

Description of Product

Caltech FCP-LO is a reinforced, low-odour, catalyst-cured polyester cold-applied liquid waterproofing resin that cures to form a seamless, fully bonded membrane. Specifically developed for use in sensitive and occupied environments, its low-odour formulation makes it ideal for applications where disruption and odour impact must be minimised.

Comprises **Caltech FCP 450 GSM Reinforcement**, a glass fibre reinforcement mat that is embedded within the membrane. The mat is rolled or pressed into the wet embedment coat to ensure full adhesion and eliminate air pockets.

The resin is cured using a Catalyst, with a low-temperature accelerator or high-temperature inhibitor used where required.

Key Features

- ✓ BBA certified service life in excess of 30 years
- ✓ Alumasc warranty up to 25 years
- ✓ Low-odour compared to traditional liquid systems
- ✓ Carbon neutral product
- ✓ Catalyst-controlled cure
- ✓ Optional colour coat finishes available

Suitable Applications

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

Approvals/Certification

- ✓ British Board of Agrément Certificate (pending)

Product Information

Caltech FCP-LO Resin	
Product code	FCP-RESIN-LOW-LG
Composition	Unsaturated polyester resin with fillers, pigments, and additives
Colour	Light Grey
Dry film thickness	2 to 2.5mm
Indicative weight	3.4 kg/m ²
Packaging	10 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 25°C. Improper storage may affect coating performance.

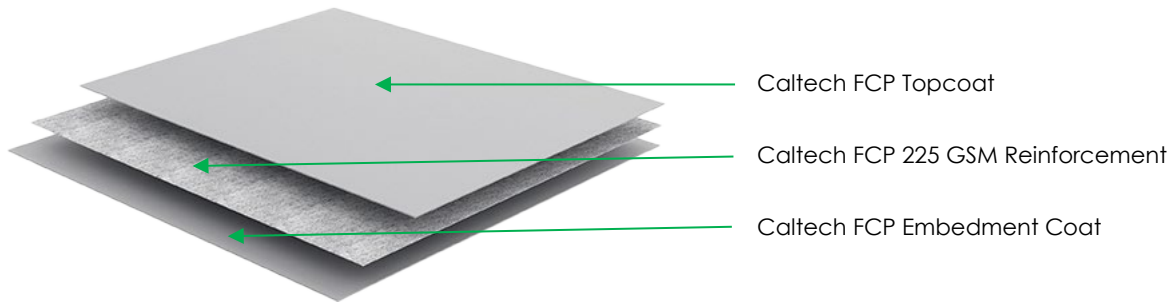
Caltech FCP 450 GSM Reinforcement	
Product code	FCP-450GSM
Composition	450gsm chopped strand glass fibre matting
Roll size	1.0m x 20m
Coverage	20m ²
Shelf life	>12 months from the date of production if stored correctly
Storage	Keep in the original packaging in dry conditions above freezing temperatures

Technical Information

Characteristic	Standard	Unit	Value
Durability	BBA	Years	>30
External fire performance	BS EN 13501-5	-	BROOF (t4) *
Flash point	EN ISO 3879	°C	67
Tensile strength	EN ISO 527-2	-	5420 N/50mm
Elongation	EN ISO 527-2	%	3.1

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

System Information



Application	Product	Coverage (minimum)	
Caltech FCP-LO to field areas	FCP-LO embedment coat	1.3-2.0 ltr/m ²	
	FCP 450 GSM Reinforcement	Fully reinforced	
	FCP-LO topcoat	20 yr. warranty 0.5 ltr/m ²	25 yr. warranty 0.75 ltr/m ²
Caltech FCP-LO to details	All angles to receive a double coat applied wet-on-wet, with Caltech FCP 450 GSM Reinforcement fully embedded.		

Coverage rates are indicative only and depend on substrate conditions as well as the warranty term.

Caltech FCP Liquid Catalyst mixing ratios:

✓ A calibrated measuring container and 38mm dispensing tap are required to ensure accurate dosing.

Air temp range	3-8°C	9-10°C	11-19°C	20-30°C
Additive	Add accelerator		-	Add inhibitor
Caltech FCP-LO Resin (Litres)	Catalyst addition (ml)*			
2.5	130	100	100	70
5.0	250	190	190	130
7.5	370	280	280	190
10	490	370	370	250

* Includes a nominal 10ml allowance for residual material in the calibrated measuring container.

Product	Caltech FCP Liquid Catalyst	Caltech FCP-LO Accelerator	Caltech FCP-LO Inhibitor
Product code	FCP-CATALYST-LIQ	FCP-LO-ACCELERATOR	FCP-LO-INHIBITOR
Packaging	1.86 litres (2.2 kg)	240g (1 tin/10 litre resin)	60g (1 tin/10 litre resin)

Mixing

1. Mix the Caltech FCP-LO Resin thoroughly in the original container – mixing from top to bottom.
2. Ensure additives are used as specified in the table. One tin of accelerator or inhibitor is required for each 10-litre container. Stir thoroughly, taking care to ensure the full contents are transferred and evenly distributed.
3. Use the temperature guide to determine the quantity of catalyst required.
4. Shake the catalyst container before use. Attach the dispensing tap to the catalyst container.
5. Decant the required amount of catalyst into the calibrated measuring container. Ensure all catalyst is transferred into the resin and mix thoroughly for a minimum of two minutes. Confirm that the catalyst is fully dissolved within the resin.

Catalyst levels may be adjusted to suit site conditions but must not fall below the minimum recommended rate. Check pot life before application and use smaller mixes in hot conditions to maintain adequate working time.

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.
Use of additives	Add to extend the resin pot life in both high and low temperature conditions.

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

- **Caltech FCP Epoxy Primer** - Two-part primer
Suitable for concrete, timber, metal, masonry, fibre cement boards, and bituminous or asphalt waterproofing.
- **Caltech Metprime Detail**
Suitable for smaller areas of metal detailing on all types for degreased metal substrates.
- **Caltech FCP SP Primer**
Suitable for Single-Ply membranes.

Refer to the applicable Product Data Sheet for full details.

Application

Prior to application, ensure all preparation is complete.

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

While the resin remains wet, reinforce by installing Caltech FCP 450 GSM Reinforcement with a minimum overlap of 50mm. Roller the surface until the mat is fully embedded and completely saturated, including all laps. Apply additional resin, as necessary.

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

Overcoating

Temperature	Minimum	Max.
15°C	40 - 60 minutes	48 hours

If the embedment coat is contaminated or left for over 48 hours, clean and wipe with Eurorof 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: 10 - 20 minutes.

Additional Information

When embedding the reinforcement over rough or uneven surfaces, tamp the mat 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-LO, 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](#).