

ShaliFloor® SL FR 2E

2K Solvent Free Self-Leveling Fire Retardant Epoxy Floor Topping



Description

ShaliFloor® SL FR 2E is a 100% volume solids, pigmented, fire retardant containing free flowing, two component solvent free system in pre-weighed packing for on-site mixing. The finished floor is monolithic, smooth, non-porous, hygienic, chemical resistant, fire retardant and easy to clean.

Approvals / Standards

Fire retardant passes as per UL - 94, V - 0 methods. Additional certificates and approvals may be available on request.

Product Information

Mixing Ratio	Component A : Component B = 85.5 : 14.5 by weight
Handling & Storage	Store under cover out of direct sunlight and protect from extremes of temperature. In tropical climates the product must be stored in an air-conditioned environment. Failure to comply with the recommended storage conditions may result in premature deterioration of the product or packaging.
Packaging	Available in 26 kg unit pack.
Shelf Life	12 months from the date of manufacture when maintain in protected storage in original unopened sealed condition at 5 - 38°C. Failure to comply with the recommended storage conditions may result in premature deterioration of the product.
Colour Variation	When applicable, products primarily meant for use as primers may have slight colour variations from batch to batch. Such products may fade and chalk when exposed to sunlight and weathering. Colour and gloss retention on topcoats / finish coats may vary depending on type of colour, exposure environment such as temperature, UV intensity etc., and application quality.

Technical Characteristics at 28°C, 55% RH

Property	Method	Result
Pot life, hours	ASTM D 2471	2 ± 0.5
Cure time, hours		
• Foot traffic	ASTM C 722	10 - 12
• Vehicle traffic		20 - 24
• Fully serviceable, days		7
Volume Solid, %	IS 101	100
Density of mix, gm / cc	ASTM D 1457	1.40 ± 0.05
Compressive Strength, MPa, 7 days	ASTM C 579	65 - 75
Flexural Strength, MPa, 7 days	ASTM C 580	25 - 30
Tensile Strength, MPa, 7 days	ASTM C 307	8 - 10
Shore D hardness, 7 days	ASTM D 2240	70 - 80
Bonding Strength to concrete, MPa, 7 days	ASTM D 4541	2.0 - 2.5 (concrete failure)

Field of Application

- Railway coach / toilet.
- Automobile workshops and showrooms.
- Oil, gas and energy industries.
- Power plants.
- Suitable in both offshore and onshore environments for the passive fire protection of structural carbon steel, stainless steel and concrete.

Advantage

- Fire and abrasion resistant.
- Easy to apply, flowable consistency, monolithic surface.
- Solvent free - no odour during application.
- Excellent bond to metal surface, concrete and other substrates like Kota stones (seamless, non-staining)

Application Information

- ✓ **Substrate Temperature-** +10°C Min / +40°C Max
- ✓ **Ambient Temperature-** +10°C Min / +40°C Max
- ✓ **Substrate Moisture Content-** < 5%

Consumption Information

System	Product	Consumption (kg / m ²)***
0.5 mm Primer Top coat	ShaliPrime® 2E SF ShaliFloor® SL FR 2E	0.35 - 0.45 0.62 - 0.65
1 mm Primer Top coat	ShaliPrime® 2E SF ShaliFloor® SL FR 2E + STP Extender 201	0.35 - 0.45 0.90 0.40
2 mm Primer Top coat	ShaliPrime® 2E SF ShaliFloor® SL FR 2E + STP Extender 90	0.35 - 0.45 1.6 1.3

*** These figures are theoretical and do not include for any additional material required due to surface porosity, surface profile, variations in level and wastage, etc.

Application Methodology

➤ Surface Preparation

- Ensure that concrete surface is sound, even, firm and 28 days cured. The grade of the concrete should not be less than M25.
- Remove oil / grease by washing with liquid detergent, followed by acid wash or by burning. Allow it to dry before priming.
- Remove dust, flakes, or other foreign particles by jet or dry air and clean the surface mechanically by scarifying or by grinding to make it smooth before application.
- Treat control joint and construction joint with **ShaliFix® EM** mortar.
- Cut open the concrete floor at ends near to door entrances, around trenches and gutters etc. around 10 mm deep and 10 mm wide to accommodate blade and anchor **ShaliFloor® SL FR 2E**.
- For metal surface make the surface profile by sand or shot blasting for better adhesion.
- Remove old painting using surface grinder.
- For best bond, concrete surface must be slightly textured.

➤ Material Preparation

- The pre-weighted packs of **ShaliFloor® SL FR 2E** has to be mixed for 2 to 3 minutes using a low-speed electric stirrer (300 - 400 rpm) with a spiral shaped stirrer. The components should be mixed in a suitably sized mixing vessel.
- The Component B is then added to the base and mixed for about 3 to 4 minutes slowly until an even color, texture is obtained.
- After stirring, wait for the product to settle in order to let entrapped air to escape.
- Add the Extender slowly into the mixing container, ensure stirring while pouring. Mix for another 2 - 3 minutes till the product is homogeneous.
- Do not dump the extender component all at once. Mix till the material is completely homogeneous. Mix only that much quantity that could be finished in the stipulated pot life. We are not recommending part mixing.

➤ Application of Material

- The concrete surface after proper and thorough surface preparation has to be primed with **ShaliPrime® 2E SF**. It is designed for better adhesion with the substrate and the flooring system. The primer should be mixed in the given proportions supplied.
- Once mixed, the primer should be applied immediately on to the prepared concrete surface. After priming, the surface has to be kept for drying - approximately 6 - 12 hrs.
- Depending on the ambient temperature before, proceed to lay **ShaliFloor® SL FR 2E**.
- The material once mixed should be used within its specified pot life; the material is poured on to the primed surface and spread evenly to the required thickness with a 'V' notched steel trowel.

- After spreading, the wet epoxy should be firmly rolled with a spiked nylon roller to help release any entrapped air in the material and assist leveling and removing any tool marks
- Anchor **ShaliFloor® SL FR 2E** near walls, around columns / foundations and at edges of trenches/cutters/bays and expansion joints.

Precautions

- Do not apply **ShaliFloor® SL FR 2E**
 - On surfaces known to, or likely to, suffer from rising dampness, potential osmosis problems or having relative humidity greater than 75%.
 - To asphalt, weak or infirm concrete, unmodified sand / cement screeds, PVC tiles or sheets, or substrates known to move substantially e.g., steel walkways.
- Common to all epoxy material, some colour may fade in the long term, when placed in adverse exposed condition. Such changes, if any, are normal and have no effect on product performance of **ShaliFloor® SL FR 2E**.

Value base of product data

All technical data stated in this Product Data Sheet are based on laboratory tests. Actual measured data may vary due to circumstances beyond our control and different test methods.

Health and Safety information

For information and advice on the safe handling, storage and disposal of chemical products, users shall refer to the most recent **Material Safety Data Sheet**.

- Please observe the precautionary notices displayed on the container.
- Use under well ventilated conditions.
- Do not inhale spray mist.
- Avoid skin contact.
- Spillage on the skin should immediately be removed with suitable cleanser, soap and water.
- Eyes should be well flushed with water and medical attention sought immediately.
- If swallowed, seek medical attention immediately. Do not induce vomiting.

Cleaning & Maintenance

- Clean all tools immediately after use with ShaliPoxy Thinner only. Do not allow the material to harden.
- All hardened materials have to be removed mechanically.



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Product Range

- Waterproofing and Insulation ■ Road Surfacing
- Sealants and Additives ■ Pipeline Coating
- Protective / Anti-Corrosive Coating ■ Epoxy Flooring
- Grouts / Admixtures ■ RestoFix- Repair / Rehabilitation
- Other Construction Chemicals



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