



# **VC FOIL ULTRA** LOW EMISSIVITY AIR AND VAPOUR CONTROL LAYER

Protect VC Foil Ultra is a robust, highly reflective air and vapour control layer (AVCL), offering low emissivity to enhance the thermal performance of walls, ceilings and floors. Suitable for timber, masonry or steel construction, VC Foil Ultra provides strong insulating properties when installed facing into a still airspace. This ensures significant thermal and performance benefits when compared with conventional vapour control materials.

Offering excellent thermal resistance, this AVCL is available with optional integrated tape to seal the overlaps and ensure radiant heat is reflected back into the structure, minimising absorption and energy transfer. When using integral tape, a super strength adhesive strip is used on the outer edges of the membrane to ensure a fully bonded solution and quick installation. This ensures a more reliable seal than traditional overlap tape. Even when joined without an underlying substrate, this will reduce air leakage and allow mechanical fixings to be installed through the double layered sealing laps. Protect tapes can also be supplied separately to ensure a fully airtight finish. The AVCL can be combined with the Protect TF200 Thermo or Protect Thermo Extreme breather membranes on the cold side of the insulation to deliver optimum cost savings and the ultimate in thermal efficiency.

Protect VC Foil Ultra has achieved independently verified Environment Product Declaration (EPD) certification, providing specifiers with clear sustainability and life cycle assessment data. Thermal Resistance 0.78 m<sup>2</sup>K/W (aged) and 0.81 m<sup>2</sup>K/W (unaged)

# BENEFITS

- Delivers an airtight system with sealed laps.
- Excellent air and vapour resistance.
- Helps avoid condensation risk in accordance with BS 5250.
- Available with integrated tapes for quicker installation and reliable, effective joint sealing.
- Low emissivity reflective surface enhances the thermal performance of the structure when used in a still air cavity.
- Corrosion and damage resistant reflective surface.
- Excellent nail tear resistance.
- High tensile strength, tough and durable.
- Easy to cut and lightweight to handle.
- BM TRADA independently certified for all applications and compliant with Building Regulations.
- Class 1 surface spread of flame to BS 476-7.
- Third party verified and certified EPD available.











# Description

Produced in the UK of triple ply construction, Protect VC Foil Ultra is supplied with red branding to aid ease of installation on the warm side of the insulation.

### Dimensions

Roll size: 1.35 m x 50 m (67.5 m<sup>2</sup>) 1.50 m x 50 m (75 m<sup>2</sup>) 2.70 m x 50 m (135 m<sup>2</sup>) 2.70 m x 100 m (270 m<sup>2</sup>) 3.00 m x 50 m (150 m<sup>2</sup>) Roll weight: 10 kg (10.5 kg with integrated tape) 11.3 kg (12.37 kg with integrated tape) 20 kg 38.6 kg 20.6 kg

#### Installation

Protect VC Foil Ultra is installed on the warm side of the structure immediately adjacent to the insulation and can be used on walls, ceilings and floors to significantly improve thermal performance and reduce air leakage in any construction. This ensures Building Regulations and airtightness standards are met.

# For more information visit: glidevaleprotect.com/vcfoilultra

| IMPROVEMENT IN THERMAL RESISTANCE VALUES |               |  |  |                               |  |
|--|---------------|--|--|-------------------------------|--|
| Wall heat flow                           | Airspace (mm) | Unventilated airspace                          |  | Improvement                   |  |
|  |               | with no special treatment (m <sup>2</sup> K/W) | with Protect VC Foil Ultra facing into airspace (m <sup>2</sup> K/W) | with Protect<br>VC Foil Ultra |  |
| Horizontal                               | ≥20           | 0.18   | 0.78* (aged)   | 333%                          |  |
| Upwards                                  | ≥13           | 0.16   | 0.52* (aged)   | 225%                          |  |
| Downwards                                | 50            | 0.21   | 1.53   | 629%                          |  |

| PERFORMANCE TO BS EN 13859-2:2010   |   |     |  |  |  |
|---|---|-----|--|--|--|
|   | MD  | CD  |  |  |  |
| Nail tear strength (N) to BS EN 12310-1 modified to BS EN 13859-2   | 239   | 243 |  |  |  |
| Tensile strength (N/50mm) to BS EN 12311-1 modified to BS EN 13859-2  | 210   | 205 |  |  |  |
| Water vapour resistance to EN ISO 1931  | 4946 MNs/g / 989 Sd                         |     |  |  |  |
| Thermal resistance (m <sup>2</sup> K/W) heat flow horizontal to BS EN ISO 8990<br>& BS EN 15976 (incorporates printing) | 0.78* (aged)<br>0.81* (unaged) <sup>†</sup> |     |  |  |  |
| Emissivity of the surface (E) unaged to BS EN 15976   | 0.02**                                      |     |  |  |  |
| Emissivity of the surface (E) aged to BS EN 15976   | 0.03**                                      |     |  |  |  |
| Weight (g/m <sup>2</sup> ) to BS EN 1849-2  | 150   |     |  |  |  |
| Resistance to water penetration to to BS EN 1928 modified to BS EN 13984  | Pass - Class W1                             |     |  |  |  |

\* Independently tested by National Physics Laboratories (NPL) in a typical UK house with timber frame wall cavity and verified by BM TRADA.

\*\* Independently tested by a European notified laboratory.

<sup>†</sup> Unaged result can be used if the vapour control layer is located in building structures which are in low humidity environments as per BS EN 15976. MD = Machine Direction (along roll). CD = Cross Direction (across roll).

# **Related products**

Protect Cavit-E clip: glidevaleprotect.com/caviteclip Protect TF200 Thermo breather membrane: glidevaleprotect.com/tf200thermo Protect Thermo Extreme breather membrane: glidevaleprotect.com/thermoextreme Protect TF InterFoil breather membrane: glidevaleprotect.com/tfinterfoil Protect reflective reinforced tape: glidevaleprotect.com/protecttapes

Environmental Product Declaration available from: glidevaleprotect.com/epdvcfoil

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Glidevale Protect maintains a policy of continuous development and reserves the right to amend product specifications without notice The company is a division of Building Product Design Ltd. Company registration 3944123. Printed on sustainably sourced paper.







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ASSURE<mark>GOLD</mark>

#### **Specification clause:**

Air and vapour control layer to be Protect VC Foil Ultra supplied by Glidevale Protect, 2 Brooklands Road, Sale, Cheshire M33 3SS. T: +44 (0)161 905 5700 F: +44 (0)161 905 2085 E: info@glidevaleprotect.com

Air and vapour control layer to be independently approved and of triple ply construction with non-woven core and solid corrosion resistant aluminium layer. To achieve a thermal resistance of 0.78 m²K/W to BS EN ISO 8990 & BS EN 15976 (aged – incorporates printing) and a vapour resistance of 4946 MNs/g / 989 Sd.

Air and vapour control layer to be fitted into wall/ceiling/floor\* on the warm side of the insulation in accordance with BS 5250, BS 9250 and manufacturer's instructions.

\*Delete as required.

# TOP TIP

Use the membrane solution of Protect TF200 Thermo, TF InterFoil and VC Foil Ultra within a timber frame panel to achieve thermal efficiency and potential insulation cost savings.



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