ShaliFloor® 3ES

Three Component Chemical & Abrasion Resistant Epoxy Screed

STP Limited

Description

ShaliFloor® 3ES (Formerly known as ShaliScreed / ShaliScreed 2000) is three components solvent free abrasion resistant flooring based on epoxy resin and specially graded aggregates. It is an extreme high build, trowel applied product. It is specially designed as a superior abrasive, impact and corrosion resistant screed for areas with extreme wear and tear. It can also be used as mid coat or finish coat. Suitable to apply on approved primers on concrete substrates.

Approvals / Standards

Certificates and approvals may be available on request.

Product Information

Mixing Ratio	Component A : Component B : Component C = 10 : 4 : 86 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 10 kg unit pack X 2 = 20 kg in one carton box.
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 @ 27°C, 55% RH

Property	Method	Result
Pot life , minutes		35 - 50
Recommended thickness, mm • Heavy duty • Low / Medium duty		 10 - 30 3 - 6
Cure time, hours • Foot traffic • Vehicle traffic • Fully serviceable, days		 20 - 24 36 - 48 7
Volume Solid, %		100
Density of mix, gm / cc	ASTM D 1475	2 ± 0.05
Consumption, kg / m^2 / mm **		2.0 - 2.3
Compressive Strength, MPa, 7 days	ASTM C 579	50 - 60
Flexural Strength, MPa, 7 days	ASTM C 580	24 - 28
Tensile Strength, MPa, 7 days	ASTM C 307	7 - 10
Bonding Strength to concrete, MPa, 7 days	ASTM D 4541	2.3 - 2.8

**** 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.**

Chemical Resistance (ASTM D 1308- Spot Test), 24 hr Exposure

Hydrochloric Acid 10%	Resistant	Sulphuric Acid 10%	Resistant
Phosphoric Acid 30%	Resistant	Nitric Acid 10%	Softening with discolouration
Sodium Hydroxide 30%	Resistant	Ammonium hydroxide	Resistant

Field of Application

Designed for a wide range of floors exposed to extreme wear and tear.

- Recommended for steel plants.
- Depots and loading ramps
- Hangars
- Car parks with higher anticipated load
- Oil refineries

Advantages

- Permeable to water vapour.
- High mechanical strength
- Impact and abrasion resistant
- Slip resistant
- Non tainting
- Excellent chemical resistance

Application Information

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

System

Primer	**ShaliPrime® 2E SF**
Epoxy Screed	**ShaliFloor® 3 ES**

Application Methodology

➢ Surface Preparation

- **ShaliFloor® 3ES** must be applied to a clean, dry substrate free from dust, dirt, oil, grease and other contaminants. A clean well prepared surface will ensure adhesion between substrate and overlay.
- Clean the surface by scrubbing followed by thorough water wash and wire brushing to remove laitance, dust, grease, paint, etc. followed by air drying.
- The choice of surface preparation should be determined by the nature and extent of contaminants present on the concrete surface.
- Damaged or uneven areas, cracks etc. should be made good.

➢ Material Preparation

- A suitable power-driven mixer / stirrer is recommended for uniform mixing of the **ShaliFloor® 3ES**.
- Stir the base and hardener separately.
- Mix Component B (hardener) gradually into the component A (base) under continuous stirring as per the stated mixing ratio. Continue the mixing for 3 - 4 minutes.
- Mix the aggregates (component C) into the mixed resin portion uniformly under continuous mechanical agitation. Mix well for 5 - 6 minutes till the components become homogeneous.
- After stirring, wait for the product to settle in order to let entrapped air escape.

➢ Application of Material

- Divide the total area into bays, covering only an area that can be applied within the pot life of the product. Place the mixed screed while the primer coat (**ShaliPrime 2E SF**) is still tacky.
- The product shall be spread by a notched steel trowel to the required thickness.
- Spread the **ShaliFloor® 3ES** Screed mixture evenly onto the substrate using leveling boards and guide rails, by giving it a surcharge over preinstalled batten (e.g. steel guides adjusted to desired height).
- Tamp down the screed heavily to desired level to give full compaction. When applied in higher thicknesses, compact the screed in layers.
- Level the screed by striking off excess material by running a straight edge ruler across batten.
- To remove any entrapped air from the coating use spike roller immediately after spreading of **ShaliFloor® 3ES.**
- Smoothen with a hand trowel.
- Anchor the screed mortar near floor to wall joints, around columns & foundations & at edges of trenches, gutters, bays & expansion joints.

Coving

NOTE: After application of **ShaliFloor® 3ES,** it has to be sealed with sealer coat or **ShaliFloor® TC 2 HBE**. **ShaliFloor® SL TC 2E / 4E** can also be applied as topping.

Precautions

- Mix only sufficient materials for immediate requirements. Leave the mixed material to stand for 5 - 8 minutes to enable entrapped air, if any, to escape from the mix and then use as quickly as possible.
- Cementitous substrates must be at least 4 weeks old.
- Failure to assess and treat cracks could lead to reflective cracking and reduced service life.
- **ShaliFloor® 3ES** is not designed to be a decorative or aesthetic finish.
- Applicators and operators shall use appropriate personal protection equipment when using this product.

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 STP Thinner only. Do not allow the material to harden.

STP Limited
Enhancing Structures' Life

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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