CHEMFIT ELASTIC SEAL 150

Two-Pack Elastic Fiber-Reinforced, Crack Bridging, Flexible Waterproofing Coating – To Protect Concrete Structures Exposed to Aggressive Environment and Flexural Strains

PRODUCT DESCRIPTION

ChemFit Elastic Seal 150 is a high-performance, two-pack elastic, fiber-reinforced, crack bridging, flexible waterproofing coating specifically formulated for protecting concrete structures exposed to aggressive environments and flexural strains. The two-component system combines a liquid polymer with a fiber-reinforced powder to create a tough, elastic, and highly durable waterproof membrane. The fiber reinforcement provides excellent crack bridging capability, tensile strength, and resistance to dynamic movement. The elastic nature allows the coating to accommodate substrate movement, thermal expansion, and contraction without cracking or delamination. Ideal for bridges, parking decks, water tanks, swimming pools, and other structures subject to flexural strains and aggressive chemical exposure.

PRIMARY APPICATIONS

ChemFit Elastic Seal 150 is recommended for use in conditions such as:

- Bridge decks, parking decks, and elevated slabs subject to flexural strains and vehicle traffic
- Water tanks, reservoirs, swimming pools, and fountains (positive and negative side)
- Balconies, terraces, podiums, and planter boxes
- Basements, retaining walls, and below-grade structures with movement potential
- Sewage treatment plants, chemical plants, and industrial floors
- Tunnels, culverts, and underground structures
- Marine structures, sea walls, and splash zones
- Concrete repair and rehabilitation projects requiring flexible waterproofing

KEY FEATURES AND BENEFITS

- **Two-pack, fiber-reinforced** – Enhanced tensile strength, crack bridging, and durability
- **Elastic and flexible** – Accommodates substrate movement, thermal expansion, and flexural strains
- **Excellent crack bridging** – Bridges dynamic cracks up to 1-2 mm (depending on thickness)
- **Aggressive environment resistance** – Resists chlorides, sewage, dilute acids, alkalis, and chemicals
- **Positive and negative side application** – Can be applied to either side of the substrate
- **High adhesion** – Bonds strongly to concrete, brick, block, stone, and properly primed steel
- **Good coverage** – 1.7 kg/m² per mm thickness
- **UV resistant** – Suitable for exposed exterior applications (when top-coated)
- **Breathable yet waterproof** – Allows water vapor transmission while blocking liquid water
- **Available in 6.4 kg (A) + 20 kg (B) pack** – Convenient for medium to large projects

PHYSICAL AND CHEMICAL PROPERTIES

Property	Specification
Appearance	Part A: Liquid polymer (white/off-white); Part B: Fiber-reinforced powder (gray)
Mixed color	Light gray
Basis	Acrylic/styrene-acrylic copolymer with fiber reinforcement
Mix ratio	As per pack (refer to product label)
Density (mixed)	~1.65 – 1.75 kg/L
Pot life (at 25°C)	30 – 60 minutes
Tack-free time (at 25°C)	4 – 8 hours
Time between coats	Minimum 8 hours, maximum 48 hours
Full cure	7 days
Application temperature	+5°C to +35°C
Service temperature	-30°C to +80°C
Elongation at break	> 50% (ASTM D412)
Crack bridging capacity (23°C)	≥ 1.5 mm (EN 14891, Class C)

MECHANICAL PROPERTIES

Property	Value
Tensile strength (ASTM D412)	2.0 – 3.5 MPa (290 – 510 psi)
Elongation at break (ASTM D412)	50 – 100%
Tensile adhesion strength (to concrete)	> 1.5 MPa (218 psi) – concrete failure typical
Crack bridging (at 23°C, EN 14891)	≥ 1.5 mm (Class C)
Crack bridging (at -5°C, EN 14891)	≥ 0.8 mm (Class C)
Water permeability (EN 14891)	≤ 0.5 mL/hour
Resistance to water pressure	0.5 MPa (5 bar) for 7 days – no leakage
Shore A hardness (after cure)	60 – 80
Capillary water absorption	< 0.2 $kg/m^2 \cdot h^{0.5}$

PACKAGING AND STORAGE

Packaging:

- 6.4 kg + 20 kg pack (6.4 kg liquid Part A + 20 kg fiber-reinforced powder Part B)

Storage:

- Store Part A (liquid) in original sealed container at +5°C to +35°C; protect from freezing
- Store Part B (powder) in original sealed bag in a cool, dry location
- Protect from direct sunlight, moisture, and extreme heat
- Keep containers tightly closed when not in use

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

DOSAGE AND COVERAGE RATES

Coverage: 1.7 kg of mixed product per square metre per mm of thickness

Typical coverage per pack (6.4 kg A + 20 kg B = 26.4 kg total):

Total thickness	Coverage per pack
1.0 mm	~ 15.5 m²
1.5 mm	~ 10.5 m²
2.0 mm (recommended minimum)	~ 7.8 m²
2.5 mm	~ 6.2 m²
3.0 mm	~ 5.2 m²

NOTE: Coverage is approximate; varies with substrate porosity and surface profile. Two coats are recommended for all applications (minimum 2.0 mm total thickness). For bridge decks and heavy traffic areas, apply minimum 2.5 – 3.0 mm total thickness.

APPLICATION GUIDLINES

Surface Preparation:

- Substrate must be clean, sound, and free from dust, oil, grease, laitance, curing compounds, loose particles, and any contaminants
- Mechanically abrade (grinding, shot blasting, scabbling) to achieve open texture (CSP 3-5 per ICRI)
- Fill large voids, bug holes, and honeycombs with suitable repair mortar
- For cracks > 0.5 mm, chase and fill with epoxy or repair mortar before coating
- Pre-soak the substrate with clean water to achieve saturated surface dry (SSD) condition; remove any standing water before application
- For steel substrates, apply suitable primer (consult ChemFit technical support)

Mixing:

- Pour Part A (liquid) into a clean mixing container
- Slowly add Part B (fiber-reinforced powder) while mixing with low-speed drill (400-600 rpm)
- Mix for 3-5 minutes until smooth, lump-free, uniform consistency with fibers evenly dispersed
- Allow to stand for 2-3 minutes; remix briefly before application
- Use within pot life (30-60 minutes at 25°C)
- Do not add water to thin the mix – this reduces performance

Application:

- Apply first coat by stiff brush, roller, or notched trowel (minimum thickness ~1.0-1.5 mm)
- Work the coating well into the substrate to ensure good penetration
- Allow first coat to dry for minimum 8 hours (until firm to touch)
- Apply second coat perpendicular to the first coat for complete coverage (minimum total thickness 2.0 mm)
- For severe exposure or high hydrostatic pressure, apply a third coat after 8 hours
- On vertical surfaces, work from bottom to top
- For bridge decks and parking decks, use squeegee or roller with gauge rake for uniform thickness
- Protect from rain, direct sunlight, and wind during application and curing

Curing:

- After final coat, protect from water, rain, and mechanical damage for minimum 24 hours
- Maintain cure for minimum 7 days before full immersion or heavy traffic
- For hot climates (>30°C), begin curing protection immediately after application (cover with plastic sheeting)
- Do not apply below +5°C or if freezing expected within 24 hours
- For bridge decks, allow 7-14 days full cure before opening to traffic

HEALTH AND SAFETY

ChemFit Elastic Seal 150 may cause mild to moderate eye and skin irritation. If eye contact occurs, rinse immediately with plenty of water for 15-20 minutes and seek medical attention if irritation persists. 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 (nitrile/rubber), safety glasses, and protective clothing during handling. Avoid inhalation of dust from powder component – use dust mask if ventilation is poor. Ensure adequate ventilation when using in confined spaces. Refer to the Safety Data Sheet for detailed information.

CLEAING OF TOOLS

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

APPROVALS AND STANDARDS

ChemFit Elastic Seal 150 conforms to the following standards:

- **EN 14891** – Liquid applied waterproofing membranes for use beneath ceramic tiling (CM Class C – Crack bridging)
- **EN 1504-2** – Surface protection systems for concrete (Principle 1 – Protection against ingress; Principle 8 – Increasing resistivity)
- **ASTM C836** – Standard specification for high solids content, cold liquid applied elastomeric waterproofing membrane for use with separate wearing course
- **ASTM D412** – Standard test methods for vulcanized rubber and thermoplastic elastomers – Tension (elongation and tensile strength)
- **ACI 515.1R** – Guide to the Selection of Waterproofing Materials
- **BS 8102:2022** – Protection of below ground structures against water ingress (Type A – barrier protection)
- **ISO 9001** – Quality management system certified
- Two-pack elastic fiber-reinforced, crack bridging, flexible waterproofing coating
- Suitable for protecting concrete structures exposed to aggressive environment and flexural strains

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.

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