CHEMFIT LASTIC 621TC

High Performance, Cold Applied, Seamless, Highly Elastic Liquid Roof Waterproofing Top Coat – For Waterproofing Exposed and Built-Up Roofs in New Construction and Refurbishment

PRODUCT DESCRIPTION

ChemFit Lastic 621TC is a high performance, cold applied, seamless, highly elastic liquid roof waterproofing top coat based on advanced polyurethane technology. This one-component, moisture-triggered, aliphatic polyurethane formulation is specifically designed as a durable, UV-stable top coat for exposed and built-up roof systems. The cold applied, solvent-free formulation eliminates the need for heat or flame during installation. It cures rapidly using atmospheric moisture to form a seamless, highly elastic, and weather-resistant membrane that provides long-term protection for new and refurbished roofs.

PRIMARY APPICATIONS

ChemFit Lastic 621TC is recommended for use in conditions such as:

- High-performance top coat for exposed and built-up roofs (new construction and refurbishment)
- Roofs with complex detail areas and geometry, even when accessibility is limited
- Cost-effective life cycle extension of failing or aged roofs
- Reflective top coat for "cool roof" applications to enhance energy efficiency
- Overcoating failed bituminous membranes without stripping

KEY FEATURES AND BENEFITS

- **Cold applied** – Requires no heat, flame, or hot bitumen; eliminates fire risk
- **Single component** – No on-site mixing; ready to use
- **Highly elastic** – Retains flexibility even at low temperatures (-30°C)
- **Crack bridging** – Accommodates substrate movement without failure
- **UV stable** – Aliphatic polyurethane provides long-term UV protection
- **Fast curing** – Rain resistant in approximately 10 minutes
- **Vapour permeable** – Allows substrate to breathe while remaining waterproof
- **Seamless membrane** – Forms a fully bonded, joint-free waterproofing layer
- **High root resistance** – Suitable for green roof applications
- **Chemical resistant** – Resists fuels, oils, acid rain, detergents, and dilute acids/alkalis
- **Good adhesion** – Bonds to concrete, metal, bitumen, and other substrates with appropriate primer

MECHANICAL PROPERTIES

Property	Value
Tensile strength	400 – 1200 N/50mm (system dependent)
Elongation at break	40 – 85% (system dependent)
Tear strength	25 – 120 N/mm (system dependent)
Solar reflectance (white, initial)	0.87
Solar Reflectance Index (white)	≥108

PHYSICAL AND CHEMICAL PROPERTIES

Property	Specification
Appearance	Liquid
Color	Traffic white (RAL 9016), slate grey (RAL 7015), other colors available
Basis	One-component, moisture-triggered aliphatic polyurethane
Density	~1.44 kg/L at 23°C
Solids by volume	~81%
Solids by weight	~87%
VOC content	< 200 g/L
Touch dry (at 20°C/50% r.h.)	3 hours
Rain resistant (at 20°C/50% r.h.)	10 minutes
Recoat time (at 20°C/50% r.h.)	6 hours minimum
Full cure	7 days
Application temperature	+5°C to +35°C
Substrate temperature	+5°C to +60°C; ≥3°C above dew point
Relative humidity	5% – 85% max.
Substrate moisture	≤4%
Service temperature	-30°C to +80°C

PACKAGING AND STORAGE

Packaging:

- 15 L container (approx. 21.6 kg)

Storage:

- Store in original sealed containers at 0°C to +25°C
- Protect from direct sunlight, moisture, and freezing
- Store in dry conditions

Shelf life: 9 months from date of manufacture when stored properly

DOSAGE AND COVERAGE RATES

Application	Coverage
Single coat (unreinforced system)	≥0.75 kg/m²
Two coat system (unreinforced)	≥1.5 kg/m² total
Top coat over reinforced base	≥1.1 – 1.5 kg/m²
Heavy duty system (two top coats)	≥2.4 kg/m² total

Yield per 15 L container:

- At 1.1 kg/m²: ~19 – 20 m²
- At 1.5 kg/m²: ~14 – 15 m²
- Two coat system: ~14 – 15 m²

NOTE: Coverage is approximate; varies with 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, loose particles, and any contaminants
- Concrete: mechanically abrade (shot blasting or grinding) to achieve open texture; moisture content ≤4%
- Substrate temperature must be at least +3°C above dew point

Priming:

- Apply primer appropriate for substrate (concrete primer, metal primer, bitumen primer, etc.)
- Allow primer to cure completely before top coat application

Mixing:

- Stir thoroughly before use
- Do not thin or dilute with any solvent
- Use immediately after opening; material skins over in opened container

Application:

- Apply by brush, solvent-resistant roller, or airless spray
- Begin with details (penetrations, drains, flashings) before horizontal areas
- For reinforced systems: apply base coat, embed reinforcement fabric, then apply top coat
- For unreinforced system: apply two coats at ≥0.75 kg/m² each
- Apply second coat after first coat is dry (minimum 6 hours at 20°C)
- Apply subsequent coats crosswise to previous coat

Curing Times:

Temperature	Rain Resistant	Touch Dry	Recoat
+5°C	10 min	8-12 hours	12-16 hours
+10°C	10 min	4 hours	8-12 hours
+20°C	10 min	3 hours	6 hours
+30°C	10 min	2 hours	4 hours

Limitations:

- Not suitable for permanent water immersion
- Do not use for indoor applications
- Do not apply on substrates with rising moisture
- Do not apply cementitious materials directly onto cured membrane

HEALTH AND SAFETY

Polyurethane resin 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 if ventilation is poor. Refer to the Safety Data Sheet for detailed information.

CLEAING OF TOOLS

Clean all brushes, rollers, mixing equipment, and spillages with xylene, acetone, or polyurethane 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 Lastic 621TC complies with the following standards:

- **ETAG 09/0139** – Liquid applied roof waterproofing kit
- **ASTM D7311-07** – Liquid-Applied, Single-Pack, Moisture-Triggered, Aliphatic Polyurethane Roofing Membrane
- **FM Approval Standard 4470** – Class 1 Roof Covers
- **ASTM E-108** – Spread of Flame Class A at 1:12 slope
- **LEED SS Credit 7.2** – Heat Island Effect – Roof (SRI ≥ 78 for white)
- **EN 13501-1** – Reaction to fire: Euroclass E
- **FLL** – Root resistance approved
- **ISO 9001** – Quality management system certified

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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