

ShaliFix® FRM 70



Non-Shrink Polymer Modified Fiber Reinforce Repair Mortar

Description

ShaliFix® FRM 70 is a single component, polymer modified, fiber reinforced, ready mix dry powder requiring addition of clean water to produce a highly consistent hand and spray grade thixotropic fiber reinforced mortar for structural and load bearing repairs.

Characteristics - Physical

Appearance	Grey Powder	Application temperature, °C	
Density, gm / cc	2.25 ± 0.10	• Substrate	5 - 40
Water / Powder ratio	0.16 - 0.18	• Material	5 - 30
Mixing water, L / 30 kg bag	4.8 - 5.4	Recommended thickness	
Yield for 30 Kg bag, m ³	0.0133	range, mm	12 - 50

Characteristics – Technical

Property	Method	Result
Compressive strength, 28 days, MPa	ASTM C 109	> 65
Tensile Strength @ 28 days MPa	ASTM C 1583	> 2
Flexural strength, 28 days, MPa	ASTM C 580	> 5

Application

ShaliFix® FRM 70 is suitable for single layer hi-build for both hand as well as spray application for variety of repair applications including overhead repairs, like,

- Surface repair of the RC elements before polymer coating applications.
- Other reinforced concrete.
- Marine concrete structures.
- Underground structures.
- Mass infill to large areas.
- Repair of,
 - Surface stripping and eroded surface.
 - Irregular profiles.
 - Fire-damaged concrete.
 - Pillars, columns, girders.
- Protection of the concrete against sulphate /chloride attacks.
- Structural and non-structural repairs of high strength concrete elements.

Advantages

- High strength.
- Perfect bonding to concrete / steel.
- Easy to use, single layer hi-build application ideal for vertical / horizontal structural repairs.
- Resistant to sulphate / chloride / oil.
- Thixotropic and hence can be used for overhead application.
- Cost effective as it has very low rebound.
- Shrinkage control feature enables completion of repair properly in the very first application.
- Suitable for extremely low permeability condition to prolong effective working life.
- No primer is required, good adhesion to host concrete.

Application Methodology

➤ Surface Preparation

- Remove all loose traces of concrete or mortar, dust grease oil, etc.
- Remove damaged or contaminated concrete to obtain a keyed aggregate exposed surface.

- Non-impact vibrating cleaning method, e.g., grit or high-pressure water blasting are recommended. Cut the edges of the repair vertically.
 - Clean all exposed reinforcement.
 - Ensure back of rebar is also clean.
 - Where reinforcing bars are corroded, cut back the concrete to at least 20 mm behind the reinforcing bars. Grit blast to remove corrosion products from around reinforcing bars and coat with **ShaliPrime® Zn R / ShaliPrime® Zn Ph** to protect rebars from corrosion.
 - Replace the affected part of rebar if the diameter after grit blasting is found reduced by more than 20% of the original diameter.
- **Material Preparation**
- Add **ShaliFix® FRM 70** into a clean mixing bucket containing clean water @ 4.8 - 5.4 L per bag of **ShaliFix® FRM 70** and continuously mix with a mechanical mixer until a lump free, thixotropic consistency is achieved.
 - Mix for about 2 - 3 minutes until a lump free, thixotropic consistency is achieved.
 - Allow mortar to settle for a minute to allow entrapped air to escape.
 - Remix for 30 seconds before application.
- **Application of Material**
- Preferably apply prepared **ShaliFix® FRM 70** when the ambient temperature in the range of 10 to 40°C.
 - Ensure that
 - Prepared substrate is pre-soaked before applying **ShaliFix® FRM 70**.
 - Surface is saturated surface dry, but without standing water.
 - Apply **ShaliFix® FRM 70** by spray or trowel. Apply mix product directly to the prepared damp substrate, or wet on wet onto the primed surface.
 - A thin scrape coat or contact layer before building up to the required thickness, wet on wet, will improve adhesion especially in case of hand application.
 - Apply to the desired layer thickness of 12 to 50 mm and level using a screeding bar, trowel or wooden board. Apply **ShaliFix® FRM 70** in thicker layers in smaller patches or where additional reinforcement is present.
 - Smoothing with a trowel or finishing by float or sponge can be done as soon as the mortar begun to stiffen.
 - Do not apply **ShaliFix® FRM 70** in standing water.
 - Open areas should be protected from the rain, wind, etc. aggressive weather conditions during the first 24 hours after finishing repair.
 - Do not use **ShaliFix® FRM 70** where liquids in contact have pH under 5.5.

Cleaning & Maintenance

Clean all tools immediately after use with water. Do not allow the material to harden

Health & Safety

- 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.

Packing

Available in 30 kg pack.

Storage

Store in a cool dry place, under shed, away from heat.

Shelf Life

6 months in original unopened sealed condition.



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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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