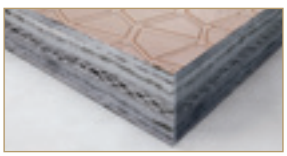
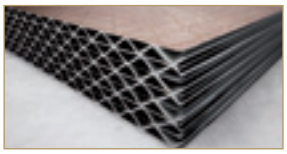
# Hello Future

## DUAL TESTING.
## DUAL PERFORMANCE.
## HYBRID.

## HYBRID INSULATION





ACTIS

TOMORROW'S INSULATION TODAY

CE

VTT EXPERT SERVICES LTD PRODUCT CERTIFICATE

BM TRADA Q MARK Construction Products Scheme

GCU Glasgow Caledonian University

# THE HYBRID RANGE: BENEFITS

## DUAL TESTING, IN A LABORATORY AND ON SITE


A range of innovative insulation products that are fully tested both under laboratory and real conditions of use, so their performance is guaranteed.

- The hybrid products are tested in a laboratory according to **EN 16012**
- The hybrid products are tested in real life according to **ISO 9869**

Construction Products Scheme

The thermal performance of the hybrid products **is verified in real life**, which eliminates any doubt between predicted energy savings, based on laboratory measured product performance, and actual achieved energy savings.

**ACTIS HYBRID products provide you with the confidence that the designed thermal expectations can be actually achieved.**

- In a laboratory, the products are measured under steady state conditions, taking into consideration in particular a temperature difference.
- However once installed in a building, the products are subjected to all other climatic conditions including wind, humidity or solar effects, which will have a major influence on their thermal behaviour, and consequently energy savings.

**By confirming that «on site » thermal performance is not derived from "declared" laboratory test results, ACTIS hybrid solutions comply with current Approved Documents Part L1A and 1B and anticipate future changes to building regulations in the UK and Europe.**

## DUAL PERFORMANCE


How do the hybrid products achieve the same on site & laboratory performance?

Each hybrid product combines insulation, air tightness, moisture resistance and reflective properties.

- ACTIS hybrid products are resistant to air infiltration and create a barrier to thermal losses through convection.
- All their components are moisture resistant.
- They take advantage of radiation effects due to the very low emissivity of their external films.

Whatever the climatic conditions, the thermal performance of the hybrid product range can be depended upon and is durable.

## A UNIQUE PATTERN

Easy to recognise, each hybrid product has the same patterned external film with a very low emissivity, **as low as 0.05.**

- Additional resistance value can be gained from the air voids facing these highly reflective films.
- The foils low emissivity is protected from degrading by surface lacquering.
- The foils reflect up to 95% of the solar thermal radiation outside the building, contributing to summer comfort.

## USE SEPARATELY OR AS A SYSTEM

All hybrid products can be used separately or together to provide a total insulation system in roofs, walls and loft applications.

Together, they can achieve the best U-value requirements with a minimal thickness compared to standard solutions.

# THE HYBRID RANGE CONSISTS OF 3 PRODUCTS

## HCONTROL HYBRID

### A vapour control layer with an unrivalled built-in thermal performance.

- Vapour control layer according to EN13984 CE
- Thermal performance measured according to EN 16012 + ISO 9869
- Fully certified

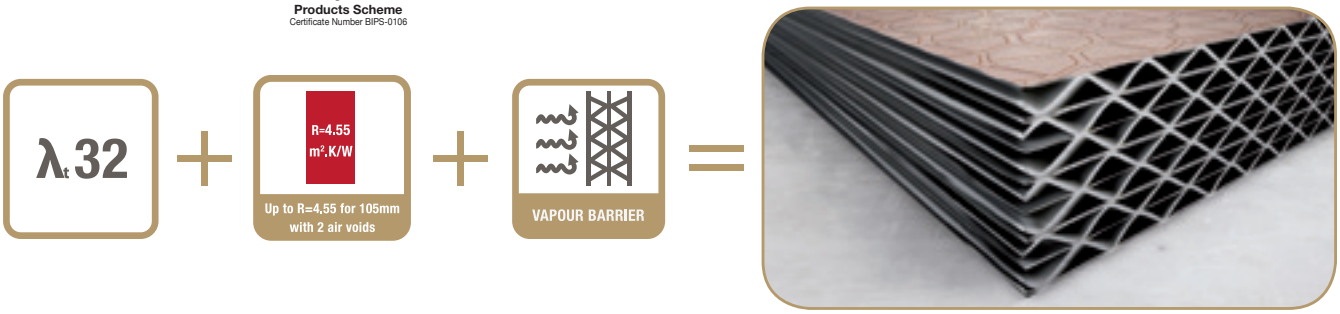
Construction Products Scheme
Certificate Number CPS-013


## HYBRIS

### A new reflective insulation product providing an excellent thermal performance associated with low emissivity films

- Thermal performance measured according to EN 12667 + EN 6946
- Fully certified

Building Insulation Products Scheme
Certificate Number BIPS-0106




## BOOST'R HYBRID

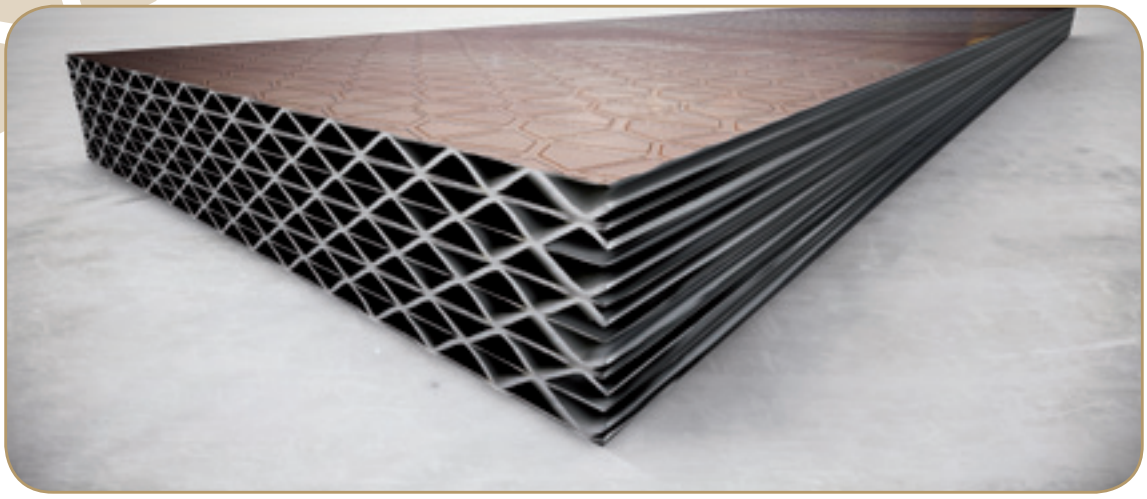
### A breather membrane combined with an excellent thermal performance.

- Breathable membrane according to EN13859 part 1&2 CE
- Thermal performance measured according to EN 16012 + ISO 9869
- Fully certified

Construction Products Scheme
Certificate Number CPS-014

# Hybris = λt32 + R=4.55 m².K/W + VAPOUR BARRIER

Up to R=4,55 for 105mm with 2 air voids



**HYBRIS is a new insulation material for timber frame or masonry walls, pitched roofs or ceiling applications.**

WALLS | ROOFS | CEILINGS

## AN INNOVATIVE TECHNOLOGY


HYBRIS is a reflective insulation product based on a honeycomb structure made of shaped polyethylene foams glued to aluminium coated polyethylene foils.

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 rolls 600 or 1200mm wide and in a range of thicknesses from 30mm to 300mm every 15mm.

## DUAL PERFORMANCE

λt 32

With a core effective thermal conductivity (λt, according to EN 12667 Annex A) **as low as 0,032 W/m.K**, HYBRIS provides a thermal resistance as high as **R=9.05 m².K/W.**

HIGHLY REFLECTIVE

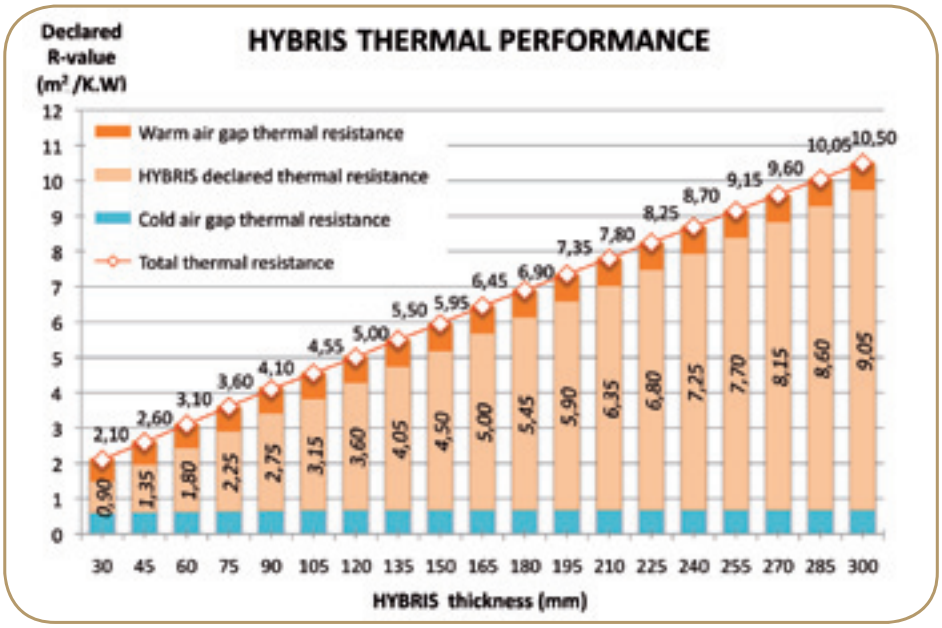
With an air gap on either side, HYBRIS can reach on average an additional thermal resistance per air gap of up to **0,67 m².K/W** in walls (horizontal flow) and up to **0.45 m².K/W** in roofs (upward vertical flow) which can be incorporated into U value calculations carried out in accordance with EN 6946.

## SPACE SAVING


**HYBRIS insulation helps to keep the fabric element to a minimum thickness and saves space !**

With 105 mm and 2 air gaps, in walls HYBRIS can achieve an R-value as high as **4,55 m².K/W** !

With the additional resistance due to the air gaps it is possible to reduce the thickness of the material needed and consequently save money.




## FULLY CERTIFIED

HYBRIS has been tested according to the following EN standards :

- **EN 12667**: *«Thermal performance of building materials - Determination of thermal resistance – Heat flow meter method - Products of high and medium thermal resistance»*
- **EN ISO 6946:** *«Building components and building elements Thermal resistance and thermal transmittance - Calculation method»*

HYBRIS is **fully certified** by 2 accredited bodies

VTT EXPERT SERVICES LTD VTT-C-9432-13 PRODUCT CERTIFICATE

BM TRADA Building Insulation Products Scheme Certificate Number BIPS-0106

**HYBRIS helps to meet the requirements of Approved Document L 2010 (England & Wales) and Section 6 (Scotland)**

## AIRTIGHT


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

## VAPOUR TIGHT


HYBRIS is intrinsically resistant to water vapour.

## USER FRIENDLY

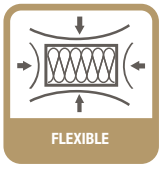

HYBRIS is very light – about 650g/m² for a 100 mm thickness – thus easy to carry


- HYBRIS is **classified A+** for internal air quality according to ISO 16000
- HYBRIS is clean - does not generate dust or fibre

## QUICK AND EASY TO INSTALL

HYBRIS reduces the installation time without changing installation procedures.


HYBRIS is very easy to cut, manually with an insulation knife on a flat surface or with an electrical saw.




HYBRIS is easily installed between rafters, timber studs or within floor joists. It accurately fits all widths, held in place by compression.
HYBRIS does not slump down.

# HYBRIS PROPERTIES

## PRODUCT

| PROPERTY | TEST METHOD | DECLARED VALUE |
|---|---|---|
| Thickness | EN 823 | **30 to 300mm every 15 mm** |
| Weight/$m^3$ | EN 1602 | <7 kg/$m^3$ |
| Length | EN 822 | 1,7 m (300mm-thick) to 11,7 m (45mm-thick) |
| Width | | 600/1200 mm |
| **DECLARED EMISSIVITY (OUTER/INNER SIDE) AFTER AGEING** | EN 16012 | **0.05 / 0.10** |
| **TENSILE STRENGTH** | | |
| Longitudinal direction | EN 1608 | >50 kPa |
| Transversal direction | | >40 kPa |
| **RESISTANCE TO TEARING, NAIL SHANK** | | |
| Longitudinal direction | EN 12310-1part1 | >150 N |
| Transversal direction | | >150 N |
| **PEEL STRENGTH OF TAPE** | EN 11339 | 22 N/100 mm |
| **TENSILE STRENGTH PARALLEL TO FACES OF THE TAPE** | EN 1608 | 116 N/100 mm |
| **WATER VAPOUR TRANSMISSION** | | |
| Permeability (W) | EN 12572 set C | <0,8 E-12 Kg/$m^2$.s.Pa |
| Vapour Resistance (Z) | | >1100 MNs/g |
| Diffusion eq.air layer thickness (Sd) | | >200 m |
| **WATERTIGHTNESS** | | Watertight |
| **AIR PERMEABILITY** | | Airtight |
| **FIRE RESISTANCE** | | Class F |
| **AFTER AGEING** | | |
| **TENSILE STRENGTH** | | |
| Longitudinal direction | EN 1608 | 74 N/50mm |
| Transversal direction | | 52 N/50 mm |
| **RESISTANCE TO TEARING, NAIL SHANK** | | |
| Longitudinal direction | EN 12310-1 part1 | 199 N |
| Transversal direction | | 188 N |
| **PEEL STRENGTH OF TAPE** | EN 11339 | At 98 N/100 mm, the HYBRIS surface is torn |
| **TENSILE STRENGTH PARALLEL TO FACES OF THE TAPE** | EN 1608 | 132 N/100 mm |

## PACKAGING

| THICKNESS | LENGTH | WIDTH | ROLL AREA | PALET AREA |
|---|---|---|---|---|
| **30mm** | 11,7m | 1200 / 2 x 600mm | 14.04$m^2$ | 252.72$m^2$ |
| **45mm** | 8,0m | | 9.60$m^2$ | 172.80$m^2$ |
| **60mm** | 6,2m | | 7.44$m^2$ | 133.90$m^2$ |
| **75mm** | 5,1m | | 6.12$m^2$ | 110.16$m^2$ |
| **90mm** | 4,3m | | 5.16$m^2$ | 92.88$m^2$ |
| **105mm** | 3,8m | | 4.56$m^2$ | 82.08$m^2$ |
| **120mm** | 3,4m | | 4.08$m^2$ | 73.44$m^2$ |
| **135mm** | 3,1m | | 3.72$m^2$ | 66.96$m^2$ |
| **150mm** | 2,8m | | 3.36$m^2$ | 60.48$m^2$ |
| **165mm** | 2,6m | | 3.12$m^2$ | 56.16$m^2$ |
| **180mm** | 2,5m | | 3.00$m^2$ | 54.00$m^2$ |
| **195mm** | 2,3m | | 2.76$m^2$ | 49.68$m^2$ |
| **210mm** | 2,2m | | 2.64$m^2$ | 47.52$m^2$ |
| **225mm** | 2,1m | | 2.52$m^2$ | 45.36$m^2$ |
| **240mm** | 2,0m | | 2.40$m^2$ | 43.20$m^2$ |
| **255mm** | 1,9m | | 2.28$m^2$ | 41.04$m^2$ |
| **270mm** | 1,9m | | 2.28$m^2$ | 41.04$m^2$ |
| **285mm** | 1,8m | | 2.16$m^2$ | 38.88$m^2$ |
| **300mm** | 1,7m | | 2.04$m^2$ | 36.72$m^2$ |

# HYBRIS THERMAL PERFORMANCE

## IN WALLS

### Details of the calculated configuration:

- Air cavities: **25 mm**
- Low emissivity (int / ext): **0,05 / 0,10**
- Heat flow direction: **horizontal**
- Temperature difference (Tint / Text): **20°C / 0°C**
- HYBRIS core thermal resistance according to **VTT certificate**
- Thermal performance of air gaps according to EN 6946.

| | Declared Thermal Resistance (m².K/W) | | | When using foil backed plasterboard |
|---|---|---|---|---|
| THICKNESS | CORE R-VALUE | R-VALUE WITH 1 AIR GAP* | R-VALUE WITH 2 AIR GAPS | R-VALUE WITH 2 AIR GAPS |
| 30mm | 0,90 | 1,50 | 2,10 | 2,15 |
| 45mm | 1,35 | 1,95 | 2,60 | 2,65 |
| 60mm | 1,80 | 2,45 | 3,10 | 3,15 |
| 75mm | 2,25 | 2,90 | 3,60 | 3,65 |
| 90mm | 2,70 | 3,40 | 4,05 | 4,15 |
| 105mm | 3,15 | 3,85 | 4,55 | 4,60 |
| 120mm | 3,60 | 4,30 | 5,00 | 5,10 |
| 135mm | 4,05 | 4,80 | 5,50 | 5,55 |
| 150mm | 4,50 | 5,25 | 5,95 | 6,00 |
| 165mm | 5,00 | 5,75 | 6,45 | 6,55 |
| 180mm | 5,45 | 6,20 | 6,90 | 7,00 |
| 195mm | 5,90 | 6,65 | 7,35 | 7,45 |
| 210mm | 6,35 | 7,10 | 7,80 | 7,90 |
| 225mm | 6,80 | 7,55 | 8,25 | 8,35 |
| 240mm | 7,25 | 8,00 | 8,70 | 8,80 |
| 255mm | 7,70 | 8,45 | 9,15 | 9,25 |
| 270mm | 8,15 | 8,90 | 9,60 | 9,70 |
| 285mm | 8,60 | 9,35 | 10,05 | 10,15 |
| 300mm | 9,05 | 9,80 | 10,50 | 10,60 |

* warm side

VTT EXPERT SERVICES LTD VTT VTT-C-9432-13 PRODUCT CERTIFICATE

## IN ROOFS

| | Declared Thermal Resistance (m².K/W) | | |
|---|---|---|---|
| THICKNESS | CORE R-VALUE | R-VALUE WITH 1 AIR GAP* | R-VALUE WITH 2 AIR GAPS** |
| 30mm | 0,90 | 1,30 | 1,80 |
| 45mm | 1,35 | 1,80 | 2,25 |
| 60mm | 1,80 | 2,25 | 2,75 |
| 75mm | 2,25 | 2,75 | 3,25 |
| 90mm | 2,70 | 3,20 | 3,70 |
| 105mm | 3,15 | 3,65 | 4,20 |
| 120mm | 3,60 | 4,10 | 4,65 |
| 135mm | 4,05 | 4,60 | 5,15 |
| 150mm | 4,50 | 5,05 | 5,60 |
| 165mm | 5,00 | 5,55 | 6,10 |
| 180mm | 5,45 | 6,00 | 6,60 |
| 195mm | 5,90 | 6,50 | 7,05 |
| 210mm | 6,35 | 6,95 | 7,50 |
| 225mm | 6,80 | 7,40 | 8,00 |
| 240mm | 7,25 | 7,85 | 8,45 |
| 255mm | 7,70 | 8,30 | 8,90 |
| 270mm | 8,15 | 8,75 | 9,35 |
| 285mm | 8,60 | 9,20 | 9,80 |
| 300mm | 9,05 | 9,70 | 10,25 |

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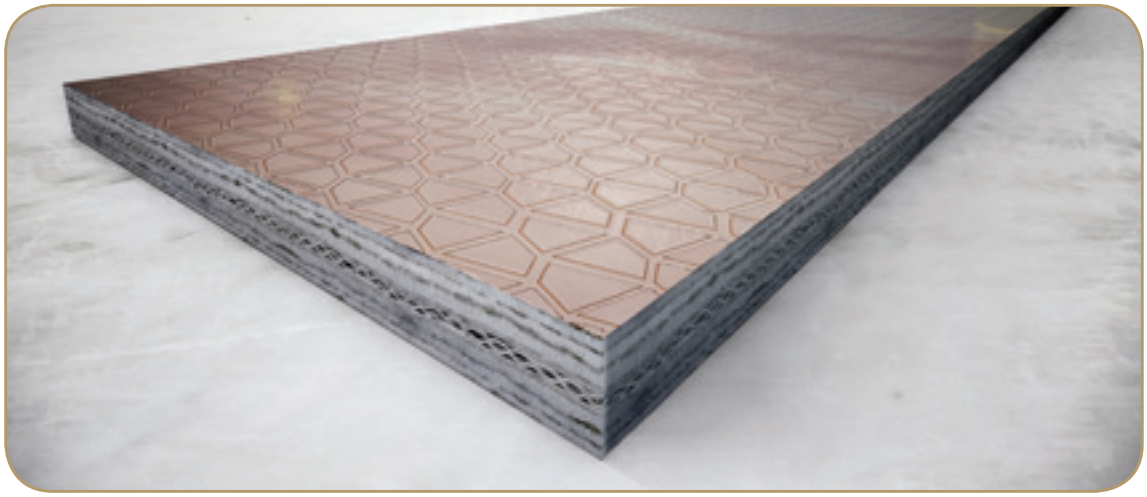
### Details of the calculated configuration:

- Air cavities: **20 mm**
- Low emissivity (int / ext): **0,05 / 0,10**
- Heat flow direction: **upward vertical flow**
- Temperature difference (Tint / Text): **20°C / 0°C**
- HYBRIS core thermal resistance according to **VTT certificate**
- Thermal performance of air gaps according to EN 6946.

* warm side
** 1 side unventilated, 1 side ventilated

# HControl Hybrid

= VAPOUR BARRIER Z>1000MN.s/g + R=3.2 m².K/W EN 16012 WITH 2 AIR VOIDS



**HCONTROL HYBRID is a reflective vapour control layer with a built-in thermal performance for use on the warm side of any insulation material, behind the internal finish in roofs, walls and ceilings.**

WALLS | ROOFS | CEILINGS

HCONTROL HYBRID provides dual performance within a single product : a vapour control layer and insulation, allowing a reduction in the number of installation steps whilst reducing the thickness of the main insulation to achieve the same required U-Value. It can be used in conjunction with any type of insulation.

HCONTROL HYBRID is available in rolls of 10m² (1600mm wide), 45mm thick.


## DUAL PERFORMANCE

VAPOUR BARRIER

With a **Z-value > 1000 MNs/g**, Sd > 200 m, HCONTROL HYBRID blocks water vapour diffusion through the fabric of the building, thus preventing any risk of condensation.

AIRTIGHT

HCONTROL HYBRID is airtight, so it acts as a barrier against air leakage and thermal convection.

R=3.2 m².K/W EN 16012 WITH 2 AIR VOIDS

Thanks to its sandwich assembly, its 45 mm thickness and its two low emissivity external faces of $\varepsilon$ **= 0,06**, HCONTROL HYBRID achieves a declared core R-value of **1,90 m².K/W** (with no air gaps – in direct contact) and an R value of **3,20 m².K/W** with 2 air voids of 20 mm (horizontal flow), as certified by VTT.

**Combined with a second layer of insulation, HCONTROL HYBRID helps to keep the fabric element to a minimum thickness and saves space !**

## DUAL TESTING


HCONTROL HYBRID has been tested **in a laboratory** according to the following EN standards:

- **EN 13984** : *« Flexible sheets for waterproofing. Plastic and rubber vapour control layers ».*
- **EN 16012** : *« Thermal insulation for buildings. Reflective insulation product. Determination of the declared thermal performance ».*

CE Complies with EN 13984

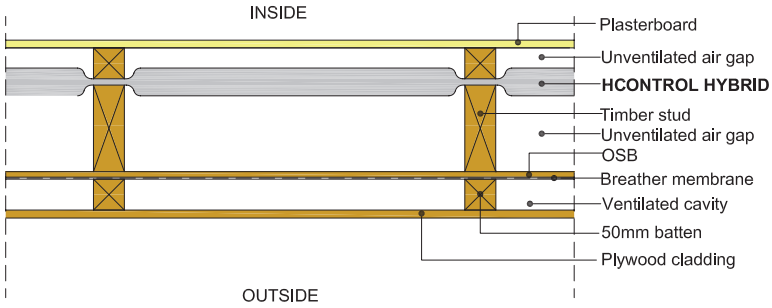
VTT EXPERT SERVICES LTD VTT-C-9190-12 PRODUCT CERTIFICATE

HCONTROL HYBRID has been tested **on site** by the Glasgow Caledonian University according to:

- **ISO 9869** *« Thermal insulation - Building elements - In-situ measurement of thermal resistance and thermal transmittance - Part 1 : Heat flowmeter method »*

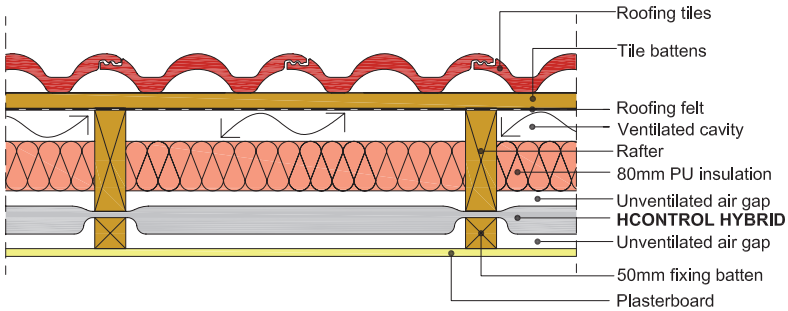
GCU Glasgow Caledonian University

## The following construction was used for thermal testing carried out on site in walls :




In walls once installed, the R Value of HCONTROL HYBRID with adjacent air cavities was measured at **3,45 m².K/W**, slightly over the laboratory measured R-value.

## The following construction was used for thermal testing carried out on site in roofs :




In roofs once installed :

- The core R Value of HCONTROL HYBRID was measured at **2,36 m².K/W.**
- The R Value of HCONTROL HYBRID with adjacent air cavities was measured at **3,54 m².K/W.**

## FULLY CERTIFIED

VTT EXPERT SERVICES LTD VTT-C-9190-12 PRODUCT CERTIFICATE

BM TRADA Construction Products Scheme Certificate Number CPS-013

HCONTROL HYBRID is fully certified by two accredited bodies

**HCONTROL HYBRID complies with BS5250 – Code of Practice for Control of Condensation in Buildings and helps to meet the requirements of Approved Document L 2010 (England & Wales) and Section 6 (Scotland)**

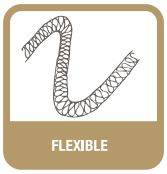
## USER FRIENDLY


- HCONTROL HYBRID is **classified A+** for internal air quality according to ISO 16000
- HCONTROL HYBRID is clean - does not generate dust or fibre
- HCONTROL HYBRID does not require earthing

## QUICK AND EASY TO INSTALL

HCONTROL HYBRID can be stapled or nailed.


HCONTROL HYBRID can be cut with a cutter




The flexible properties of HCONTROL HYBRID enable fitting to any uneven surface, allowing a continual insulation, thus offering a high quality installation without air leakages.

# HCONTROL HYBRID PROPERTIES

## PRODUCT

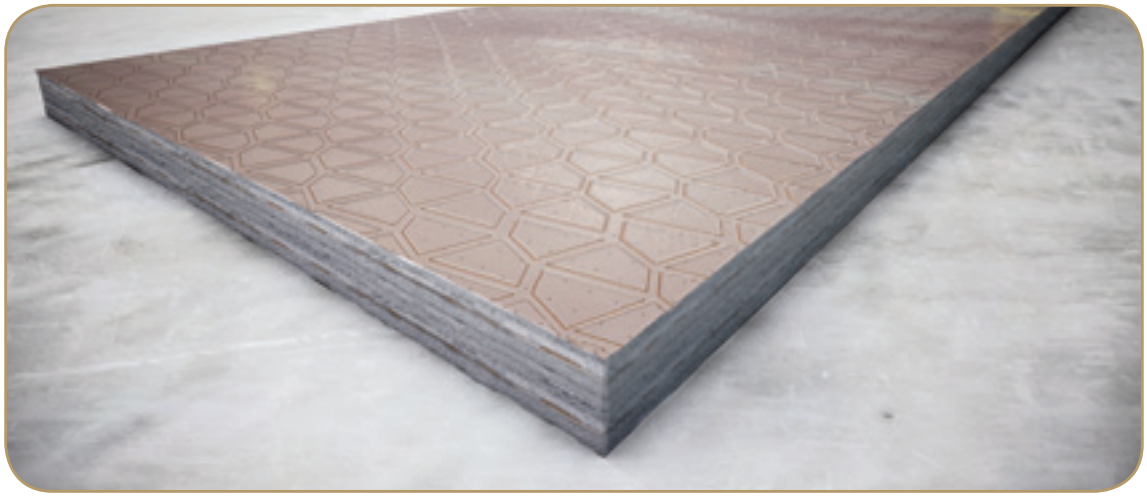
| PROPERTY | TEST METHOD | DECLARED VALUE |
|---|---|---|
| Thickness | EN 823 | 45mm |
| Weight/$m^2$ | EN 1849-2 | 950 g/$m^2$ |
| Length | EN 1848-2 | 6,25m |
| Width | | 1,6m |
| **DECLARED THERMAL PERFORMANCE** | | |
| R Value of HCONTROL HYBRID + 2 air cavities after ageing | EN 16012 | **3,20$m^2$.K/W** |
| R value of material | | **1,90$m^2$.K/W** |
| Declared Emissivity after ageing | | **0,06** |
| **TENSILE STRENGTH** | | |
| Longitudinal direction | EN 12311-1 & EN 13859-1 annex C | >300 N/50mm |
| Transversal direction | | >200 N/50mm |
| Elongation (Longitudinal) | | >20% |
| Elongation (Transverse) | | >5% |
| **RESISTANCE TO TEARING, NAIL SHANK** | | |
| Longitudinal direction | EN 12310-1 & EN 13859-1 annex B | >150 N |
| Transversal direction | | >150 N |
| **JOINT STRENGTH** | EN 12317 - 2 | 55 N/50mm |
| **WATER VAPOUR TRANSMISSION** | | |
| Permeability (W) | EN 1931 set C | 7,51 $10^{-13}$ Kg/$m^2$.s.Pa |
| Vapour Resistance (Z) | | ≥1000 MNs/g |
| Diffusion eq.air layer thickness (Sd) | | ≥200 m |
| **WATERTIGHTNESS** | EN 1928 method A | Watertight, W1 |
| **AIR PERMEABILITY** | EN 12114 | Airtight |
| **RESISTANCE TO IMPACT** | EN 12691, method A | 300 mm Drop height |
| **FIRE RESISTANCE** | | Class F |
| **AFTER AGEING** | | |
| **RESISTANCE TO TEARING, NAIL SHANK** | | |
| Longitudinal direction | Before Testing ageing at 70°C/48h then EN 12310 - 1 | 250 N |
| Transversal direction | | 200 N |
| **JOINT STRENGTH** | Before Testing ageing at 70°C/48h then EN 123170 - 2 | 80 N/50mm |
| **WATER VAPOUR TRANSMISSION** | | |
| Permeability (W) | EN 1931 set C | 6,681 $10^{-13}$ Kg/$m^2$.s.Pa |
| Vapour Resistance (Z) | | ≥1000 MNs/g |
| Diffusion eq.air layer thickness (Sd) | | ≥200 m |
| **WATER TIGHTNESS** | EN 1928 method A | Watertight, W1 |

**All these values are certified by VTT**

VTT EXPERT SERVICES LTD
VTT-C-9190-12
PRODUCT CERTIFICATE

# Boost'R Hybrid

= VAPOUR RESISTANCE Z = 0.55MN.s/g + R=2.4 m².K/W EN 16012 WITH 2 AIR VOIDS



**BOOST'R HYBRID is a reflective breathable membrane with a built-in thermal performance for use on the cold side of the building fabric in roofs and walls.**

WALLS

ROOFS

BOOST'R HYBRID provides dual properties within a single product : A breathable membrane and insulation, allowing a reduction in the number of installation steps whilst reducing the thickness of the main insulation to achieve the same required U-Value. It can be used in conjunction with any type of insulation.

BOOST'R HYBRID is available in rolls of 10 $m^2$ (1600 mm wide), 35 mm thick.


## DUAL PERFORMANCE

VAPOUR RESISTANCE Z = 0.55MN.s/g

With a **Z-value = 0,55 MNs/g**, Sd =0,11 m, BOOST'R HYBRID allows for water vapour diffusion through the fabric of the building, thus preventing any risk of condensation.

AIRTIGHT

With an air permeability value of <0.030 $m^3/m^2xhx50Pa$), BOOST'R HYBRID acts as a barrier against air leakage and thermal convection.

R=2.4 m².K/W EN 16012 WITH 2 AIR VOIDS

Thanks to its sandwich assembly, its 35 mm thickness and its two low emissivity external faces (**inner side ε = 0,05, outer side ε = 0.31**), BOOST'R HYBRID achieves a declared core R-value of **1,35 m².K/W** (with no air gaps – in direct contact) and an R value of **2,40 m².K/W** with 2 air voids of 20 mm (horizontal flow), as certified by VTT.

**Combined with a second layer of insulation, BOOST'R HYBRID helps to keep the fabric element to a minimum thickness and saves space !**

## DUAL TESTING


BOOST'R HYBRID has been tested **in a laboratory** according to the following EN Standards:

- **EN 13859-1/2** : *« Flexible sheets for waterproofing. Definitions and characteristics of underlays. Part 1 : Underlays for discontinuous roofing. Part 2 : Underlays for walls ».*
- **EN 16012** : *« Thermal insulation for buildings. Reflective insulation product. Determination of the declared thermal performance ».*

CE
COMPLIES WITH
EN 13859-1 AND
EN 13859-2

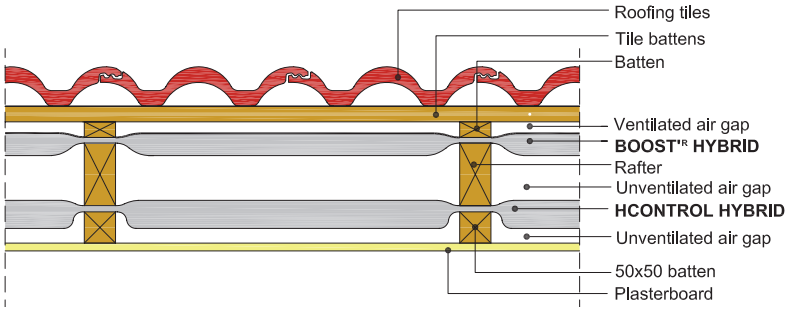
VTT EXPERT SERVICES LTD
VTT-C-9328-13
PRODUCT CERTIFICATE

BOOST'R HYBRID has been tested **on site** by the Glasgow Caledonian University according to:

- **ISO 9869** *« Thermal insulation - Building elements - In-situ measurement of thermal resistance and thermal transmittance - Part 1 : Heat flowmeter method »*

GCU Glasgow Caledonian University

### The following construction was used for thermal testing carried out on site in roofs :




In roofs once installed : The R Value of BOOST'R HYBRID with adjacent air cavities was measured at **2,17 m².K/W.**
The slight difference from the performance in a laboratory is due to the fact that BOOST'R HYBRID has been measured with a ventilated air gap on the cold side, which is not taken into account in the laboratory tests.

## FULLY CERTIFIED

VTT EXPERT SERVICES LTD
VTT-C-9328-13
PRODUCT CERTIFICATE

BH TRADA
Construction Products Scheme
Certificate Number CPS-014

BOOST'R HYBRID is fully certified by two accredited bodies.

**BOOST'R HYBRID complies with BS5250 – Code of Practice for Control of Condensation in Buildings and helps to meet the requirements of Approved Document L 2010 (England & Wales) and Section 6 (Scotland)**

## USER FRIENDLY


- BOOST'R HYBRID is **classified A+** for internal air quality according to ISO 16000
- BOOST'R HYBRID is clean - does not generate dust or fibre

## QUICK AND EASY TO INSTALL

BOOST'R HYBRID can be stapled or nailed


BOOST'R HYBRID can be fitted to rafters with a maximum span of 600 mm


BOOST'R HYBRID can be cut with a cutter


The flexible properties of BOOST'R HYBRID enable fitting to any uneven surfaces, allowing a continual insulation, thus offering a high quality installation without air leakages.

# BOOST'R HYBRID PROPERTIES

## PRODUCT

| PROPERTY | TEST METHOD | DECLARED VALUE |
|---|---|---|
| Thickness | EN 1849-2 under 50 Pa load | 35mm |
| Weight/$m^2$ | EN 1849-2 | 650 g/$m^2$ |
| Length | EN 1848-2 | 6,7m |
| Width | | 1,5m |
| **DECLARED THERMAL PERFORMANCE (OUTER/INNER SIDE)** | | |
| R Value of Boost'r Hybrid + 2 air cavities after ageing | EN 16012 | **2,40 $m^2$.K/W** |
| R value of material | | **1,35 $m^2$.K/W** |
| Declared Emissivity (outer / inner side) after ageing | | **0,31/0,05** |
| **TENSILE STRENGTH** | | |
| Longitudinal direction | EN 12311-1 & EN 13859-1/2 annex A | >300 N/50mm |
| Transversal direction | | >200 N/50mm |
| Elongation (Longitudinal) | | >20% |
| Elongation (Transverse) | | >10% |
| **RESISTANCE TO TEARING, NAIL SHANK** | | |
| Longitudinal direction | EN 12310-1 & EN 13859-1/2 annex B | >150 N |
| Transversal direction | | >150 N |
| **WATER VAPOUR TRANSMISSION** | | |
| Vapour Resistance (Z) | EN 12572 set C | 0,55 MNs/g |
| Diffusion eq.air layer thickness (Sd) | | 0,11 m |
| **WATERTIGHTNESS** | EN 1928 method A | Watertight, W1 |
| **AIR PERMEABILITY** | EN 12114 (50Pa) | < 0,030 $m^3/(m^2$ x h x 50Pa) |
| **FLEXIBILITY AT LOW T** | EN 1109, 30°C/ ø30mm | -30/30 °C/ ø30mm |
| **DIMENSIONAL STABILITY** | EN 1107, +80°C/6h | < 1% |
| **FIRE RESISTANCE** | | Class F |
| **AFTER AGEING** | | |
| **TENSILE STRENGTH** | | |
| Longitudinal direction | EN 12311-1 & EN 13859-1/2 annex A | 545 N/50mm |
| Transversal direction | | 250 N/50mm |
| Elongation (Longitudinal) | | 32% |
| Elongation (Transverse) | | 19% |
| **WATERTIGHTNESS** | EN 1928 method A | Watertight, W1 |

**All these values are certified by VTT**

VTT EXPERT SERVICES LTD
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PRODUCT CERTIFICATE

# SOLUTION OPTIMISER AND PATHFINDER

**Vapour control layer with built-in thermal performance**

**Innovative Insulation**

**Breather membrane with built-in thermal performance**

| | Configuration | Insulated plasterboard* | HCONTROL HYBRID** | Other insulation | HYBRIS | BOOST'R HYBRID*** |
|---|---|---|---|---|---|---|
| WALLS | Timber frame | HYBRIS 75mm | | | ● | |
| | Timber frame | HYBRIS 90mm | | | ● | |
| | Timber frame | HCONTROL HYBRID + HYBRIS 45mm + BOOST'R HYBRID | ● | | ● | ● |
| | Timber frame | HCONTROL HYBRID + HYBRIS 75mm + BOOST'R HYBRID | ● | | ● | ● |
| | Timber frame | HCONTROL HYBRID + HYBRIS 75mm | ● | | ● | |
| | Timber frame | HCONTROL HYBRID + BOOST'R-HYBRID | ● | | | ● |
| | Timber frame | BOOST'R HYBRID + HYBRIS 75mm | | | ● | ● |
| | Timber frame | BOOST'R HYBRID + PU 35mm | | ● | | ● |
| | Solid | HYBRIS 105mm | | | ● | |
| ROOFS | Pitched roofs(1) | HYBRIS 105mm + 90mm | | | ● | |
| | Pitched roofs(1) | HCONTROL HYBRID + HYBRIS 45mm + BOOST'R HYBRID | ● | | ● | ● |
| | Pitched roofs(1) | HCONTROL HYBRID + HYBRIS 75mm | ● | | ● | |
| | Pitched roofs(1) | HCONTROL HYBRID + BOOST'R-HYBRID + insulated plasterboard 25mm | ● | | | ● |
| | Pitched roofs(1) | HCONTROL HYBRID + PU 55mm | ● | ● | | |
| | Pitched roofs(2) | HCONTROL HYBRID + PU 80mm | ● | ● | | |
| | Pitched roofs(2) | HCONTROL HYBRID + PU 25mm + insulated plasterboard 47.5mm | ● | ● | | |
| CEILINGS | Ceiling | HYBRIS 105mm + 90mm | | | ● | |
| | Ceiling | HYBRIS 165mm | | | ● | |

| Vented/ non vented | Rafter/ stud size | Rafter/ stud spacing | Condensation risk | **Calculated U-value** |
|---|---|---|---|---|
| n/a | 140 x 50 | 600 | No | **0,30 W/m².K** |
| n/a | 140 x 50 | 600 | No | **0,27 W/m².K** |
| n/a | 89 x 50 | 600 | No | **0,17 W/m².K** |
| n/a | 140 x 50 | 600 | No | **0,15 W/m².K** |
| n/a | 140 x 50 | 600 | No | **0,19 W/m².K** |
| n/a | 89 or 140 x 50 | 600 | No | **0,22 W/m².K** |
| n/a | 140 x 50 | 600 | No | **0,19 W/m².K** |
| n/a | 89 or 140 x 50 | 600 | No | **0,28 W/m².K** |
| n/a | 125 x 50 | 600 | No | **0,27 W/m².K** |
| non vented | 125 x 50 | 600 | No | **0,18 W/m².K** |
| non vented | 125 x 50 | 600 | No | **0,17 W/m².K** |
| non vented | 125 x 50 | 600 | No | **0,18 W/m².K** |
| non vented | 125 x 50 | 400 | No | **0,18 W/m².K** |
| non vented | 125 x 50 | 600 | No | **0,18 W/m².K** |
| vented | 136 x 50 | 400 | No | **0,18 W/m².K** |
| vented | 125 x 50 | 400 | No | **0,18 W/m².K** |
| non vented | 100 x 50 | 600 | No | **0,16 W/m².K** |
| non vented | Continuous support | 600 | No | **0,16 W/m².K** |

* Calculation with standard plasterboard except when insulated plasterboard is used.
** Calculation with a standard vapour control layer except when HCONTROL HYBRID is used.
*** Calculation with a standard breather membrane except when BOOST'R HYBRID is used.

1) In new build
2) In refurbishment

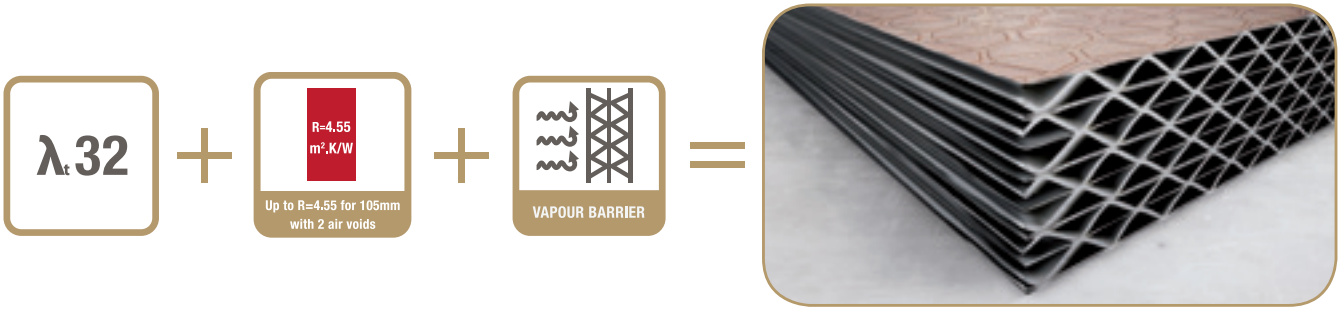
# THE HYBRID RANGE

## HCONTROL HYBRID

**A vapour control layer with an unrivalled built-in thermal performance.**


## HYBRIS

**A new reflective insulation product providing an excellent thermal performance associated with low emissivity films.**




## BOOST'R HYBRID

**A breather membrane combined with an excellent thermal performance.**


## U-VALUE SIMULATOR

Discover a unique tool to get a quick simulation of your project by scanning the following QR code.

## VISIT OUR WEBSITE

Please visit **www.insulation-actis.com** for more details.

**ACTIS INSULATION LTD.**
Unit 1 Cornbrash Park - Bumpers Way
Bumpers Farm Industrial Estate - Chippenham
Wiltshire - SN14 6RA
Tel. +44 (0) 1249 462 888 / Fax. +44 (0) 1249 446 345
Email : solutions@insulation-actis.com

Ref : PZ501(03/2013) – RCS CARCASSONNE 380 986 265