

ShaliCrete RM

Modified SBR Latex Based Polymer for Waterproofing, Repair & Rendering



STP Limited

Description

ShaliCrete RM is an emulsion of single component styrene butadiene co-polymer based latex specially developed to improve the properties of cementations compositions. It is fully soluble in water and is to be added directly to the gauging water of slurry / mortar / concrete / grout. Mortars produced with **ShaliCrete RM** may be used for horizontal, vertical and overhead repair work. It is used with cement to produce a waterproofing membrane for concrete structures.

Product Information

Chemical Base, Color	Styrene butadiene rubber emulsion, Milky white liquid
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 5 Kg, 20 Kg and 200 Kg drum.
Shelf Life	Shelf life is 12 months from the date of manufacturing. Store in a cool & dry place in unopened condition (Prevent from direct sunlight).
Handling Precautions	As with all chemical products, care should be taken during use and storage to avoid contact with eyes mouth, skin and foodstuffs. Treat splashes to eyes and skin immediately. Keep away from children and animals

Technical Characteristics 27°C, 55% RH

Properties	Result
pH	7 - 9
Specific Gravity	1.01 ± 0.02
Chemical Resistance	Resistance to mild, acids, sulphates, alkalis
Freeze Thaw Resistance	Excellent
Pull off adhesion test, MPa	1.5 - 2.1 (Concrete failure)

Consumption Information

Application type	Mixing Ratio by weight	Consumption of mixture
Waterproofing coat	ShaliCrete RM : Cement = 1 : 3	0.7 - 1.0 kg / m ² in 2 coats
Bonding coat	ShaliCrete RM : Cement = 1 : 2	0.3 - 0.5 kg / m ² in single coat
Polymer modified repair mortar	ShaliCrete RM : Water*: Cement : Sand = 4 : 5 : 25 : 75	1900 - 2000 kg / m ³
Polymer concrete & screed	ShaliCrete RM : Water : Cement : Sand : Aggregate (6 mm down) = 4 : 6 : 25 : 37 : 75	2200 - 2300 kg / m ³

*Water content shall be kept at minimum and can be adjusted ±10% depending upon required consistency.

Field of Application

- Repair & Rehabilitation of concrete.
- Waterproofing mortars / concretes including, terrace, sunken slabs, basements, retaining walls, water tanks, sunshades, lift pits, balconies, masonry walls and slopping RCC roofs.
- Bedding for tiles / marbles.
- Bonding slurry.
- External rendering.
- General reconstruction work and latex modified overlays and topping.

Advantages

- Easy application by brush.
- Excellent concrete modifier.
- Withstands chloride ion diffusion & sulphate / CO₂ attack.
- Improves bond strengths to hardened concrete.

- Dense, impermeable, mortar for column & beam repairs.
- Reduces rate of corrosion when applied on steel bars.
- Reduces cracking through increased mortar flexural strength.
- Increases mortar wear resistance under rubber wheeled traffic.

Application Methodology

➤ Surface Preparation

- Remove all loose concrete, grease, mould oil or curing compound from concrete and steel surfaces using wire brush, scrubber.
- Saw cut the concrete areas to a square or rectangular profile to a minimum 10 mm depth at the extreme edges.
- Treat surface with 5% - 10% hydrochloric acid, followed by complete neutralization with water, which will improve bonding of the coating. Oils, greases & mould release agents can be cleaned with solvents.
- Remove excess / standing water.

➤ As Bonding Coat / Primer

- Mix 2-parts cement to 1-part **ShaliCrete RM** by weight of cement.
- Mix to a lump free creamy consistency for 2-3 minutes by slowly adding **ShaliCrete RM**.
- Using a stiff brush, apply the bonding slurry well into the damp surface, when the bond coat is tacky, apply mortar / screed overlay.

➤ As Waterproofing Slurry

- Repair all cracks in the prepared surface thoroughly with **PlastiSeal**.
- Prior to application of waterproofing slurry, damp the surface to be coated by sprinkling water. Avoid formation of puddles of water.
- Mix 3-parts cement to 1-part **ShaliCrete RM** by weight of cement with suitable addition of water.
- Mix to a lump free creamy consistency for 2 - 3 minutes by slowly adding **ShaliCrete RM**.
- Using a stiff brush, apply the bonding slurry well into the damp surface.
- After the first coat has dried, apply second coat at right angle to the first followed by mortar/ screed overlay. Average time gap between two coats is 3 to 5 hours.
- Apply second coat and allow it to air cure for at least 72 hrs.
- Protect the coating with a cement screed overlay at least 25 mm thick.

➤ As Repair Mortar

- **Mix Design:** 50 kg cement : 150 kg of sieved sand (Zone II) : 8 - 10 kg of **ShaliCrete RM** : 10 - 12 L of water.
- **Mixing Process:** Mix sand and cement in Pan type mixer for 1 - 2 minutes. Hand mixing is only permissible when the total weight of the mix is less than 25 kg.
- Mix the required quantity of **ShaliCrete RM Latex** and water for 2 minutes in a separate container, to avoid excessive air entrapment.
- Finally add the liquid mix slowly into the mixer containing the mixed sand and cement until the required consistency is achieved.
- Apply repair mortar at a thickness of 10 - 20 mm or, when the bond coat is still tacky.
- Finish with trowel for smoothness.

➤ Polymer concrete and screed

- **Mix Design:** 50 kg cement : 75 kg of sieved sand (Zone II) : 150 kg 6 mm down size washed aggregate: 8 - 10 kg of **ShaliCrete RM** : 12 - 15 L of water.
- Apply bonding coat by mixing **ShaliCrete RM** and cement in 1 : 2 by weight and apply by brush a single coat over the prepared surface.
- The prepared mix placed over the wet bonding coat (tacky) and usually applied by trowel to 10 mm to 40 mm thickness well compacted and finished using wooden or steel trowel.

Note: Follow mixing using drill machine fitted with paddle or small mixer machine. Placethe topping on the slurry coat before the slurry coat dries out on large floor areas, use screed strips as guides in combination with vibratoryscreeding to level. Compact and finish by hand or machine trowel.

Slurry Application: Spread the slurry with a stiff bristle broom until the suggested coverage rate is achieved.

Curing

Moisture cure for 24 - 72 hours and then allow to dry slowly.

Precautions

- Avoid application in direct sun and/or strong wind. Apply only to sound, prepared substrates. Do not exceed maximum layer thickness.
- For waterproofing or damp proofing application, always use at least 2 coats.
- In areas of severe water penetration, three coats might be required.
- Protect freshly applied material from rain etc.

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 & Safety

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**.

- Avoid contact with skin / eyes and avoid swallowing.
- Ensure adequate ventilation and avoid inhalation of vapour.
- Wear suitable protective clothing, gloves and eye protection.
- In case of skin contact, rinse with plenty of clean water, then cleanse with soap and water. Do not use solvent to clean the contacted area.
- In case of eye contact, wash with plenty of clean water and seek medical advice.
- If swallowed, seek medical attention immediately. Do not induce vomiting.

Cleaning & Maintenance

Clean tools and equipment with water before the material hardens.



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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