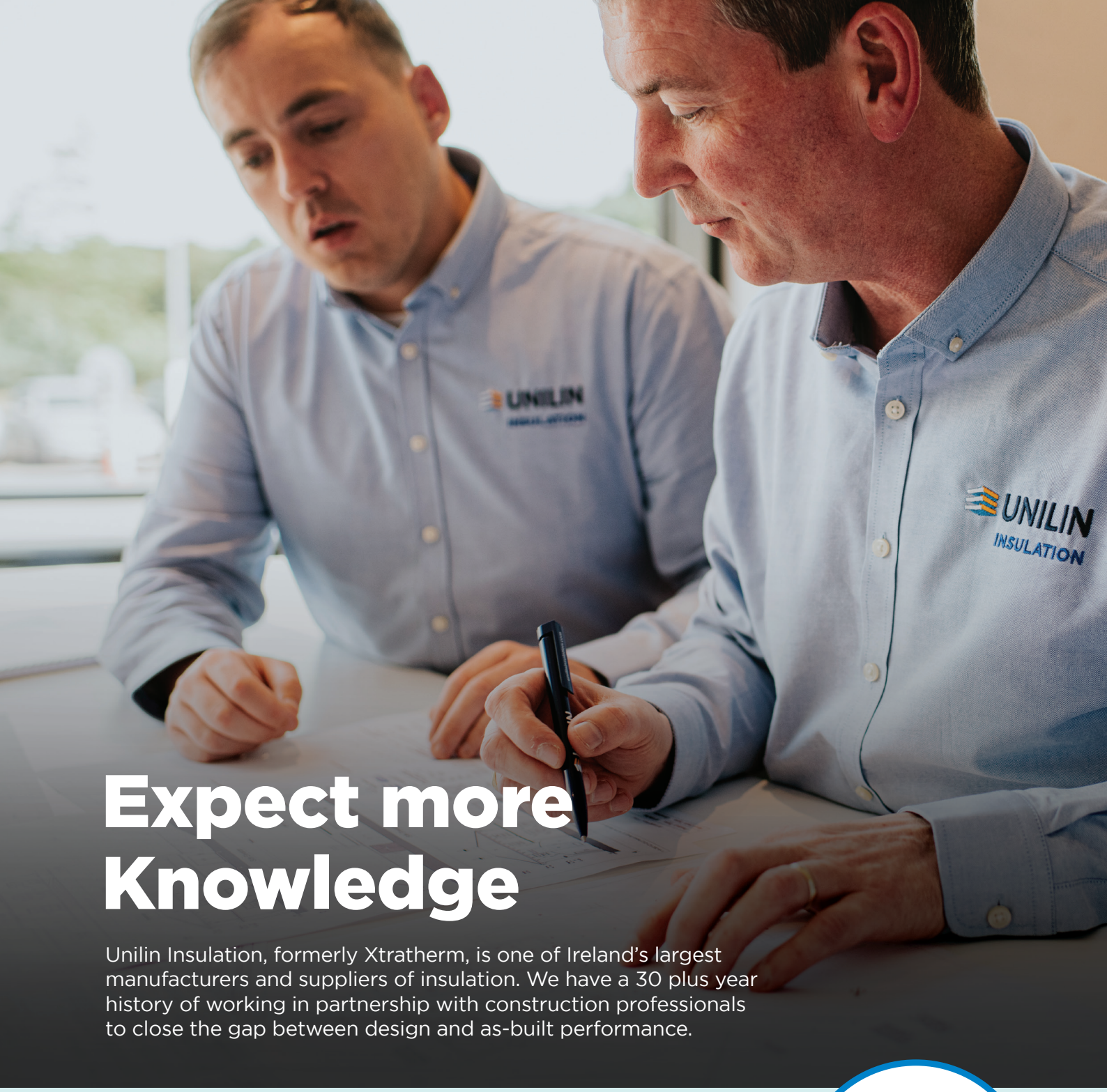
Insulation should be stored off the ground, on a clean, flat surface and must be stored under cover. The polythene wrapping is not considered adequate protection for outside exposure. Care should be taken to protect the insulation in storage and during the build process.

Ensure tight fitting of the insulation boards to achieve continuity of insulation. Appropriate PPE should be worn when handling insulation. Please refer to Health & Safety data sheets 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.

Durability

Unilin Insulation products are stable, rot proof, provide no food value to vermin and will remain effective for the lifetime 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

Unilin Insulation, formerly Xtratherm, is one of Ireland's largest manufacturers and suppliers of insulation. We have a 30 plus year history of working in partnership with construction professionals to close the gap between design and as-built performance.

FREE
One-to-one advice

Higher standards of fabric performance call for greater adherence to best practice detailing. To achieve this and to 'close the gap' between design and build, we provide a dedicated Technical Team, all qualified to the highest standards of competency in U-Value calculation and condensation risk analysis.

Here to support you

- BRE listed Thermal Bridging Detailing
- BRE/NSAI Trained Modelling
- BBA/TIMSA calculation competent
- Warranted Calculations available
- Immediate technical response
- DEAP Qualified
- Insulation systems to deliver real onsite performance

Get in touch

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ASSOCIATE MEMBER SPRA Single Ply Roofing Association

LRWA Liquid Roofing and Waterproofing Association

CE

bre

ISO 9001 Quality Management Systems
ISO 14001 Environmental Management Systems

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The Sustainable Solution

Specifying Unilin Insulation is a real commitment to minimising energy consumption, harmful CO_2 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.

Environmental Product Declaration (EPD)

An Environmental Product Declaration or EPD for a construction product indicates a transparent, robust and credible step in the pursuit and achievement of real sustainability in practice, it is a public declaration of the environmental impacts associated with specified life cycle stages of that product. Unilin EPDs have been independently verified in accordance with EN 15804+A2:2019 and ISO 14025 accounting for stages of the LCA from A1 to A3, with options A4-A5 and modules C1-C4 and D included. The process of creating an EPD allows us to improve performance and reduce resource wastage through improvements in product design and manufacturing efficiency. They play a crucial role in manufacturing and construction and are increasingly asked for by industry.

EPDs and BREEAM

BREEAM is primarily trying to encourage designers to take EPDs into consideration when specifying products. BREEAM requires EPDs to be verified by a third-party. For the Mat 02 category, points are awarded based on whether EPDs are generic, manufacturer-specific, or product-specific. Non 3rd party verified EPDs to EN 15804 cannot be accepted. All of Unilin EPDs are externally verified.

Responsible Sourcing

Unilin 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.

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 Unilin Insulation Technical Support. Unilin technical literature, Agrément certifications and Declarations of Performance are available for download on the Unilin Insulation website. 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.