

Flowfast 230 Membrane LM

Flowfast 230 Membrane LM is a medium viscosity, urethane-modified, pre-reacted, 100 % solid membrane system based on acrylic monomers for the application of waterproofing membranes.

Uses

Used as a waterproofing membrane in Deckshield Rapide car park deck systems. Flowfast 230 Membrane LM designed as a simple to apply, highly elastomeric liquid waterproofing membrane and coating.

The cured product is a very flexible crack-bridging membrane that retains its flexibility and crack-bridging performance in service even at very low temperature.

The domains of application for Flowfast 230 Membrane LM include:

- For the sub-grade waterproofing of Buildings and Civil Engineering Structures, including underneath Ground Slabs.
- The protection and waterproofing of Stadium Terracing.
- The waterproofing of containment structures including Reservoirs, waste and contaminated material storage structures.
- The waterproofing of Plant Rooms & Lift Pits
- Offshore platforms.

Environment & Health

Follow the appropriate Occupational Health and Safety guidelines applicable to the location where the application is undertaken. For more information, please refer to the safety datasheets for the individual components. Safety Data Sheet must be read and understood before use.

Features & Benefits

- Highly flexible with excellent crack-bridging characteristics even at extremely low temperatures (-20°C and below).
- Easy to apply using a roller or a squeegee.
- Thixotropic version available for vertical surfaces.
- Excellent waterproofing properties.
- Very high impact and puncture resistance.
- Roots resistance.
- High UV resistance.
- Withstands stress and movements in the substrate.
- Excellent adhesion to many types of substrates.
- Good chemical and abrasion resistance
- Can be applied over a wide range of ambient and substrate temperatures (-5°C to +30°C).
- Can easily be repaired, excellent inter-layer adhesion due to chemical bonding
- Fully cured up to two hours after application.

Packaging

The product is supplied in full units.

Flowfast 230 Membrane LM	25 kg	25 ltr
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Standard Coverage

Refer to Technical Data Sheet or System Specification.

Curing Times (at 20°C)

Min Overcoating	1 hour
Max Overcoating	< 6 hours
Foot Traffic	1 hour
Full Chemical Cure	2-3 days
* Do not cover or wash within the first 2 hours of curing.	

Technical Information

VOC Content	26 g/L Complies with Green Building Council of Australia Green Star Design & As Built V1.2-13.1.1B Green Star Interiors V1.2-12.1.1B
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Storage

Time	12 Months in Unopened Packs. If longer than 12 Months consult Flowcrete.
Temperature	Storage temperature between 15°C and 20°C. Maximum storage temperature is 30°C.
Protection	Should be stored inside and protected from frost, weather, moisture, direct sunlight and contamination ingress.

Characteristics (Liquid State)

Viscosity, 25°C (EN DIN 53019)	9.000 – 19.000 mPa·s (shear rate: 0.5 s ⁻¹) 290 – 560 mPa·s (shear rate: 50 s ⁻¹) 150 – 250 mPa·s (shear rate: 1000 s ⁻¹)
Density, 23°C (ISO 1183)	1.2 kg/l
Curing Time, 20°C (ISO 1183)	60 min
Pot life / processing time at 20°C	15 min

Characteristics (Cured State)

Tensile Strength at +25°C (EN ISO 527)	9.25 MPa
Tensile Strength at -20°C (EN ISO 527)	20.9 MPa
Elongation at Fracture at +25°C (EN ISO 527)	493%
Elongation at Fracture at -20°C (EN ISO 527)	337%
Modulus of Elasticity at +25°C (EN ISO 527)	49.6 N/mm ²
Modulus of Elasticity at -20°C (EN ISO 527)	146 N/mm ²
Density, 23°C (ISO 1183)	1.36 kg/l

Application Temperature

Ambient temperature range	-5°C - +35°C
Substrate temperature range	-5°C - +35°C
Ambient relative humidity	<95%
Substrate relative humidity (for primers)	<5.5% (TRAMEX scale or 92% RH BS 8203)

In abovementioned temperatures resin flow is optimized for best application effect and assumed material consumptions can be maintained. The recommended substrate temperature is between 0 – 25 °C.

During application and initial curing of product, substrate temperature needs to be at least 3 °C higher than dew point temperature. In closed rooms a forced ventilation with at least 7-fold air exchange per hour is recommended.

Do not apply material in direct sunlight as it may prevent proper curing and cause inter-coat adhesion problems. To assess possibility of application outside of these conditions or application temperatures below 0 °C, please consult our Technical Department.

Application / Pot Life

Ready-mixed product should be used within 15 minutes at a temperature of 20°C. At higher temperatures (or if left in bucket) the application time is shorter. Decant mixed product into smaller quantities if applying small/detailed areas.

Surface Preparation

Product must be applied only on substrates prepared and primed in accordance with System Specification or System Technical Data Sheet. Assumes a concrete base with a minimum 25 N/mm² compressive strength and 1.5 N/mm² tensile strength (latter as tested to EN 1542). Perform preliminary tests on critical and unknown surface.

Glazed surfaces must be removed from tiles before applying the primer (e.g. by diamond grinding or shot blasting). Loose tiles and tiles over hollows must be removed. Steel substrates must be prepared to SA 2.5 (to DIN 55929). The area to be coated, must be pre-treated with a suitable Flowfast primer (e.g. Flowfast 101 Standard Primer) including sanding. The substrate must be dry, firm, solid and free of dust, fat and oil. All substances that can prevent a good adhesion should be removed.

Mixing

Prior to use, Flowfast 230 Membrane LM must be carefully stirred to achieve a uniform distribution of paraffin contained in the product.

Flowfast 230 Membrane LM is thoroughly mixed with the Catalyst (50 % dibenzoyl peroxide), in accordance with the below guidelines. It should be noted that the amount of Catalyst powder to be added depends upon the application temperature. Add the required amount of Flowfast Catalyst Peroxan BPPLvr based on guideline in table below - to the resin and mix with slow speed drill and helical spinner, taking care not to entrain air. Additional filler should be mixed in after proper incorporation of Flowfast Catalyst Peroxan BPPLvr.

Catalyst Addition Rates

Guidelines for Flowfast Catalyst Peroxan BPPLvr (50% dibenzoyl peroxide) Addition to Flowfast 230 Membrane LM		
Temperature	Weight % Catalyst	Gram Catalyst per 25kg
+30°C	1.0%	250g
+20°C	1.4%	350g
+10°C	2.4%	600g
0°C	4.0%	1000g
<0°C	4.0%	1000g

Remark: The optimal product temperature is 15 °C – 20 °C. At temperatures below 0 °C, Flowfast 404 Accelerator should also be added. For further information contact our Technical Department.
Conversion:
1 cm³ of Catalyst (C2) = 0.64 g
1 g of Catalyst (C2) = 1.57 cm³

Application Method

Please refer to appropriate Flowfast Technical Data Sheet as per required specification.

After the Flowfast Catalyst Peroxan BPPLvr has been stirred in the product is poured onto the substrate in stripes and distributed using a trowel or toothed squeegee/rake. The material consumption depends in which of the Flowfast systems Flowfast 230 Membrane LM resin is being used for (minimum 1 mm); see specific Technical Data Sheets for further information.

In case that the Membrane is applied on primer not scattered with quartz sand, it must be applied to primer within 4-6 hours to prevent adhesion problems. Time limit to overcoat the Membrane is 4-6 hours.

When applying subsequent layers (e.g. Flowfast 215 Flexible Binder), do not exceed 6 hour overcoat time of Membrane.

Coverage

- 1.25 kg/m² per 1 mm membrane thickness.
- 1 mm thickness minimum
 - 2 mm thickness recommended

Cleaning

Tools and equipment can be cleaned with Flowfast 405 Cleaner or Solvents (MEK/ Acetone) immediately after application, cured remains can be removed only by mechanical means. Please refer to SDS when using solvents.

Additional Notes

1. The product has reached full chemical cure after 2-3 days at 20°C.
2. The applied colours may differ from the examples shown.
3. Tremco CPG Australia Pty Ltd [Tremco CPG] assumes no responsibility for the application of incorrect colour.

4. It is the applicators responsibility to verify accuracy of the product and its colour prior to application. Tremco CPG does not bear any responsibility or accept claims for incorrect product application or colour after application of material.
5. Do not cover or wash within the first 2 hours of curing at 20°C.
6. This system should be installed at 3°C above the dew point.
7. Please ensure application temperature and RH limits are followed.
8. Wind or strong airflow may cause quick curing and drying of the system.
9. Ensure wind or strong airflow is eliminated during application, however adequate safety ventilation should still be followed.
10. Whilst the product is low in VOC (<140 g/L complying with Green Building Council of Australia Green Star Design & As Built V1.2-13.1.1B Green Star Interiors V1.2-12.1.1B) this product will emit a discernible odour during application.
11. In closed rooms a forced ventilation with at least 7-fold air exchange per hour is recommended. To provide for outside these conditions, please contact our Technical Service.
12. Direct heat during application of the system can cause flash curing and potential delamination. Ensure you do not apply this system to substrates with temperatures exceeding 30°C.
13. Tremco CPG warrants all goods to be free from defects and will replace materials proven to be defective but makes no warranty as to appearance of colour or the application of incorrect product. The information and recommendations herein are believed by Tremco CPG to be accurate and reliable.