

CHEMFIT EPOXYPRIME 1400

Two Part Epoxy Primer, Leveling Mortar and Mortar Screed – For Concrete, Cement Screeds & Epoxy Mortars

PRODUCT DESCRIPTION

ChemFit EpoxyPrime 1400 is a two part, high solids, solvent-free epoxy primer designed for treating concrete, cement screeds, and other absorbent substrates prior to the application of epoxy mortars, coatings, and self-leveling screeds. It penetrates and seals the substrate to eliminate outgassing, consolidates weak surfaces, and provides a high-strength mechanical key for subsequent flooring systems.

PRIMARY APPLICATIONS

ChemFit EpoxyPrime 1400 is recommended for use in conditions such as:

- Priming of concrete, cement screeds, and blockwork prior to epoxy flooring
- Bond coat for epoxy mortars, self-levelers, and cementitious toppings
- Leveling minor surface irregularities as a skim coat (with aggregate addition)
- Sealing of substrates to prevent air bubbles during topcoat application
- Consolidation of friable or laitance-covered surfaces

KEY FEATURES AND BENEFITS

- **Two part epoxy** – High strength, excellent chemical resistance
- **High solids / Solvent free** – Low shrinkage, reduced porosity, safer indoor use
- **Excellent penetration** – Seals porous substrates and reduces outgassing
- **High adhesion** – Provides strong bond between substrate and flooring system
- **Multi-functional** – Can be used as a primer, leveling mortar, or screed binder
- **Versatile** – Suitable for use under both epoxy and cementitious systems
- **Good coverage** – Extends the open time of subsequent topcoats

MECHANICAL PROPERTIES

Property	Value (typical)
Compressive Strength	[50 – 70] N/mm ²
Flexural Strength	[20 – 35] N/mm ²
Adhesion to Concrete	> 1.5 N/mm ² (substrate failure)

PHYSICAL AND CHEMICAL PROPERTIES

Property	Specification
Appearance	Part A: Pigmented liquid; Part B: Clear/Amber liquid
Color	Clear, Amber, or Pigmented (Grey)
Basis	Two component epoxy resin
Solids Content	[98 – 100]%
Density (mixed)	[1.1 – 1.5] kg/L [citation:2]
Mix Ratio	Refer to product label (typically 2:1, 3:1, or 4:1)
Pot Life (at 25°C)	[40 – 90] minutes
Touch Dry (at 25°C)	[4 – 8] hours
Recoat Window	24 – 48 hours (max)
Full Cure	7 days
Application Temperature	+10°C to +30°C

PACKAGING AND STORAGE

Packaging:

- 2.5 kg unit
- 10 kg unit
- 25 kg unit

Storage:

- Store in original sealed containers at +10°C to +25°C
- Protect from direct sunlight, moisture, and freezing
- Store in dry conditions

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

DOSAGE AND COVERAGE RATES

Coverage varies based on application type and substrate porosity:

Application Type	Consumption
As Primer (sealing coat)	[0.2 – 0.4] kg/m ²
As Primer + Sand Sprinkling	[0.3 – 0.5] kg/m ²
As Leveling Mortar (1:1 with sand)	[1.0 – 1.5] kg/m ² per mm

Yield per 25 kg unit (as primer): Approx. [60 – 125] m² per unit

NOTE: Coverage is approximate; varies with substrate porosity and surface profile.

APPLICATION GUIDELINES

Surface Preparation:

- Substrate must be sound, clean, dry, and free from dust, oil, grease, laitance, curing compounds, and loose particles
- Mechanically abrade (grinding, shot blasting) to achieve open texture (CSP 2-3)
- Remove all dust by vacuuming
- Fill major voids and cracks with suitable repair mortar

Mixing:

- Pre-mix Part A (Resin) thoroughly before combining
- Add Part B (Hardener) to Part A according to label ratio
- Mix with low-speed drill (300-400 rpm) for 2-3 minutes until uniform
- Scrape sides and bottom during mixing; avoid air entrapment
- Use within pot life (20-40 minutes depending on temperature)

Application:

- Apply by brush, roller, or rubber squeegee
- For primer application: apply a thin, uniform coat at [0.2 – 0.4] kg/m²
- For bond coat (sand sprinkled): apply at [0.3 – 0.5] kg/m², broadcast silica sand while tacky
- For leveling mortar: mix with [1:1] graded silica sand to achieve trowelable consistency
- Overcoat with epoxy flooring system within recoat window (24-48 hours)

Curing:

- Protect from moisture, dust, and mechanical damage during cure
- Light foot traffic after 12-16 hours (at 25°C)
- Full chemical resistance after 7 days
- Do not apply below +10°C or if relative humidity exceeds 85%

HEALTH AND SAFETY

Epoxy resins and hardeners may cause skin and eye sensitization and irritation. If eye contact occurs, rinse immediately with plenty of water for 15-20 minutes and seek medical attention. 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. Use gloves (nitrile), safety glasses, and protective clothing during handling. Ensure adequate ventilation – use respiratory protection with organic vapor cartridges if ventilation is poor. Refer to the Safety Data Sheet for detailed information.

CLEANG OF TOOLS

Clean all brushes, rollers, mixing equipment, and spillages with xylene, acetone, or epoxy thinner immediately after use before material cures. Dried material requires mechanical removal. Dispose of cleaning materials in accordance with local regulations.

APPROVALS AND STANDARDS

ChemFit EpoxyPrime 1400 complies with the following standards:

- **ASTM D4541** – Pull-off adhesion strength testing
- **EN 1504-2** – Surface protection systems for concrete (where applicable)
- **ISO 9001** – Quality management system certified
- Two part epoxy primer, leveling mortar and mortar screed
- Suitable for priming concrete, cement screeds, and epoxy mortars

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