

Description of Product

Caltech UV is a reinforced high-performance one-part polyurethane cold-applied liquid membrane that is moisture-triggered to form a seamless, flexible, and durable waterproofing solution when cured.

Comprises **Caltech G-Mat-UV** glass fibre reinforcement mat which is carefully embedded into the membrane. The mat is typically rolled or pressed into the wet embedment coat to ensure good adhesion and eliminate air pockets.

Apply using a short to medium pile roller or brush depending on the application requirement.

Key Features

- ✓ BBA certified service life in excess of 30 years
- ✓ Alumasc warranty up to 25 years
- ✓ 1 part, moisture triggered
- ✓ Ease of application
- ✓ Cold-applied for safer installation
- ✓ Seamless and flexible
- ✓ Vapour permeable
- ✓ UV stable
- ✓ Low application temperature from 3°C and rising

Suitable Applications

- ✓ Flat roofs $\geq 1:80$ falls and pitched roofs
- ✓ Cold roofs, Warm roofs
- ✓ Overlay of existing failed roofing
- ✓ Complex detailing for use with other membrane types
- ✓ Intended for exterior application only

Approvals/Certification

- ✓ British Board of Agrément Certificate

Product Information

Caltech UV	
Composition	Thixotropic hybrid polyurethane resin
Colour	Grey RAL 7043
Packaging	17 litre containers
Shelf life	12 months from the date of production if stored correctly
Storage	Keep in original unopened containers to prevent air and moisture from entering. Store only in dry conditions at temperatures between 5°C and 30°C. Failure to do so can degrade the quality of the coating and affect its performance.

Caltech G-Mat-UV reinforcement	
Composition	225gsm chopped strand glass fibre matting with an emulsion binder
Roll size	0.95m x 150m
Coverage	143m ²
Shelf life	>12 months from the date of production if stored correctly
Storage	Keep in the original packaging in dry conditions above freezing temperatures

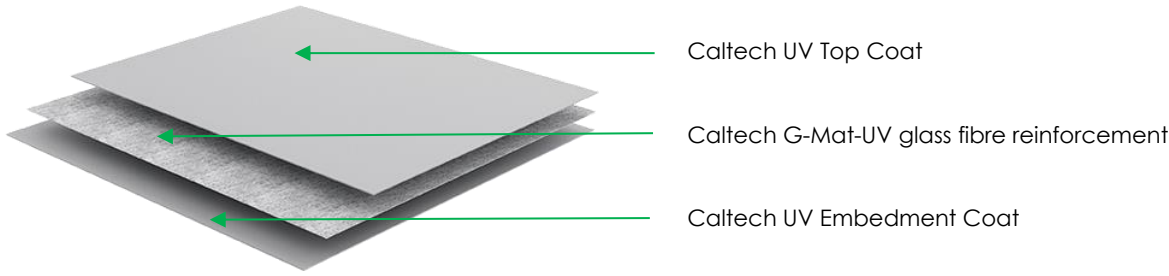
Technical Information

Characteristic	Standard	Unit	Value
Durability	BBA	Years	>30
External fire performance	ENV1187	-	BROOF (t4) subject to the full system build-up
Reaction to fire	EN13501-1	-	Euroclass F
Dry film thickness		-	2 to 2.5mm
Flash point	EN ISO 3879		33°C
Density	EN ISO 2811-1	g/ml	1,46 ± 0,03
Solid content	EN ISO 3251	%	83±1% by volume, 87% by weight
Tensile strength	UNI EN 12311-2	MPa	>6
Elongation	UNI EN 12311-2	&	>600
Crack bridging	EN 1062-7	-	A5 (23°C) - B4.2 (23°C)

Offers excellent chemical resistance to a range of dilute acids, alkalis, and salt solutions. This covers acid rain, airborne pollutants, and general industrial atmospheres, but no coating is entirely impervious to all chemicals. Contact Alumasc technical services for further guidance.



System Information



Application	Product	Coverage (minimum)	
Caltech UV to field areas	Caltech UV embedment coat	1.0-1.5 ltr/m ²	
	G-Mat-UV	Fully reinforced	
	Caltech UV topcoat	20 yr. warranty 1.2 ltr/m ²	25 yr. warranty 1.5 ltr/m ²
Caltech UV to details	Caltech UV embedment coat	1.0-1.5 ltr/m ²	
	G-Mat-UV	Fully reinforced	
	Caltech UV topcoat to be completed in two coats	20 yr. warranty 0.6 ltr/m ² per coat	25 yr. warranty 0.75 ltr/m ² per coat
Walkway coat (optional)	An additional coat of Caltech UV	0.5 ltr/m ²	
	Broadcast Alumasc Mineral Granules	Circa. 6 kg/m ²	

Coverage rates vary according to the warranty term.

Application Information

Factors such as temperature, humidity, and moisture content can affect application and curing. Application in damp or cold conditions that may result in surface condensation must be avoided.

Air temperature	3°C minimum air temperature and rising
Humidity	85% RH maximum
Substrate temperature	All surfaces must be at least 3°C above the dew point. Check against Primer PDS.
Substrate moisture content	Maximum of 28% WME (Wood Moisture Equivalent), or 5% moisture content of concrete. Tramex Moisture meters can be used to measure the moisture content.
Opened containers	Skin formation will occur once the drum has been opened. This can happen overnight or during a working day if the lid is left off but will not occur during normal use.

Substrate preparation

All surfaces must be dry, clean, and free from all contaminants.

The preparation and priming requirements may differ based on the type and condition of the substrate. Refer to the specification or consult with Alumasc Technical Services for advice and guidance.

Adhesion tests are to be carried out to verify surface preparation and coating application are within specification. Installation must only proceed if satisfactory adhesion is achieved.

Priming

Euroroof PU Primer

Suitable for concrete, timber, masonry, fibre cement boards, existing bituminous roofing, mastic asphalt, single-ply roofing (not PVC), and liquid coatings.

Caltech METprime

Suitable for all types of degreased metal. Very smooth or glossy metals should be lightly abraded to provide a key.

Euroroof PVC Primer

Suitable for PVC Single-Ply membranes.

Refer to the Product Data Sheet for further information.



Application

Apply an embedment coat at the specified coverage rate of Caltech UV to the prepared substrate.

Whilst wet, reinforce by laying Caltech G-Mat-UV glass fibre matting into the wet resin with a minimum of 50mm overlaps, roller the surface until the mat is completely embedded and fully saturated, including all laps by applying further material if necessary.

Allow the first coat to dry before applying the subsequent coats. The average overcoat time is between 12 to 24 hours subject to ambient/substrate temperature and relative humidity at the time of installation.

Once dry, apply a topcoat of Caltech UV at the required coverage rate according to the warranty term.

Overcoating time

Temperature	Minimum	Max.
>22°C & 50% RH	8 hours	48 hours

Curing time

Temperature	Torch Dry	Full Cure
>22°C & 50% RH	6-8 hours	10 days

If contaminated or left for more than 48 hours between coats, then the embedment coat must be cleaned and primed using Eurorof PU Primer before applying the topcoat.

In the event of rainfall, stop work immediately and do not resume until the surface is completely dry. Where a curing membrane is subjected to rainfall, the surface can become pitted. Where applicable, these areas should be topped off for aesthetic reasons.

Rain resistant: 6 hours.

Cleaning

All tools should be cleaned with Eurorof Solvent immediately after use.

Additional Information

The coverage rates provided are indicative only and the contractor must determine the exact coverage rates according to the condition of the substrate.

When embedding the G-Mat-UV onto rough or uneven surfaces tamping of the matting may be required to give all round contact with the substrate. Use a soft nylon/bristle brush or small roller to rectify. Ensure sufficient embedment coat is applied to all angles, junctions etc. to avoid tenting at these critical areas.

For application onto insulation boards or timber, the Caltech Preparation Layer is the carrier membrane to provide a sound base for the Caltech UV system.

Grit salt and/or other de-icing agents must not be used between layers of Caltech UV as this may adversely affect the cure and inter-coat adhesion.

When applying in a confined space, follow recommendations as stated in the Safety Data Sheet. Ensure air conditioning units are switched off or isolated before applying Caltech UV close to air intake vents, otherwise vapour may be drawn into the building.

Health & Safety

Scan the QR Code below using your mobile phone or tablet. The QR Code will redirect you to the Safety Data Sheet.



Caltech UV



Caltech G-Mat

All other Alumasc Safety Data Sheets can be downloaded via the following link www.alumascroofing.com.

Technical Support

Contact details:

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