Description of Product

Caltech UV is a reinforced one-part polyurethane cold-applied liquid membrane that is moisture-triggered to form a seamless, waterproofing solution.

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.

Key Features

- ✓ BBA certified service life in excess of 30 years
- ✓ Alumasc warranty up to 25 years
- ✓ 1 part, moisture triggered
- ✓ Vapour permeable
- ✓ Cold-applied, eliminating hot works during installation

Suitable Applications

- ✓ Cold roofs, Warm roofs
- ✓ Overlay of existing failed roofing

Approvals/Certification

- ✓ British Board of Agrément Certificate 23/7047

Product Information

Caltech UV	
Product code	ACPUV (Dusty Grey) / ACPUV-D (Slate Grey)
Composition	Thixotropic hybrid polyurethane resin
Colour	RAL 7037 (Dusty Grey) & RAL 7015 (Slate Grey)
Dry film thickness	2 to 2.5mm
Packaging	17 litre containers
Shelf life	12 months from the date of production when stored correctly
Storage	Keep in original unopened containers to prevent air and moisture ingress. Store only in dry conditions away from heat, direct sunlight, and oxidizing agents at temperatures between 5°C and 35°C. Improper storage may affect coating performance.

Caltech G-Mat UV Reinforcement	
Product code	G-MAT-UV
Composition	225gsm chopped strand glass fibre matting
Roll size	1.25m x 120m
Coverage	150m²
Shelf life	>12 months from the date of production if stored correctly
Storage	Keep in the original packaging in dry conditions above freezing temperatures

Caltech G-Mat Detail	
Product code	CGFM02
Composition	225gsm chopped strand glass fibre matting
Roll size	0.31m x 1.27m

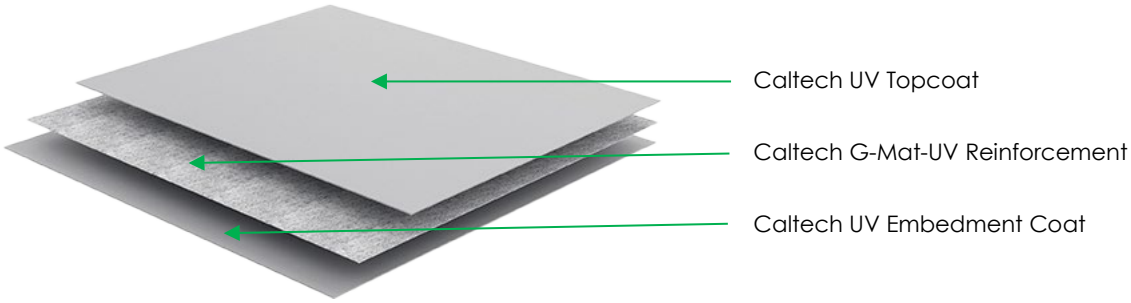
Technical Information

Characteristic	Standard	Unit	Value
Durability	BBA	Years	>30
External fire performance	BS EN 13501-5	-	BROOF (t4) *
Reaction to fire	EN13501-1	-	Euroclass F
Flash point	EN ISO 3879	°C	33
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 at break	UNI EN 12311-2	%	>600
Crack bridging	EN 1062-7	-	A5 (23°C) - B4.2 (23°C)

** Classified as BROOF(t4) to BS EN 13501-5 within approved and tested system assemblies.*

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System Information



Application	Product	Coverage (minimum)	
Caltech UV to field areas	Caltech UV embedment coat	1.0-1.5 ltr/m²	
	G-Mat-UV	Fully reinforced	
	Caltech UV topcoat	**20 yr. warranty**	**25 yr. warranty**
		1.2 ltr/m²	1.5 ltr/m²
Caltech UV to details	Caltech UV embedment coat	1.0-1.5 ltr/m²	
	G-Mat-UV	Fully reinforced	
	Caltech UV topcoat to be completed in two coats	**20 yr. warranty**	**25 yr. warranty**
		0.6 ltr/m² per coat	0.75 ltr/m² per coat
Walkway coat (optional)	An additional coat of Caltech UV	0.5 ltr/m²	
	Broadcast Alumasc Mineral Granules	Circa. 6 kg/m²	

Coverage rates are indicative only and depend on substrate conditions as well as 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; maximum 30°C
Humidity	85% RH maximum
Substrate temperature	All surfaces must be at least 3°C above the dew point. Primer requirements may vary.
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

Surfaces must be clean, dry, and free from contaminants.

Preparation and priming requirements vary depending on the substrate type and condition. Refer to the Alumasc project specification or contact Technical Services for guidance.

Adhesion tests must be undertaken to confirm that surface preparation and coating application meet the specified requirements. Installation may only proceed once satisfactory adhesion has been achieved.

Primer Range

- **Euroroof PU Primer**
  Suitable for concrete, timber, masonry, fibre cement boards, and bituminous, asphalt, single-ply (not PVC), liquid waterproofing.
- **Caltech Metprime**
  Suitable for all types of degreased metal. Very smooth or glossy metals should be lightly abraded.
- **Caltech PVC Primer**
  Suitable for PVC Single-Ply membranes.

Refer to the applicable Product Data Sheet for full details.

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Application

Prior to application, ensure all preparation is complete.

Using a short to medium piled roller apply an embedment coat of catalysed Caltech UV to the prepared substrate at the specified coverage rate.

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.

Once the embedment coat is dry, apply a topcoat of catalysed Caltech FCP by roller at the required coverage rate according to the warranty term.

Overcoating

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

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.

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

If the embedment coat is contaminated or left for over 48 hours, clean and wipe with Euroroof Solvent before applying the topcoat.

In the event of rainfall, stop work immediately and do not recommence until the surface is completely dry. If rainfall occurs during curing, surface pitting may result; where necessary, affected areas should be topped up for aesthetic purposes.

Rain resistant: 6 hours.

Additional Information

When embedding the reinforcement over rough or uneven surfaces, tamp the matt as required to ensure full contact with the substrate using a soft brush, or a small roller. Apply sufficient embedment resin at all angles, junctions, and details to avoid tenting.

Where applied over insulation or timber substrates, Caltech Preparation Layer shall be used as a carrier membrane to provide a suitable substrate.

Grit, salt, or other de-icing agents must not be used between layers of Caltech FCP, as they may adversely affect curing and inter-coat adhesion.

Where works are carried out in confined spaces, all relevant guidance and control measures detailed in the Safety Data Sheet must be always adhered to.

Health & Safety

Copies of Alumasc Safety Data Sheets can be downloaded from the Alumasc Roofing website.

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