CHEMFIT ELASTIC SG

Liquid Applied, Two Component Polyurethane Resin Based Flexible Membrane;– For Exterior Walls, Basements, Parking Decks, Roof Decks, Bathroom Floors & Plazas

PRODUCT DESCRIPTION

ChemFit Elastic SG is a liquid applied, two component polyurethane resin based flexible, seamless waterproofing membrane. Based on pure elastomeric hydrophobic polyurethane resin, this system cures to form a highly elastic, durable, and fully bonded protective layer. It offers excellent adhesion to various substrates, superior crack bridging capabilities, and robust mechanical properties, making it ideal for areas requiring a durable waterproof finish.

PRIMARY APPICATIONS

ChemFit Elastic SG is recommended for use in conditions such as:

- Exterior walls, basements, and foundation walls
- Parking decks, podium decks, and roof decks
- Cut and cover tunneling and bridge decks
- Balconies, terraces, plazas, and rooftop gardens
- Bathroom floors and wet areas
- Secondary containment areas

KEY FEATURES AND BENEFITS

- **Elastic & Crack Bridging** – Exceptional elongation (up to 1000%) accommodates substrate movement and bridges dynamic cracks
- **Solvent Free** – Low VOC; safe for use in occupied and confined spaces
- **High Build** – Capable of achieving required film thickness in fewer coats
- **Excellent Adhesion** – Bonds to concrete, steel, bitumen, timber, and masonry (with appropriate primer)
- **Fast Curing** – Rapid installation allows quick return to service
- **Seamless** – Forms a monolithic, fully bonded membrane with no laps or seams
- **Weather Resistant** – UV stable and remains elastic at low temperatures (down to -40°C)
- **ASTM C836-95 Compliant** – Meets standard specification for cold liquid-applied elastomeric waterproofing membranes
- **Root Resistant** – Suitable for green roofs and planter boxes

PHYSICAL AND CHEMICAL PROPERTIES

Property	Specification
Appearance	Two components: Part A (Resin), Part B (Hardener)
Mixed Color	Grey / Black / Custom
Basis	Polyurethane Resin / Polyurea Hybrid
Solvent Content	Nil / Low (100% Solids approx.)
Mix Ratio	Refer to product label (typically 1:1 or 4:1 by volume)
Density (Mixed)	~1.0 – 1.1 kg/L
Pot Life (at 25°C)	20 – 30 minutes
Tack Free Time (at 25°C)	2 – 6 hours
Full Cure	7 days
Application Temperature	+5°C to +35°C
Service Temperature	-40°C to +80°C

MECHANICAL PROPERTIES

Property	**Value**
Tensile Strength	> 2.0 N/mm²
Elongation at Break	> 500% (up to 1000%)
Shore A Hardness	~35 – 60
Adhesion to Concrete	> 1.5 N/mm² (Substrate Failure)
Water Absorption	< 1%
Crack Bridging	> 3 mm

PACKAGING AND STORAGE

Packaging:

- 10 L unit (pre-weighed Part A + Part B)
- 20 L unit (pre-weighed Part A + Part B)

Storage:

- Store in original sealed containers at +10°C to +30°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: 0.74 kg/m² achieves a dry film thickness of approximately 500 microns (0.5 mm)

Note: For waterproofing, a minimum total thickness of 1.0 – 1.5 mm (2-3 coats) is typically recommended for most applications.

Total Thickness (DFT)	Approx. Consumption	Yield per 20L Unit (~20 kg)
0.5 mm (1 coat)	0.74 kg/m²	~27 m²
1.0 mm (2 coats)	1.48 kg/m²	~13.5 m²
1.5 mm (3 coats)	2.22 kg/m²	~9 m²

NOTE: Coverage is theoretical for smooth, primed substrates. Actual consumption varies based on substrate porosity, surface profile, and application method.

APPLICATION GUIDLINES

Surface Preparation:

- Substrate must be sound, clean, dry, and free from dust, oil, grease, laitance, curing compounds, and loose particles
- Concrete: Mechanically abrade (grinding/shot blasting) to achieve open texture. Moisture content must be < 4%
- Steel: Blast clean to Sa 2½ (near-white metal)
- Remove all dust before application
- Substrate temperature must be at least +3°C above dew point

Priming:

- Apply compatible polyurethane primer (e.g., ChemFit PU Primer) at the manufacturer's recommended rate on porous or critical substrates to ensure adhesion and seal the surface

Mixing:

- Pre-mix Part A (Resin) thoroughly before combining
- Add Part B (Hardener) to Part A according to the specified ratio

- Mix with a low-speed drill (300-400 rpm) fitted with a suitable paddle for 2-3 minutes until uniform
- Use within the pot life (approximately 20-30 minutes at 25°C)

Application:

- Apply by stiff brush, short-pile roller, or airless spray
- Apply the first coat evenly at ~0.74 kg/m²
- Allow the first coat to dry until tack-free (minimum 4-6 hours at 25°C)
- Apply subsequent coats crosswise to the previous coat
- Protect from rain, condensation, and water for at least 24 hours after the final coat

Curing:

- Protect from moisture, dust, and mechanical damage during cure
- Light foot traffic after 24 hours
- Full chemical and water resistance after 7 days
- Do not apply below +5°C or if relative humidity exceeds 85%

HEALTH AND SAFETY

Polyurethane resins and isocyanates may cause skin and eye sensitization and respiratory irritation. If eye contact occurs, rinse with water for 15 minutes and seek medical attention. For skin contact, wash with soap and water. If swallowed, seek medical attention immediately. Use nitrile gloves, safety glasses, and protective clothing. Ensure adequate ventilation – use respiratory protection with organic vapor cartridges if ventilation is poor. Refer to the Safety Data Sheet (SDS) before use.

CLEAING OF TOOLS

Clean all brushes, rollers, mixing equipment, and spillages with xylene, acetone, or polyurethane thinner immediately after use. Dried material requires mechanical removal.

APPROVALS AND STANDARDS

ChemFit Elastic SG conforms to the following standards:

- **ASTM C836-95** – Standard Specification for High Solids Content, Cold Liquid-Applied Elastomeric Waterproofing Membrane
- **ASTM D412** – Standard Test Methods for Vulcanized Rubber and Thermoplastic Elastomers (Tension)
- **ASTM G53 / D2240** – Testing for accelerated weathering and hardness
- **CE Marking** – Declaration of Performance (ETA-10/0095)
- Two component, liquid applied, polyurethane resin based flexible waterproofing membrane
- Suitable for exterior walls, basements, parking decks, roof decks, bathroom floors, and plazas

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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