

CHEMFIT MONOTOP 612

Fiber Reinforced, Polymer Modified Repair Mortar – For General Patch Repair of Concrete and Mortars

PRODUCT DESCRIPTION

ChemFit MonoTop 612 is a high-quality, cement-based, fiber reinforced, polymer modified repair mortar formulated for general patch repair of concrete and mortars. The incorporation of synthetic fibers provides enhanced crack resistance and toughness, while polymer modification ensures excellent adhesion, low permeability, and improved durability. Designed for single-layer application in thicknesses from 5 mm to 30 mm, this versatile mortar is ideal for repairing spalls, surface defects, and localized damage on horizontal, vertical, and overhead surfaces.

PRIMARY APPLICATIONS

ChemFit MonoTop 612 is recommended for use in conditions such as:

- Patch repair of spalled, cracked, or honeycombed concrete
- Repair of concrete surfaces, columns, beams, walls, and slabs
- General restoration of deteriorated concrete and cementitious substrates
- Filling formwork tie holes and surface imperfections
- Suitable for horizontal, vertical, and overhead applications
- Interior and exterior use (above ground)

KEY FEATURES AND BENEFITS

- **Fiber reinforced** – Provides enhanced toughness, impact resistance, and crack control
- **Polymer modified** – Superior adhesion to concrete and mortars; reduced permeability
- **Single-component** – Just add water; consistent and easy to use
- **Good workability** – Non-sag properties for vertical and overhead repairs
- **Layer thickness 5-30 mm** – Single-layer application for most patch repairs
- **Good yield** – Approximately 13 liters per 25 kg bag
- **Low shrinkage** – Minimizes cracking and delamination
- **Chloride free** – Safe for use on reinforced concrete
- **Easy to apply** – Trowel application; no primer required in most cases
- **Rapid strength gain** – Quick return to service

PHYSICAL AND CHEMICAL PROPERTIES

Property	Specification
Appearance	Fine, free-flowing powder
Color	Gray
Form	Powder (one component)
Basis	Cementitious with polymer and synthetic fibers
Maximum Aggregate Size	< 2 mm
Mixing Water Requirement	Approximately 3.5 – 4.0 L per 25 kg bag
Yield per 25 kg bag	Approximately 13 liters (wet)
Pot Life (at 25°C)	20 – 30 minutes
Initial Set (at 25°C)	60 – 90 minutes
Final Set (at 25°C)	2 – 3 hours
Application Temperature	+5°C to +35°C
Layer Thickness (single application)	5 – 30 mm
Density (fresh mortar)	~2.15 kg/L

COMPRESSIVE AND OTHER STRENGTHS

- **6 hours:** 5 – 10 MPa (725 – 1,450 psi)
- **1 day:** 15 – 25 MPa (2,180 – 3,600 psi)
- **3 days:** 25 – 35 MPa (3,600 – 5,100 psi)
- **7 days:** 30 – 45 MPa (4,350 – 6,500 psi)
- **28 days:** 45 – 55 MPa (6,500 – 8,000 psi)
- **Flexural strength (28 days):** 7 – 10 MPa (1,015 – 1,450 psi)
- **Bond strength to concrete (28 days):** > 1.5 MPa (218 psi)

Note: Strength depends on temperature, water content, and curing.

PACKAGING AND STORAGE

Packaging:

- 25 kg bags with moisture barrier

Storage:

- Store in original sealed bags in a cool, dry location
- Protect from moisture, humidity, and direct sunlight
- Stack pallets off the ground on wooden pallets
- Keep bags intact and sealed until ready for use
- Do not store in areas with high humidity or risk of water damage

Shelf life: 12 months from date of manufacture when stored properly in unopened bags

DOSAGE AND COVERAGE RATES

The yield of **ChemFit MonoTop 612** is approximately 13 liters of mixed mortar per 25 kg bag.

Thickness	Coverage per 25 kg bag
5 mm	Approximately 2.6 m ²
10 mm	Approximately 1.3 m ²
15 mm	Approximately 0.87 m ²
20 mm	Approximately 0.65 m ²
25 mm	Approximately 0.52 m ²
30 mm	Approximately 0.43 m ²

NOTE: Coverage rates are approximate and vary based on substrate porosity, surface texture, and application technique. For rough or profiled surfaces, coverage will be lower. Allow 10-15% extra for waste and surface irregularities.

APPLICATION GUIDELINES

Surface Preparation:

- Substrate: clean, sound, no dust/oil/laitance/loose particles
- Remove unsound concrete; expose sound texture; square edges
- Reinforcement: clean rust to bright metal; apply anti-corrosion if needed
- Pre-soak to SSD (damp, no standing water)

Mixing:

- Water: 3.5-4.0 L per 25 kg bag (lower for vertical/overhead)
- Add powder to water; mix 3-5 min (400-600 rpm) until lump-free
- Rest 2-3 min, remix 30 sec; use within 20-30 min (@25°C)
- Do not over-water (reduces strength, causes sagging)

Application:

- Apply by steel trowel; first a 2-3 mm scratch coat pressed firmly
- Build to 5-30 mm per layer; vertical/overhead max 20 mm per layer
- Depth >30 mm: multiple layers, wait 4-6 h between layers; pre-dampen previous layer
- Finish as required (smooth/textured/brushed)

Curing:

- Protect from sun, wind, rapid drying; cover with plastic/wet burlap or curing compound
- Moist cure minimum 3 days (7 days for critical repairs)
- Hot weather (>30°C): cool water, shade; cold weather (<10°C): warm water (20-30°C), insulate
- Do not apply below +5°C or if freezing within 24 h

HEALTH AND SAFETY

ChemFit MonoTop 612 is alkaline and may cause severe eye and skin irritation. In fresh, wet state, the product is caustic. If eye contact occurs, rinse immediately with plenty of water for 15-20 minutes and seek medical attention immediately. For skin contact, wash immediately with soap and water; remove contaminated clothing. If swallowed, do not induce vomiting; rinse mouth and drink water, then seek medical attention immediately. Use gloves, safety glasses, and protective clothing during handling. Avoid inhalation of dust – use dust mask if ventilation is poor. Refer to the Safety Data Sheet for detailed information.

CLEANG OF TOOLS

Clean all mixing equipment, trowels, and spillages with water immediately after use. Dried or cured material may require mechanical removal.

APPROVALS AND STANDARDS

ChemFit RepairLite 9210 conforms to the following standards:

- **EN 1504-3** – Products and systems for protection and repair of concrete structures (Class R3 / R4 structural and non-structural repair)
- Fiber reinforced, polymer modified, cementitious one-component repair mortar
- Suitable for general patch repair of concrete and mortars, thickness 5-30 mm
- **Chloride free** – Safe for reinforced concrete

LEGAL NOTES

All technical data provided in this Product Data Sheet is based on laboratory testing under controlled conditions. Actual field performance may vary due to differences in substrates, application methods, site conditions, and environmental factors. ChemFit makes no warranty of merchantability or fitness for a particular purpose. Users shall conduct their own trials to validate product suitability for the intended application. ChemFit reserves the right to modify product specifications without prior notice. For the most current documentation, request the latest Product Data Sheet and Safety Data Sheet from ChemFit.

CHEMFIT CONSTRUCTION CHEMICAL AND SERVICES LIMITED

Office No. 8, 1KM Near Gaey Soap, Sargodha Road, Faisalabad

Tel: +923364544837

Web: www.chemfitchemicals.com

Email: chemfit.pro@gmail.com