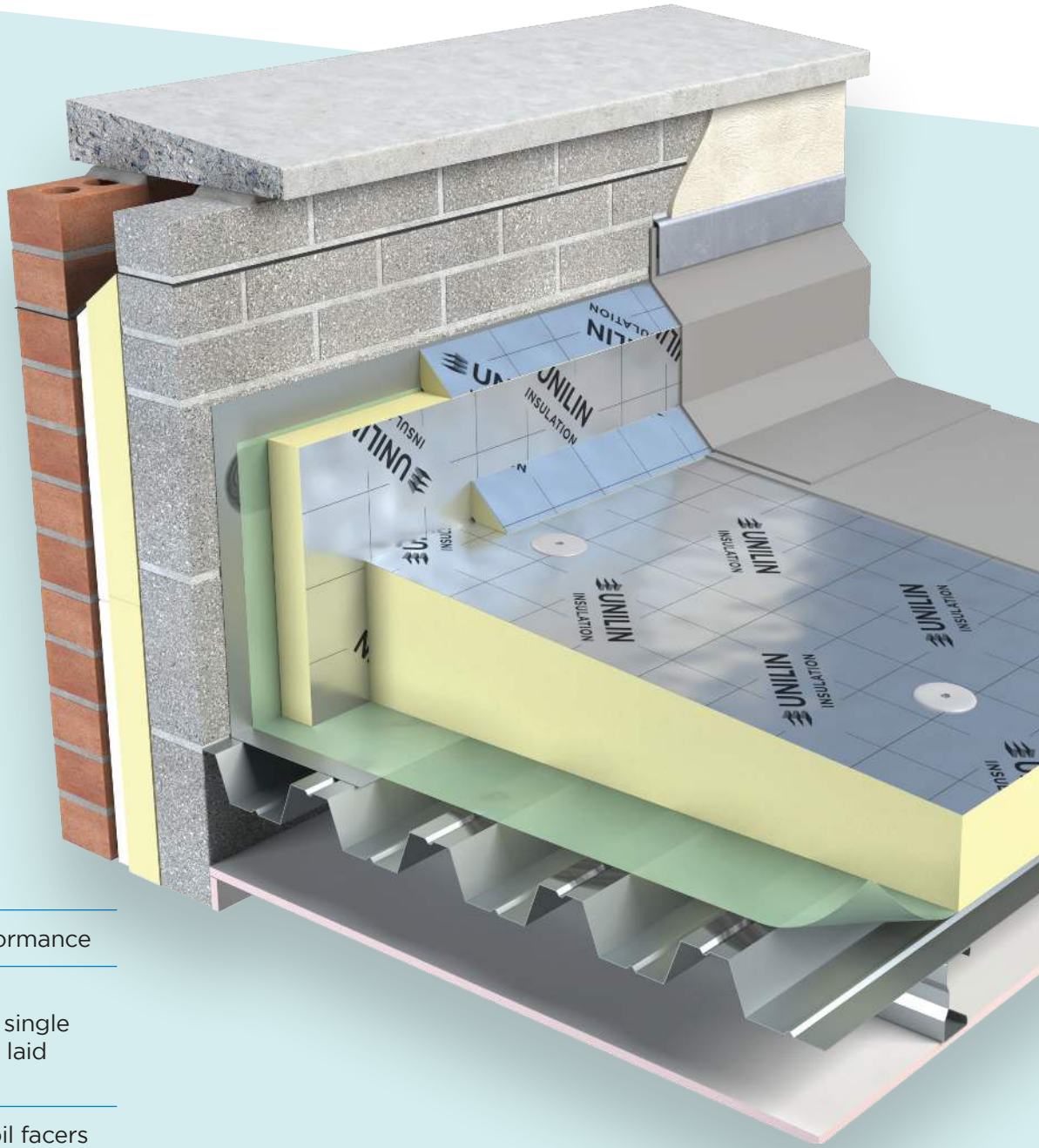
FLAT ROOF TOTAL FLAT ROOF SOLUTIONS

Mechanically Fixed Single Ply Waterproofing Systems

TR/ALU



BBA APPROVAL INSPECTION TESTING CERTIFICATION
CERTIFICATE 11/4817

High Thermal Performance

Compatible with mechanically fixed single ply systems. Loose laid ballasted systems

Vapour resistant foil facers

UNILIN INSULATION

Thinnest solution for mechanically fixed flat roofs

FLAT ROOF TOTAL FLAT ROOF SOLUTIONS

Mechanically Fixed Single Ply Waterproofing Systems

TR/ALU

Tapered Roof ALU is a high performance Polyisocyanurate Tapered Roof Insulation with vapour-tight aluminium foil facings suitable for use with single ply membranes. It is part of the comprehensive range of Unilin's high performance tapered roof boards providing total solutions for tapered roof projects.

An Environmental Product Declaration (EPD), certified by IGBC is available for this product. Please contact technical support for further details.

Roof Design

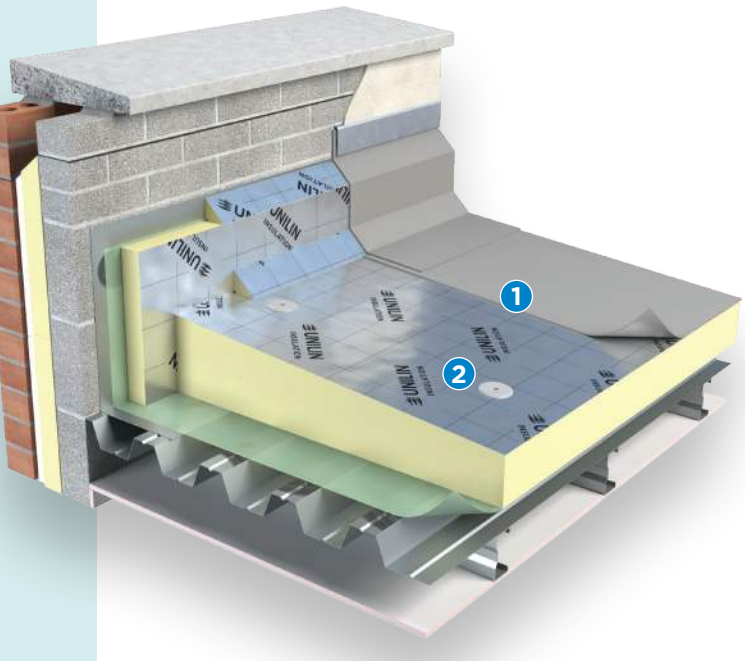
Consideration should be given to the recommendations of BS 4841: Part 3 and those of the Single Ply Roofing Association (SPRA).

Heat Loss/Condensation Risk

A U-Value calculation should be carried out at design stage for minimum or average U-Values depending on requirements. In addition a condensation risk analysis must be calculated within the guidance provided in BS 5250 code of practice for control of condensation in buildings.

Fire Performance

The fire rating, when tested to EN 13501-5 and BS 476 Part 3 'External Fire Exposure Roof Test', will be dependent upon waterproofing system specified.



Specification Clause

The tapered roof insulation shall be Unilin Insulation Thin-R TR-ALU manufactured to EN 13165 by Unilin Insulation, comprising a rigid Polyisocyanurate (PIR) core between low emissivity foil facings. The TR-ALU_ _ _mm with a Agrément declared Lambda value of 0.022 W/mK to achieve a U-Value of __ _ _W/m²K for the roof element. To be installed in accordance with instructions issued by Unilin Insulation.

Refer to NBS clause J42 420, J42 10.

1. The boards are faced with a gas-tight foil face and are suitable for use below single ply mechanically fixed roof membranes.

   Note: This product is not suitable for applications with built-up bitumen based roofing or mastic asphalt systems.

2. These foil faced insulation boards are suitable for use on roof decks that are subject to maintenance traffic only. Walk ways should be provided on roofs requiring regular pedestrian access. When the roof is complete, protective boarding should be laid if additional site work is to be carried out. The completed roof should not be used for storage of heavy materials or air conditioning plant.

This tapered insulation should be laid over a separate vapour control layer. The requirements for this vapour control layer should be assessed in accordance with BS 6229:2018. Typically a 1000 gauge polythene should be used with all joints lapped and sealed.

The joints should be butted and care taken to ensure that all joints are supported by the deck. Mechanical fixings with washers are normally used to secure both the insulation and waterproof membranes. Fixings that penetrate the vapour control layer must be of the self sealing type.

Tapered Roof ALU is suitable for use under single ply mechanically fixed roof membranes.

TAPERED ROOF

TR/ALU

Tapered Roof ALU insulation systems have been designed to provide solutions to design issues that arise in new and refurbishment roofs. Tapered Roof ALU systems address most flat roof failures i.e. ponding of rainwater caused by an inability to shed rainwater on the surface whilst providing a high level of thermal insulation performance.

Product Description

Tapered Roof ALU is the tapered version of Flat Roof ALU. It is faced on both sides with composite gas tight foil facings autohesively bonded to a Polyisocyanurate (PIR) core during manufacture. TR/ALU has a verified Environmental Product Declaration (EPD).

Fixing

The specification for fixing of Unilin roof boards will vary with the location, roof height/ width and topographical data, architectural specification should be consulted.

Laying over Metal Deck

These tapered boards should be laid over the vapour control layer with all joints fully supported by the deck. They are secured by mechanical fixings with washers. The waterproofing is also mechanically fixed in accordance with the specific manufacturer's instructions.

Laying Timber Deck

The tapered boards should be laid over the vapour control layer in a break bonded pattern. The boards are generally secured by approved mechanical fixings. The waterproofing is also mechanically fixed in accordance with the specific manufacturer's instructions.

Laying over Concrete Deck

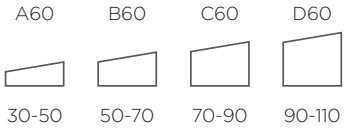
The tapered boards should be fitted over the vapour control layer that has been laid on a prepared deck that is clear, dry and level without gaps. They are secured by mechanical fixings with washers. The waterproofing is also mechanically fixed in accordance with the specific manufacturers instructions.

Daily Working Practice

The facing of these boards should not be considered as temporary waterproofing, when work is interrupted or at the end of each day, a night joint must be made to prevent water penetration. Unilin tapered boards should be waterproofed as soon as possible after fixing.

TR/ALU Tapered 1:60

1200 x 1200



Flat

2400 x 1200

80mm

Alternative tapers available on request.

TR/ALU

Length (mm)	1200
Width (mm)	1200
Thickness (mm)	30 (minimum)

Other sizes are available subject to quantity and lead time.

Note: Unilin Insulation Ltd. reserves the right to amend product specifications without prior notice.

Property & Units

Density (Foam Core)	32 kg/m^3
Compressive Strength	>150kPa@10% Compression
Thermal Conductivity	0.022 W/mK
Reaction to Fire	Euroclass E

Contact our Technical Team
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HANDLING, CUTTING & STORAGE

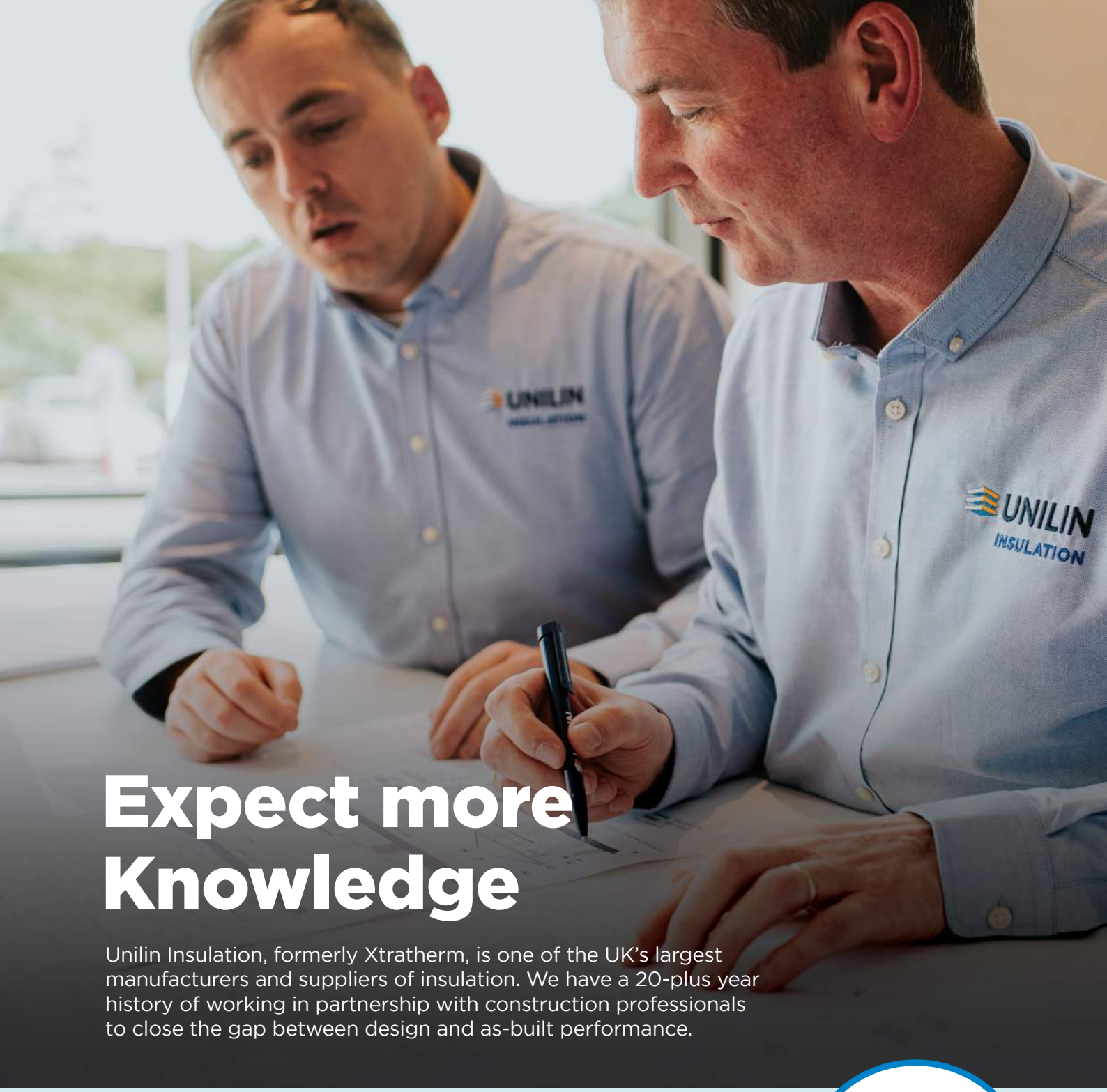
Unilin insulation should be stored off the ground, on a clean, flat surface and must be stored under cover. The polythene wrapping is not considered adequate protection for outside exposure. Care should be taken to protect the insulation in storage and during the build process.

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 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 the UK's largest manufacturers and suppliers of insulation. We have a 20-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 Trained Modelling
- BBA/TIMSA calculation competent
- Warranted Calculations available
- Immediate technical response
- SAP Qualified
- Insulation systems to deliver real onsite performance

Get in touch

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ISO 45001 Occupational Health & Safety Management Systems
ISO 9001 Quality Management Systems
ISO 14001 Environmental Management Systems

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 and 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. All images and content within this publication remain the property of Unilin Insulation.

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