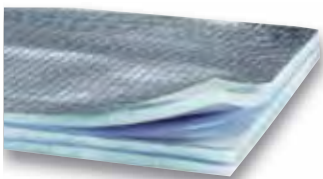


NEW

You have always trusted us,
you were right.



NEW TRISO-SUPER 10+ MULTIFOIL INSULATION



ACTIS

TOMORROW'S INSULATION TODAY





Certificate Number
BIPS-0104

Date of initial registration
25 October 2011

Date of last issue
16 January 2012

Date of expiry
24 October 2014

REGISTRATION CERTIFICATE



This is to certify that the Building Insulation Product known as TRISO SUPER 10+ manufactured by the following company

ACTIS SA

Avenue de Catalogne
11300 Limoux
France

and distributed in the UK by

ACTIS INSULATION Ltd


Unit 1 Cornbrash Park, Bumpers Way
Bumpers Farm Industrial Estate
Chippenham
Wiltshire SN14 6RA

has been assessed in accordance with the BM TRADA Certification Building Insulation Products Scheme, including in-situ testing in accordance with TRADA Technology Ltd test protocol BIP-001, for use in roof construction and has an in-situ thermal insulation performance equivalent to 210mm of mineral wool.* TRISO SUPER 10+ is registered within the BM TRADA Certification Scheme for Building Insulation Products

**The mineral wool used to establish equivalence conforms to EN 13162, has a declared thermal conductivity of 0.04W/mK and 210mm of this mineral wool has a declared R value of 5.25m²K/W. The thermal performance equivalence is between the two tested roof structures, and includes all the associated heat losses, such as thermal properties of the materials, air leakage and thermal bridging, the structures being designed with realistic and identical air tightness and fractional timber surface area to ensure that the results of the test are representative of commonly used roof structures.*

The validity of this certificate is dependent on the adherence to the conditions laid down in the accompanying Q-Mark Schedule. The Q-Mark Schedule is an integral part of this certificate

As a Scheme member the Company agrees to maintain the fabrication and design of its TRISO SUPER 10+ product in accordance with the BM TRADA Certification scheme requirements and to use the Q-Mark in accordance with the Scheme Regulations



RS Foster

Signed on behalf of BM TRADA Certification Ltd
Robert Foster, Technical Client Manager

Chiltern House, Stocking Lane, High Wycombe, Buckinghamshire, HP14 4ND

Further clarification regarding the scope of this certificate and verification of the certificate is available through BM TRADA at the above address or at www.bmtrada.com

This certificate remains the property of BM TRADA Certification Ltd To whom it must be returned on request.

The use of the accreditation mark indicates accreditation in respect of those activities covered by the accreditation certification 012

MAXIMUM PERFORMANCE IN 35MM THICKNESS

For 30 years the ACTIS vision has been to reduce buildings' energy consumption with effective insulation solutions which, once installed, achieve the results they claim. For this reason ACTIS has tested its multifoil insulation products in real conditions of use to measure effectively their impact on buildings' energy consumption.

An accredited product certification

Since 1997 this vision has been shared by the laboratory TRADA Technology Ltd which has developed a reliable "in situ" test protocol. In July 2011 the time and energy spent has been recognized as BM TRADA Certification received UKAS accreditation for its Building Insulation Products scheme, including assessment by its BIP-001 test protocol used to evaluate the performance of reflective multifoil insulation products in real life conditions.

As there are currently no ISO or BS EN testing standards designed for innovative multifoil insulation products, this new UKAS accreditation gives further confidence to local Authority Building Control Bodies to accept independent certification for insulation products.



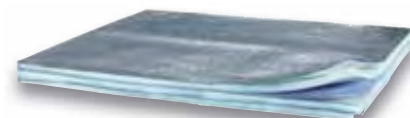
TRISO-SUPER 10+ IS THE FIRST PRODUCT CERTIFIED BY BM TRADA CERTIFICATION IN ACCORDANCE WITH THE NEW UKAS ACCREDITED BUILDING INSULATION PRODUCTS SCHEME.

A certified high thermal performance

TRISO-SUPER 10+ is certified for use in a roof construction as equivalent to 210mm mineral wool which conforms to EN 13162 and has a declared thermal conductivity of $\lambda = 0,04$ W/m.K (Q-Mark certificate BIPS-0104).

TRISO-SUPER 10+ has been tested in comparison with mineral wool for a total of 3 months at sites in the UK and France. Energy consumption data was collected from two identical full scale roof structures at each site, one fitted with **TRISO-SUPER 10+**, the other insulated with traditional mineral wool, which were tested concurrently and under a range of identical winter weather conditions. The energy consumption of the two structures was then calculated for a range of UK winter weather conditions to ensure that the results achieved are valid throughout the UK.

Refer to Q-Mark schedule for full details of the test data and prediction modelling of the range of typical conditions.



TRISO-SUPER 10+

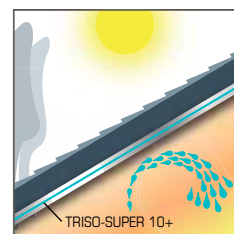
A PROVEN PERFORMANCE DEVELOPED FROM 30 YEARS OF RESEARCH.

Tested and certified airtightness and vapour resistance

TRISO-SUPER 10+ is designed to be airtight, water tight and water vapour resistant. It acts as a barrier against cold air infiltration and prevents warm air escaping.

A tested water vapour resistance of over : $Z > 500\text{MN}/\text{g}^{-1}$.

A TIME SAVING SOLUTION: INSULATION, AIR TIGHTNESS AND VAPOUR BARRIER.



User friendly

- Internal air quality : **A+** rating according to ISO 16000.
- No personal protection equipment required
- No earthing required.
- Very little wastage – minimum cutting required.
- Easy to carry, transport and store.
- Dimensional stability : does not create thermal bridging by sagging, shrinking or deforming
- Surface finish which guarantees emissivity for the life of the building.



Information about VOC emissions' levels in indoor air, showing the risk of toxicity if inhaled, on a scale from A+ (very low emissions) to C (high emissions).

TECHNICAL CHARACTERISTICS

The product

| DATA | VALUE | STANDARD |
|-------------------------|---|---|
| Thickness | 35 +/-3mm | EN 823 |
| Thermal performance | Equivalent to 210mm of mineral wool ($\lambda_D = 0.04W/m.K$)* | BIP-001 |
| Emissivity | 0.05 | prEN 16012 |
| Air permeability | Airtight | EN 12114 |
| Water vapour resistance | $Z > 500MN.s/g^{-1}$ | EN 1931 |
| Water resistance | W1 | EN 1928 method A EN 13859-1 § 5.2.3 En |
| Surface weight | $\geq 738g/m^2$ | |
| Fire test reaction | Euroclasse F | EN 13501-1 |
| Tensile strength | | |
| Longitudinal | $\geq 600 N/50mm$ | EN 12311-1 |
| Transversal | $\geq 400 N/50mm$ | |
| Nail tear resistance | | |
| Longitudinal | $\geq 400 N$ | EN 12310-1 |
| Transversal | $\geq 450 N$ | |

* For details refer to certificate on page 2.

Additional information

| PROPERTY | VALUE | STANDARD |
|---------------------------------|------------------|-----------|
| Width | 1.6m | EN 1848-2 |
| Length | 10m | |
| Area per roll (m ²) | 16m ² | |
| Weight per roll | Approx. 12Kg | |

Accessories

ISODHESIF TAPE



CUTTER



INSTALLATION GUIDE

Essential rules of installation:

- 1** Ensure an air gap of 25mm minimum on either side of the insulation.
- 2** Ventilation:
 - Felted Roof: Ensure an air gap of 50mm minimum between the insulation and the felt, with ventilation from eaves to ridge according to British Standards.
- 3** Pull the insulation taut and staple every 50mm to the rafters or timber support using galvanised staples, 14mm minimum. 20mm stainless steel staples are recommended.
- 4** Overlap the insulation 50-100mm at each joint and staple every 50mm onto the rafter or timber support batten.
- 5** Cover all joints with ACTIS ISODHESIF reflective tape to give an air tight finish.
- 6** Fold all finishing edges under by 50mm minimum, staple every 50mm, and secure with a final batten.
- 7** All exposed edges must be sealed with reflective tape to prevent ingress of moisture to the inner layers of the insulation.

General guidance on installing your ACTIS insulation

Insulation should take into account all elements of the building envelope which are susceptible to thermal losses, such as doors, roofs, walls and floors. Adequate ventilation should be provided where necessary, in compliance with good building practice and with the most recent editions of the relevant regulatory guidance and British and European Standards available. ACTIS cannot compensate for heat losses due to defective or poorly insulated joinery, or thermal bridging due to poor construction.

IMPORTANT: For guidance on how to install ACTIS insulation products so as to maximise thermal performance, please refer to the detailed 'Installation Guidelines' brochure available for the relevant product, which should be read in conjunction with this leaflet. ACTIS makes no warranty, express or implied, as to the performance of its products if the relevant installation guidelines are not followed.

• Television and mobile signals

It is advisable to have an external television aerial when using ACTIS insulation. Mobile signals may be affected by ACTIS insulation in low signal areas.

• Protecting your ACTIS product from the elements before and after installation

ACTIS insulation should be stored in its packaging under cover to protect it from the elements (such as rain or snow). During installation, ACTIS insulation should be protected from any prolonged exposure to rain or snow. Once installed, ACTIS insulation should not be left exposed to weathering for more than 3 days.

• Installing other products with your ACTIS product

When using ACTIS insulation in conjunction with other products, such as a tiling underlay or breather membrane (as recommended by current regulatory guidance), or with supplementary insulation, precautions must be taken to avoid vapour or condensation issues. This can be avoided by ensuring adequate ventilation, but ACTIS also recommends that the product with the highest vapour resistivity be placed on the inside (the warm side). ACTIS cannot make any warranty, express or implied, as to the performance or safety of other products used in conjunction with its own products.

• Building Control approval

There are currently no ISO or BS EN testing standards designed for innovative multifoil insulation products. Local Authority Building Control Bodies have the discretion to accept independent certification for insulation products. We strongly advise that you seek confirmation of this approval from your local Building Control Body before installing the TRISO-SUPER 10+.

For more information, please contact the ACTIS helpline on **01249 462 888**, email us at **solutions@actis-isolation.com** or write to us at **ACTIS Insulation Ltd, Unit 1 Cornbrash Park, Bumpers Way, Bumpers Farm Industrial Estate, Chippenham Wilts, SN14 6RA.**

INSTALLATION GUIDE

Quick & easy to install

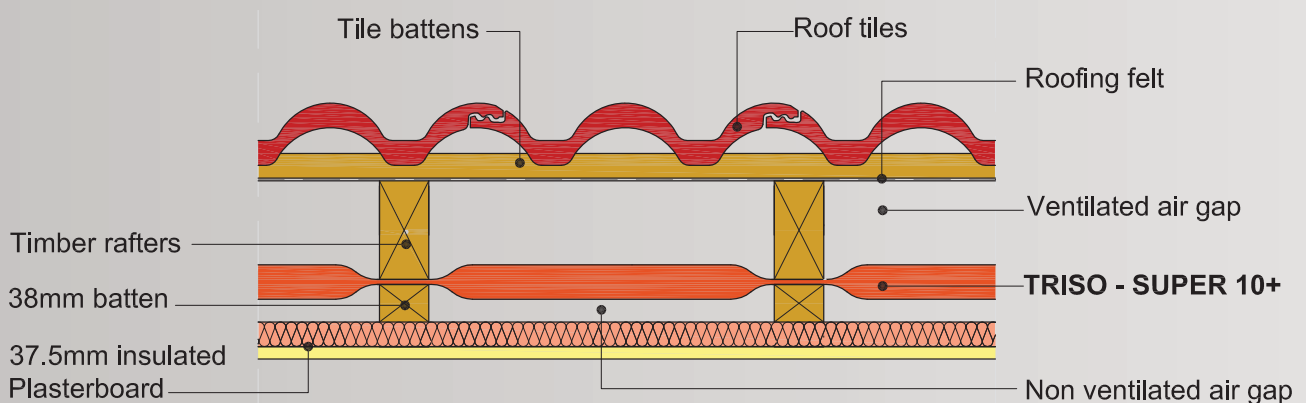
- Clean and free from irritant fibres
- Flexible, can be cut with scissors or an ACTIS cutter, fitted by stapling
- Short & simple accessories list: 1 tape / 1 cutter
- Durable, will not sag, moisture resistant



Under rafter installation

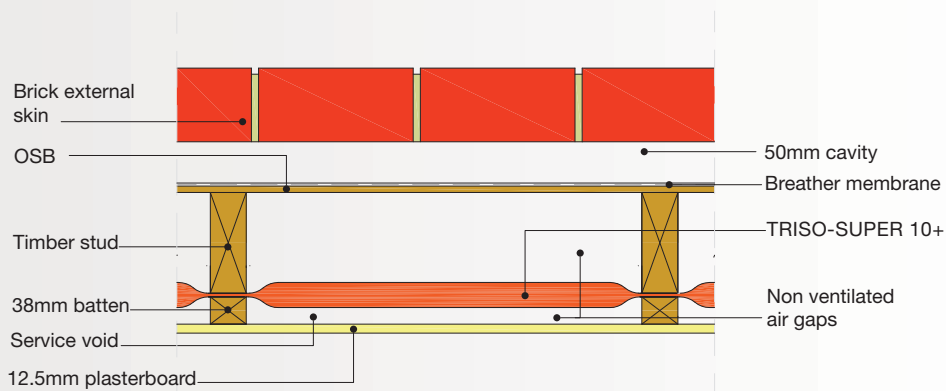
TRISO-SUPER 10+ is suitable for use in an under rafter application providing the ideal option for loft conversions and saving space.

1. Fix timber supports (as noggin) between the rafters at collar/roof junctions enabling joints to be stapled & taped securely. Continue to fix timber supports every 1500mm as appropriate.
2. Install secondary insulation between roof collars, to achieve Part L compliance, aligning a 25mm air gap to the underside.
3. Lay TRISO-SUPER 10+ across the face of the rafters, fixing in a continuous layer from timber support. Staple in place every 50mm keeping insulation as taught as possible.
4. Fix next layer overlapping insulation by 50–100mm.
5. Staple the insulation to timber support and seal with 100mm ACTIS ISODHESIF tape.
6. Ensure all exposed ends of insulation are folded to stop air ingress.
7. Visually inspect installed insulation to ensure the finish is as air tight as possible.
8. Prepare for plasterboard by fixing horizontal or vertical battens (50x38mm) using nails or screws, through the ACTIS insulation to the rafter.
9. Fixing foil backed plasterboard is recommended.



Associated timber frame walls

1. Fix vertical or horizontal support batten to timber frame at joint positions of insulation enabling joints to be stapled & taped securely.
2. Fit insulation horizontally stapling every 50mm. Cut insulation oversized at floor and ceiling allowing insulation to be clamped by the second batten.
3. Overlap 50–100mm on batten, staple using 14mm galvanised staples, and tape with ACTIS ISODHESIF tape.
4. Fix horizontal batten (38x25mm) at ceiling and floor clamping insulation to floor and ceiling creating an air tight seal.
5. Fix vertical batten (38x25mm).
6. Fix vapour controlled plasterboard.



SAFETY PRECAUTIONS AND RECOMMENDATIONS

How to get the most from your ACTIS product

IMPORTANT: in addition to the specific recommendations given by ACTIS below, your ACTIS product should be installed and used in compliance with (1) good building practice; (2) the most recent editions of any applicable regulations or relevant guidance and (3) any British or European Standards relating to the installation and use of insulation products, particularly in relation to safety precautions.

• Fire precautions

Never expose ACTIS insulation to a direct heat source, sparks or a naked flame.

Keep blow torches well away from ACTIS insulation, even when using a flame guard or other protective device, and make sure that hot debris and sparks do not make contact with the insulation.

• Fireproof finishes and compartment walls

As recommended by current regulatory guidance, do not leave insulation exposed in habitable rooms. We recommend that ACTIS insulation is always covered with a fireproof finish such as plasterboard (see, for example, the fire safety provisions contained in Approved Document B, which provides practical guidance on the fire safety requirements of the Building Regulations 2000 (as amended) in England and Wales; or refer to the relevant provisions in Scotland and Northern Ireland, as amended from time to time).

To ensure that compartment walls achieve the requisite levels of fire resistance, the insulation should not be carried over junctions with such walls (again, please refer to the fire safety provisions contained in Approved Document B noted above, or to any applicable provisions in Scotland and Northern Ireland, as amended from time to time).

TRISO-SUPER 10+ is not fire rated and has Euroclass classification F.

• Chimneys, flues, heat exchangers and other sources of heat

Never use ACTIS insulation to insulate a chimney flue, heat exchanger or any other heat source above 80°C. Use a Euroclass A1 non-combustible insulation in compliance with British or European Standards. ACTIS advise leaving a minimum gap of 200 mm between the insulation and chimneys, flues, heat exchangers and all other sources of heat above 80°C.

PLEASE SEEK ADVICE FROM ACTIS BY CALLING THE HELPLINE ON 01249 462 888 AND CHECK WITH YOUR LOCAL BUILDING CONTROL OFFICER BEFORE INSTALLING ACTIS INSULATION NEAR ANY SOURCE OF HEAT ABOVE 80°C.

• Down-lighters and recess lighting

The use of down-lighters or recess lighting in conjunction with ACTIS insulation is not recommended. Unless special precautions are taken, this poses an elevated fire risk.

However, if the use of such recess lighting in conjunction with ACTIS insulation is desired, encasing the down-lighter appropriately with a non-combustible material may provide adequate fire protection, but in all cases advice should be sought with the relevant Building Control officer who will give guidance on a case by case basis.

• Contact between materials and compatibility between products

Avoid all contact between ACTIS insulation and lead, zinc, copper and its alloys as well as caustic products.

• Sun protection

When laying ACTIS insulation materials outside, remember that multi-foil insulation is highly reflective. Where the product is being installed in bright or sunny weather conditions, appropriate eyewear should be worn (such as sunglasses conforming to the most stringent requirements of BS EN 172, as amended from time to time) and protect against sunburn.



Example of ACTIS "in-situ" test cells, Limoux, France.

Distributor details



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