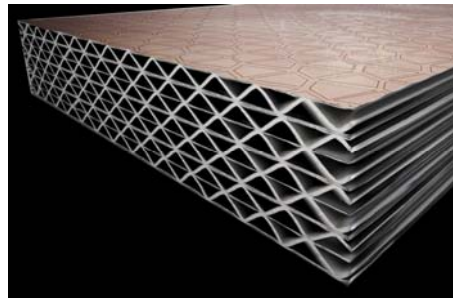


This certificate is valid for Building Regulations & associated technical guidance in force on the date of registration and for the regulations in the countries indicated

Actis Ltd - Hybris

Description of Product

HYBRIS is a reflective insulation product based on a honeycomb structure and low emissivity films. HYBRIS is an insulation material generally used for wall, pitched roof or ceiling applications, especially suitable for timber frame and masonry construction. HYBRIS is available in various thicknesses from 45mm to 205mm.



Key Factors Assessed

- Mechanical Resistance & Stability
- Safety in case of Fire
- Health, Hygiene and Environmental
- Safety in Use
- Energy Economy and heat retention

Validity

This certificate was first issued on 26th June 2014 and is valid until 4th April 2019

Issue Dated 31st January 2018

Scope of Registration

Hybris is a reflective insulation product which is typically installed between studs (walls) or rafters (roofs). Hybris is airtight and intrinsically resistant to water vapour.

- Hybris must be installed with the embossed copper coloured film facing the inside (warm side) of the building.
- It can be in direct contact with building components (1 or 2 sides) but the thermal efficiency will be improved with air gaps on both sides (e.g. service void).
- Hybris must be used in conjunction with a breather membrane or roofing felt.
- Hybris is usually associated with an independent and continuous vapour control layer which will also ensure air tightness.
- If a separate VCL is not used, then joints between HYBRIS insulation must be sealed with an ACTIS adhesive tape.
- Hybris is cut approx. 5-10mm wider than the gap between stud or rafter centres and it is necessary to obtain a tight friction fit.

Test Standard	EN 16012	
Insulation Product Type	2	
Test Method	EN 12667	
Thermal conductivity (λ)	0.033	W/mK
Emissivity	0.06/ 0.10	
Water vapour resistance	450	MNs/g
Fire performance	Euroclass F	
Product Thickness	45-205	mm
Core RD value (thermal resistance)	See below	M2K/W
RD value with 1 or 2 air spaces	See below	M2K/W
Air space thickness	13 roof - 20 wall (recommended)	mm
Direction of heat flow when tested	Vertical	
Length	1200	mm
Width	1145	mm
Weight	9500	g/m3

Thickness (mm)	Declared Core RD thermal resistance M2K/W	Declared RD thermal resistance with 2 air cavities M2K/W
40	1.20	2.35
45	1.35	2.50
50	1.50	2.65
60	1.80	2.95
75	2.25	3.40
90	2.70	3.85
105	3.15	4.30
120	3.60	4.75
125	3.75	4.90
135	4.05	5.20
140	4.20	5.35
150	4.50	5.65
155	4.65	5.80

For Scotland purposes:

BR443 dedicates a whole section to reflective foil products (3.10) multifoil insulation (3.10.2) and airspace resistances (4.8). R-values of airspaces can be calculated according to BS EN ISO 6946.

BBA IB3: 'Reflective foil insulation – Conventions for U-value calculations' - Actis adheres to this convention and recommends batten sizes accordingly with regards to sagging and residual air cavities.

The insulation must not be carried over junctions between roofs and walls, required to provide a minimum period of fire resistance, including around cavity barriers in roof or wall elements. The continuity of fire resistance must be maintained.

Actis does provide project specific condensation risk analysis alongside U-value calculations to verify viability of solutions in accordance with EN 13788, i.e. Glaser method as laid out in BS5250. Some applications may require a specialist vapour control layer, to avoid potential interstitial condensation.

The product Hybris has a declared λ -value of 0.033W/mK and associated air cavity resistances are calculated according to EN6946 and relevant heat flow directions (e.g. horizontal for walls, upwards vertical for roofs).

Actis have commissioned an independent assessment (carried out by BM Trada and BRS) of typical construction details utilising the Hybrid range of products. These thermal model junctions quantify the thermal performance of each specific thermal bridge, including temperature factors f_{Rsi} and thermal transmittance values ψ (psi-values) in accordance with BR 497 and BS EN ISO 10211: 2007, which can be applied in energy assessments (e.g. SAP calculations).

Conditions of Certificate

Hybris must be used in accordance with the guidance in the installation guidelines and the guidance in the BM Trada Certification sections 9 and The VTT Certificate section 6, 7, 8 and 9 and Appendix A and B.

The product should be used in a prescribed manner and location as indicated by the manufacturer and installed according to their instructions and manuals.

All products of Actis' Hybrid range can be used separately or together to provide a total insulation system in roofs, walls and loft applications.

Hybris must not be in contact with a chimney. The product must be isolated from a chimney with a fire resistant material.

For Scotland purposes:

That the specifications and materials referred to have been assessed in accordance with the Building (Scotland) Regulations 2004 and in accordance with the supporting guidance in the Domestic Technical Handbooks which came into force with effect from 1 October 2015.

That where reference is made on a plan or specification document to any Code of Practice, British or European Standard or manufacturer's instruction it shall be construed as a reference to such publication in the form in which it is in force at the date of this Registered Detail.

That the materials specified shall be for purposes of this Registered Detail and should not be changed without first gaining approval so to do from Local Authority Building Standards Scotland [LABSS]. Failure to do so will invalidate the Registered Detail.

Thickness (mm)	Declared Core RD thermal resistance M2K/W	Declared RD thermal resistance with 2 air cavities M2K/W
160	4.80	5.95
165	5.00	6.15
170	5.15	6.30
185	5.60	6.75
195	5.90	7.05
205	6.20	7.35

That the Registered Detail shall be valid for a period of 12 months from the date of issue or until otherwise invalidated by formal notice by LABSS. The Registered Detail may be re-validated after 12 months following a request and payment of an annual renewal fee from the Registered Detail Holder.

This Registered Detail should not be regarded as a formal approval under the building warrant process prescribed by the Building (Scotland) Act 2003 enacted from 1 May 2005

That this Registered Detail shall contribute to compliance with relevant Mandatory Standards specified under the Building (Scotland) Regulations 2004 as amended when read with the scope, conditions and regulations sections to this Registered Detail.

For LABC Warranty purposes:

This Product Approval is based on the details and limitations of use described in the current Exova BM TRADA Certification Limited Q-Mark Scheme, Certificate Number CPS- 0106.

LABC Warranty product approval is based on the current Exova BM TRADA Certification Limited Q-Mark Scheme, Certificate Number CPS-0106, remaining in place. Should this lapse, the Warranty Product Approval will be withdrawn.

LABC Warranty accepts the use of Actis Hybris, provided it is installed, used and maintained in accordance with Chapter 7 of our Technical Manual.

LABC and LABSS consider that, Hybris, if used in accordance with the provisions of this Certificate, will meet or contribute to meeting the relevant requirements of the following Building Regulations:



The Building Regulations 2010 (as amended) England & Wales

Regulation 7	Materials and workmanship
Note:	The products are acceptable.
AD B	Fire Safety
Note:	Subject to limitations detailed in Conditions section.
AD C	Site preparation and resistance to contaminants and moisture
Note:	Subject to limitations detailed in Conditions section.
AD L	Conservation of fuel and power
Note:	The thermal insulation performance of this system should be considered in the context of the contribution made to the overall performance.



The Building Regulations 2010 (as amended) England

AD L	Conservation of fuel and power
Note:	The thermal insulation performance of this system should be considered in the context of the contribution made to the overall performance.



The Building Regulations 2010 (as amended) Wales

AD L	Conservation of fuel and power
Note:	The thermal insulation performance of this system should be considered in the context of the contribution made to the overall performance.



The Building (Scotland) Regulations 2004 (as amended)

Technical Handbooks Domestic and Non-Domestic

Regulation 8	Durability, workmanship and fitness of materials
0.8.5:	Ways of establishing the fitness of materials
Regulation 9	Building Standards applicable to construction
Note:	Construction shall be carried out so that the work complies with the applicable requirements of schedule 5.

Mandatory

Standard 3.15 Condensation

Note: As per section 10.2.3.1 of the BM Trada certification, compliance with this standard will be demonstrated through the submission of a site specific condensation analysis

Mandatory

Standard 6.1(b) Carbon dioxide emissions

Note: The thermal insulation performance of this product should be considered in the context of the contribution made to the overall performance of the building.

Mandatory

Standard 6.2 Building insulation envelope

Note: The thermal insulation performance of this product should be considered in the context of the contribution made to the overall performance of the building.

Non-Regulatory Information



LABC Warranty

LABC Warranty conditionally accepts the use of Hybris when installed and used in accordance with the Scope and Conditions of this Certificate. Visit www.labcwarranty.co.uk for our LABC Warranty Technical Manual requirements and Warranty conditions of acceptance.

Supporting Documentation

Approved Document L BS EN 16012: 2012, EN12667

Actis, Technical Documentation Issue 10/07/2013

Actis Hybris installation guidelines

VTT certificate no VTT-C 9432-13 dated 12.02.2013 updated 21.03.2013 and BM Trada Q mark certificate no BIPS-0106 revision date 04/03/2013

VTT certificate no VTT-S-01403-15 dated 16.12.2013

Multifoil template dated 18/04/13

In addition for Scottish purposes:

Details - Pitched roof build up – DRW no TE 426, 431, 432

Actis Hybris installation guidelines PZ509

Contact Information

Actis Insulation Ltd

Unit 1 Cornbrash Park

Bumpers Way

Bumpers Farm Industrial Estate

Chippenham

Wiltshire

SN14 6RA

Tel: 01249 462 888

Email: solutions@insulation-actis.com

Web: www.insulation-actis.com