لاصق الشعلة
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ALSHOULA
CONCRETE REPAIR MORTAR

Polymer-Modified Fiber-Reinforced Cementitious Repair Mortar

Doc Code: TDS-MR-003 | Category: Mortars & Repair Systems (Repair)

1. Product Description

ALSHOULA CONCRETE REPAIR MORTAR is a single-component, polymer-modified cementitious dry mortar formulated for the repair and reprofiling of damaged concrete elements.
It consists of Portland cement, carefully graded aggregates and performance-enhancing additives. The formulation is designed to provide good adhesion to properly prepared concrete substrates, high mechanical strength and reduced shrinkage. The product is suitable for vertical, horizontal and overhead concrete repair applications, subject to the recommended application thickness and site conditions. It requires only the addition of clean water before application.

2. Areas of Application

- Repair of damaged, spalled and deteriorated concrete surfaces.
- Repair of concrete walls, columns, beams and slabs.
- Filling of honeycombed concrete and surface voids.
- Reprofiling of damaged concrete edges, corners and sections.
- Repair of vertical, horizontal and overhead concrete surfaces.
- Localized concrete repairs before applying compatible protective coatings or waterproofing systems.
- Interior and exterior concrete repair applications.

3. Features and Benefits

- High Mechanical Strength: Formulated to provide high compressive and flexural strength for concrete repair applications.
- Good Adhesion: Polymer-modified formulation designed to provide reliable bonding to properly prepared concrete substrates.
- Fiber-Reinforced: Synthetic fibers help control shrinkage-related cracking and improve the integrity of the hardened mortar.
- Reduced Shrinkage: Formulated to minimize shrinkage during curing under recommended application conditions.
- Thixotropic Consistency: Suitable for vertical and overhead applications with reduced sagging when applied within the recommended thickness.
- Good Workability: Provides a workable consistency for application, compaction and surface finishing.
- Factory-Preblended Quality: Ensures consistent material composition and reduces on-site batching variations.
- Interior and Exterior Use: Suitable for both applications under recommended conditions.

AT A GLANCE

PACKAGING	APPLICATION TEMPERATURE	SHELF LIFE
25 kg bags	+5°C to +35°C	12 months

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TECHNICAL DATA

4. Technical Specifications

Property	Typical Value
Product Type	Polymer-Modified Fiber-Reinforced Cementitious Repair Mortar
Appearance	Grey Dry Powder
Base Material	Portland Cement, Graded Aggregates and Performance-Enhancing Additives
Fresh Density	Approx. 2.05–2.20 kg/L
Mixing Water	Approx. 4.0–4.8 L per 25 kg bag
Application Thickness	10–40 mm per layer, subject to application conditions
Pot Life	Approx. 45–60 minutes at 25°C
Compressive Strength (28 Days)	Target ≥ 35.0 N/mm²
Flexural Strength (28 Days)	Target ≥ 6.5 N/mm²
Adhesion Strength (28 Days)	Target ≥ 1.5 N/mm²
Application Temperature	+5°C to +35°C
Packaging	25 kg bags
Shelf Life	12 months

Compressive strength, flexural strength and adhesion strength are to be evaluated using the applicable test methods, including EN 12190, EN 1015-11 and EN 1542, respectively. Classification under EN 1504-3, including R3 or R4, is subject to verification through the relevant laboratory tests and applicable performance requirements.

5. Coverage and Consumption

Theoretical material consumption is approximately 1.9–2.0 kg/m² per 1 mm of application thickness. Actual consumption depends on the repair depth, surface roughness, substrate geometry, application method and material wastage.

Application Thickness	Approx. Consumption
10 mm	19–20 kg/m²
20 mm	38–40 kg/m²
30 mm	57–60 kg/m²
40 mm	76–80 kg/m²

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APPLICATION GUIDE

6. Application Procedure

6.1 Surface Preparation

- Remove all loose, weak and deteriorated concrete until a sound and stable substrate is exposed.
- Cut the repair perimeter to provide well-defined edges and avoid feather-edged applications.
- Remove dust, oil, grease, curing compounds and other contaminants using suitable mechanical cleaning methods.
- Where reinforcement is exposed, remove loose rust and corrosion products using appropriate mechanical cleaning methods.
- Assess the condition of exposed reinforcement and replace or supplement severely damaged reinforcement where required by the project engineer.
- Apply a suitable reinforcement corrosion-protection coating when specified by the repair system or project requirements.
- Pre-wet the concrete substrate with clean water and allow it to reach a saturated surface-dry (SSD) condition before application. No standing water should remain.
- For critical repairs, use an approved bonding treatment where required by the selected repair system. Follow the bonding product manufacturer’s application instructions.

6.2 Mixing

- Add approximately 4.0–4.8 litres of clean water to a clean mixing container per 25 kg bag.
- Gradually add the dry powder while mixing with a low-speed mechanical mixer.
- Mix at approximately 400–500 rpm for 3–5 minutes until a uniform, lump-free mortar is obtained.
- Allow the mixture to stand briefly, then remix before application if required.
- Adjust the water quantity within the recommended range according to the required consistency and application conditions.
- Do not add cement, sand or other materials unless specifically approved. Do not add extra water after the mortar has started to set.

6.3 Application

- Apply the mortar firmly onto the prepared concrete substrate using a suitable steel trowel or application tool.
- Press the material firmly into the repair area to ensure good contact with the substrate and complete compaction around exposed reinforcement.
- Apply at a typical thickness of 10–40 mm per layer, subject to the repair location and application conditions.
- For deeper repairs, apply the material in multiple layers.
- Allow each layer to stiffen sufficiently before applying the next layer.
- Where required, provide a keyed surface between successive layers to improve mechanical interlock.
- Finish the surface using a suitable steel, wooden or plastic float, depending on the required finish.
- Avoid feather-edge applications and excessive build-up beyond the recommended thickness.

6.4 Curing

- Protect freshly applied repair mortar from direct sunlight, strong wind, excessive heat and rapid moisture loss.
- Begin curing after the mortar has reached its initial set.
- Cure by lightly spraying clean water or by using a suitable curing method compatible with the subsequent coating or finishing system.
- Continue moist curing for approximately 3–7 days, depending on site conditions and project requirements.
- When a curing compound is used, ensure compatibility with any subsequent coating, waterproofing or finishing materials.

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HANDLING & SUPPLY

7. Drying and Curing

Stage	Indicative Time
Initial Setting	Depends on site conditions
Moist Curing	Approximately 3–7 days
Subsequent Coating or Finishing	After sufficient curing and drying

8. Packaging and Storage

Packaging: 25 kg multi-layer moisture-resistant bags.
Storage: Store in a cool, dry and covered area on elevated wooden pallets. Protect from moisture, rain and direct sunlight. Keep bags sealed until use.
Shelf Life: 12 months from the manufacturing date when stored in original unopened packaging under recommended storage conditions.

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SAFETY & SUPPORT

9. Safety Precautions

Contains cement and may cause skin and eye irritation. Cement-based material becomes alkaline when mixed with water. Wear suitable protective gloves, safety goggles and a dust mask during handling and application. Avoid inhalation of dust and direct contact with skin and eyes. In case of eye contact, rinse immediately with plenty of clean water and seek medical attention.

10. Important Notes

- The product is intended for concrete repair and reprofiling and is not a substitute for structural assessment or reinforcement replacement where required.
- Remove all deteriorated concrete before application to ensure the repair mortar is applied to a sound substrate.
- Proper preparation of the concrete substrate and exposed reinforcement is essential for repair durability.
- Use the recommended water ratio to maintain consistent workability and performance.
- Do not apply to frozen, unstable or excessively wet substrates.
- Avoid application under extreme weather conditions or where rapid moisture loss cannot be controlled.
- Observe the recommended application thickness and use multiple layers for deeper repairs.
- The product is not a waterproofing membrane. Where waterproofing or additional concrete protection is required, use a compatible approved system.
- For structural repairs, verify that the product’s tested performance and classification meet the project specifications and applicable requirements of EN 1504-3.
- Conduct a preliminary application trial where substrate conditions or repair requirements are uncertain.

11. Manufacturer Information

ALSHOULA ADHESIVES FACTORY
Jeddah, Kingdom of Saudi Arabia
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Disclaimer: The technical information provided in this document represents indicative product specifications based on formulation data and practical application experience. Declared performance values and any product classification are subject to verification through appropriate laboratory testing. Application conditions, substrate characteristics and workmanship may affect the final results. Users are responsible for conducting suitability tests under actual site conditions before use.