

CHEMFIT EPOXYSMOOTH 1500

Two Part Epoxy Self-Smoothing and Broadcast System – For Storage Halls, Workshops, Garages & Loading Ramps

PRODUCT DESCRIPTION

ChemFit EpoxySmooth 1500 is a two part, high solids, epoxy resin based self-smoothing and broadcast system. It provides a seamless, hard-wearing, and decorative finish for concrete and cementitious screeds. This system is designed for applications requiring a high level of hygiene and dust control, conforming to the stringent airborne particle limits of **ISO 14644-1 Class 5**. It is ideal for creating a smooth, gloss finish or a slip-resistant textured surface through aggregate broadcast.

PRIMARY APPLICATIONS

ChemFit EpoxySmooth 1500 is recommended for use in conditions such as:

- Self-smoothing and broadcast systems for concrete and cementitious screeds
- Storage halls, assembly areas, and maintenance workshops
- Garages, loading ramps, and multi-storey car parks
- Clean rooms and hygiene-sensitive production areas (ISO 5 compliant)
- Food and beverage industry wet areas

KEY FEATURES AND BENEFITS

- **Two part epoxy** – High mechanical strength and chemical resistance
- **Self-smoothing** – Seamless, easy-to-clean gloss finish
- **ISO 14644-1 Class 5** – Suitable for high-specification cleanrooms
- **Good chemical resistance** – Resists oils, greases, and many industrial chemicals
- **Broadcast ready** – Can be over-broadcast with aggregates for slip-resistant textures
- **Vapour permeable options** – For use over moisture-sensitive substrates (check primer)
- **Seamless and hygienic** – Eliminates joints where dirt and bacteria can accumulate

PHYSICAL AND CHEMICAL PROPERTIES

Property	Specification
Appearance / Colour	Part A: Pigmented Liquid; Part B: Clear Liquid; Mixed: Coloured
Colour Range	Grey, Green, Blue, Red, Yellow (custom RAL available)
Basis	Two-part epoxy resin
Mix Ratio (by weight)	Part A : Part B = 4 : 1 (approx.)
Density (Mixed)	~1.43 kg/L
Solid Content	~100% (Solvent Free)
Pot Life (at +20°C)	20 – 30 minutes
Touch Dry (at +20°C)	12 – 16 hours
Full Cure	7 days
Application Temperature	+10°C to +30°C
Substrate Moisture	< 4% (no rising moisture)

MECHANICAL PROPERTIES

Property	Value
Compressive Strength	~50 N/mm ²
Flexural Strength	~25 N/mm ²
Adhesion to Concrete	> 1.5 N/mm ²
Shore D Hardness	~76
Abrasion Resistance (Taber)	< 100 mg
Flammability	Class E

PACKAGING AND STORAGE

Packaging:

- 20 kg unit (Part A: 15.8 kg + Part B: 4.2 kg)

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: 12-24 months from date of manufacture when stored properly

DOSAGE AND COVERAGE RATES

Application Type	Mix Ratio (Base : Filler)	Consumption (approx.)	Coverage per 20 kg Unit
Self-Smoothing Coat	1 : 0 (Neat)	0.8 – 1.0 kg/m ²	20 – 25 m ²
Self-Smoothing Layer (1.5 mm)	1 : 0.8 (Base : Sand)	1.8 – 2.0 kg/m ²	10 – 11 m ²
Broadcast Base Coat	1 : 1 (Base : Sand)	2.0 – 2.2 kg/m ²	9 – 10 m ²

NOTE: Coverage is theoretical and does not account for surface porosity, profile, or wastage

APPLICATION GUIDELINES

Surface Preparation:

- Substrate must be sound, clean, dry, and free from dust, oil, grease, laitance, and loose particles
- Mechanically abrade (shot blasting or grinding) to achieve open textured surface (CSP 2-3)
- Fill blowholes, voids, and repair damaged areas with suitable filler material
- Vacuum thoroughly to remove all dust
- Apply a compatible epoxy primer (e.g., **ChemFit EpoxyPrime 1400**) and allow to cure

Mixing:

- Pre-mix Part A (Resin) thoroughly before combining
- Add Part B (Hardener) to Part A according to label ratio (typically 4:1)
- Mix with a low-speed drill (300-400 rpm) for 2-3 minutes until uniform
- **For self-smoothing:** Add clean, dry, graded silica sand (0.1-0.3 mm) at the required ratio and mix for a further 2 minutes
- Pour into another container and mix again to ensure thorough blending
- Use within pot life (approx. 20-30 minutes at +20°C)

Application:

- Pour the mixed material onto the prepared and primed substrate
- Spread using a notched trowel, squeegee, or serrated spreader
- Immediately roll with a spiked roller to remove entrapped air and aid leveling
- **For Broadcast System:** Broadcast clean, dry, graded aggregates (e.g., 0.4-0.7 mm) into the wet base coat
- Allow to cure overnight, then vacuum loose aggregates and apply a seal coat (e.g., **ChemFit EpoxySmooth 1500** neat)

Curing:

- Protect from dust, moisture, and mechanical damage during cure
- Light foot traffic after 12-16 hours (at +20°C)
- Full chemical resistance after 7 days
- Do not apply below +10°C or if relative humidity exceeds 80%

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 EpoxySmooth 1500 complies with the following standards:

- **ISO 14644-1** – Classification of air cleanliness (Class 5 for airborne particles)
- **EN 1504-2** – Surface protection systems for concrete (Coating)
- **ISO 4624** – Pull-off adhesion strength testing
- **DIN 53505 / EN ISO 868** – Shore hardness testing
- **DIN 53109 / EN 13892** – Abrasion resistance testing
- **EN 196-1** – Compressive and flexural strength testing
- Two part epoxy self-smoothing and broadcast system
- Suitable for storage halls, workshops, garages, and loading ramps

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