HYBRIS, A UNIQUE INNOVATIVE REFLECTIVE INSULATION

FOR ROOFS, WALLS, CEILINGS & SUSPENDED TIMBER FLOORS

HYBRID RANGE

ACTIS

TOMORROW'S INSULATION TODAY

HYBRIS, A NEW GENERATION OF INSULATION

HYBRIS is an innovative insulation material for timber frame or masonry wall, pitched roof, ceiling and suspended timber floor applications.

Applications in roofs, walls, ceilings and suspended floors

AN INNOVATIVE TECHNOLOGY

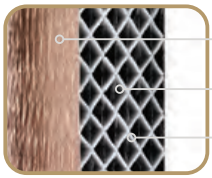
HYBRIS is a reflective insulation product based on a unique honeycomb structure made of shaped polyethylene foams glued to aluminium coated polyethylene foils. Its high thermal performance is provided by a special structure composed of a large number of low emissivity cavities, protected from dust and excessive air movement. Moreover, the low emissivity external films provide additional thermal resistance, when associated with air cavities.

HYBRIS is available in panels of **1145mm x 1200mm** and in a range of thicknesses from **50mm to 185mm**.

LIGHT, FLEXIBLE & DURABLE INSULATION

HYBRIS is easily installed between rafters, timber studs or within floor joists. It accurately fits all widths, held in place by friction-fit. Hybris is also durable and doesn't slump down over time.

HYBRIS is lightweight, less than 7.2 kg/m^3, thus easy to store and transport.



CRADLE TO CRADLE CERTIFICATION

Hybris is the only reflective insulation in Europe to achieve Bronze Cradle to Cradle certification for its sustainability credentials. Cradle to Cradle certified is the global standard for products that are safe and responsibly made, having a positive impact on people and the planet.

Assessment is carried out across five sustainability performance categories; reuse of materials, renewable energies and carbon management, social equity, healthy materials & water conservation. Hybris performed well in all categories achieving its Cradle to Cradle certification.

A HIGH THERMAL PERFORMANCE INSULATION

$\lambda_D 33$
THERMAL PERFORMANCE

HYBRIS significantly reduces building energy consumption while providing maximum comfort. With a core declared thermal conductivity (λ_D) as low as **0.033 W/mK**, HYBRIS provides a thermal resistance as high as **5.65 m²K/W for 185mm**.

HIGHLY REFLECTIVE

Easily recognisable HYBRIS has a copper-coloured internal face with a very low emmissivity of 0.06 (external face e = 0.10). With an air gap on either side HYBRIS can reach a total thermal resistance as high as **6.45 m²K/W for 185mm** in a roof application.

		ROOF	WALL
THICKNESSES	CORE THERMAL RESISTANCE	WITH TWO AIR GAPS	WITH ONE AIR GAP
50 mm	**1.50**	2.35	2.15
75 mm	**2.25**	3.10	2.90
90 mm	**2.75**	3.60	3.35
105 mm	**3.20**	4.05	3.85
125 mm	**3.80**	4.65	4.45
140 mm	**4.25**	5.10	4.90
155 mm	**4.70**	5.55	5.35
170 mm	**5.15**	6.00	5.80
185 mm	**5.65**	6.50	6.25

CLEAN, QUICK & EASY TO INSTALL

NO EYE & RESPIRATORY PROTECTION REQUIRED

HYBRIS is classified A+ for internal air quality according to ISO 16000 and is clean to use so doesn't generate dust or fibres while cutting or installing.

TIME SAVING

HYBRIS reduces the installation time without changing installation procedures.

For more info download the installation guideline on **www.insulation-actis.com** or watch HYBRIS installation videos on **Youtube**.

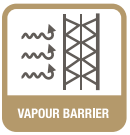
HYBRIS is easy to cut with an insulation saw, standard handsaw or an electric alligator saw if preferred.

HYBRIS will 'friction fit', for extra support tape adjacent Hybris panels and staple top and bottom to timbers.

THERMAL, AIRTIGHT AND ACOUSTIC INSULATION

PROPERTY	TEST METHOD	DECLARED VALUE
Thickness	EN 823	**50** to **185mm**
Weight/m^3	EN 1602	7.2 kg/m^3
Length	EN 822	1200mm
Width		1145mm
DECLARED THERMAL PERFORMANCE		
Thermal conductivity λ_D	EN 16012	**0.033 W/mK**
Declared core thermal resistance		**1.50 m^2K/W (50mm) to 5.65 m^2K/W (185mm)**
Emissivity (inner/outer) after ageing		**0.06/0.10**
TENSILE STRENGTH (BEFORE AND AFTER AGEING)		
Longitudinal direction	EN 1608	>45 kPa
Transversal direction		>30 kPa
RESISTANCE TO TEARING, NAIL SHANK (BEFORE AND AFTER AGEING)		
Longitudinal direction	EN 12310-1 part 1	>150 N
Transversal direction		>150 N
WATER VAPOUR TRANSMISSION		
Permeability (W)	EN 1931	<2,3 E-12 Kg/m^2.s.Pa
Vapour Resistance (Z)		450 MNs/g
Diffusion eq.air layer thickness (Sd)		>90m
WATERTIGHTNESS	EN 1928 Method A	Watertight, W1
AIR PERMEABILITY	EN 12114	Airtight
HEAT CAPACITY	2065 J/kg K	
REACTION TO FIRE	Class F	

HYBRIS is intrinsically airtight, stopping air infiltration from the outside and heat loss through convection from the inside.



HYBRIS' copper-coloured layer is a certified vapour control layer (Sd > 90m, Z = 450 MNs/g) and is intrinsically resistant to vapour.

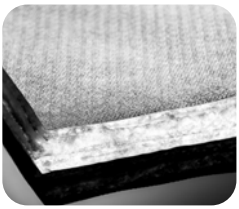
HYBRIS is resistant to air infiltration; it can effectively control noise and provide sound insulation. A masonry wall with 125mm HYBRIS installed can achieve Rw (C; Ctr)> = 67.7 (-2; -4) dB.

HYBRID RANGE, A FABRIC FIRST SYSTEM OF FOUR INNOVATIVE INSULATION PRODUCTS

HYBRIS can be combined with an insulating vapour control layer, such as **HCONTROL HYBRID** and an insulating breather membrane such as **BOOST'R HYBRID** or **BOOST'R HYBRID ROOF** to provide a total insulation system in all applications.

HCONTROL HYBRID
R-value 3.20 m^2K/W*

HYBRIS
λ = 0.033 W/mK

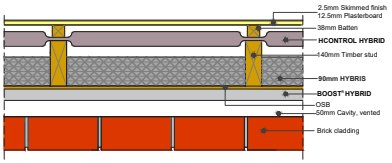


BOOST'R HYBRID
R-value 2.40 m^2K/W*

BOOST'R HYBRID ROOF
R-value 2.15 m^2K/W*

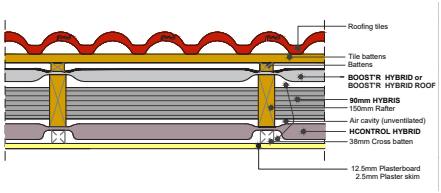
* R-value of product + 2 air cavities, according to EN16012.

Example in a timber frame wall



U-value 0.14 W/m^2K

Example in a pitched roof @600c



U-value 0.15 W/m^2K

For a more extensive list of solutions and for further technical support please visit:

U-VALUE SIMULATOR

Discover a unique tool to get a quick simulation of your project by visiting **Hybrid.insulation-actis.com**

CPD

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Ref: PZ684 (07/2024)