

CHEMFIT PU620

PU UV Topcoat – For Exposed Roofs

PRODUCT DESCRIPTION

ChemFit PU620 is a high-performance, UV-stable polyurethane topcoat specifically formulated for the protection of exposed roof systems and waterproofing membranes. This aliphatic polyurethane coating cures to form a durable, weather-resistant, and colour-stable finish that withstands prolonged UV exposure without yellowing or degradation. It provides a seamless, protective barrier against UV radiation, moisture, and pedestrian traffic. The coating is easy to apply and provides a glossy, easy-to-clean surface

PRIMARY APPLICATIONS

ChemFit PU620 is recommended for use in conditions such as:

- UV protection for exposed polyurethane waterproofing membrane systems
- Finish coat on flat roofs, podium decks, terraces, balconies, and roof gardens
- Protection of concrete, metal, and coated surfaces in exterior exposed situations
- Waterproofing of GI roofs, metal roofs, and non-trafficked roof areas

KEY FEATURES AND BENEFITS

- **UV stable** – Excellent resistance to UV degradation; non-yellowing and non-chalking
- **Durable finish** – Resistant to light pedestrian and vehicular traffic
- **Weather resistant** – Resists rain, frost, and temperature extremes (-40°C to +90°C service temperature)
- **Colour stable** – Maintains appearance with minimal fading over time
- **Good adhesion** – Bonds strongly to polyurethane membranes, concrete, and metal substrates
- **Seamless membrane** – Forms a joint-free, fully bonded protective layer
- **High solar reflectance** – Improves building energy efficiency and reduces cooling costs (cool roof certified)
- **Fast curing** – Quick return to service

MECHANICAL PROPERTIES

Property	Value
Tensile strength	> 2.0 N/mm ² (> 20 MPa)
Elongation at break	> 150%
Shore A hardness	75 – 85
Adhesion to concrete	> 2.0 N/mm ²
Water impermeability	5 atm (no leakage)
Abrasion resistance	AR 0.5
Capillary water absorption	< 0.01 kg/m ² ·h ^{0.5}
Water vapour permeability	Sd = 0.65 m
CO ₂ permeability	Sd > 50 m

PHYSICAL AND CHEMICAL PROPERTIES

Property	Specification
Appearance	Liquid
Color	White, Grey, and other standard colours
Basis	Aliphatic polyurethane
Type	[One component / Two component] (refer to product label)
Density	1.10 – 1.20 kg/L
Solids content	> 55% (by weight)
VOC content	Low
Pot life (at 25°C)	[20 – 40 minutes] (for 2K formulations)
Tack-free time (at 25°C)	2 – 6 hours
Hard dry (at 25°C)	20 – 24 hours
Recoat time (at 25°C)	4 – 24 hours
Full cure	7 days
Application temperature	+5°C to +35°C
Service temperature	-40°C to +90°C

PACKAGING AND STORAGE

Packaging:

- 20 kg container (pail / drum)

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

Consumption: 0.2 – 0.3 kg/m² per coat

Yield per 20 kg container: Approximately 65 – 100 m² per coat

Recommended system:

- Minimum 1 coat for UV protection (over existing waterproofing membrane)
- 2 coats recommended for complete coverage and durability

NOTE: Coverage is approximate; varies with substrate porosity, surface profile, and application method. For rough or textured surfaces, additional material may be required.

APPLICATION GUIDELINES

Surface Preparation:

- Substrate must be clean, dry, sound, and free from dust, oil, grease, loose particles, and any contaminants
- For application over existing membranes, ensure membrane is fully cured, clean, and dry
- Concrete: mechanically abrade to achieve open texture; moisture content must be < 4%
- Metal: remove rust, scale, and oil

Mixing (for two-component formulations):

- Pre-mix Part A thoroughly before combining
- Add Part B (hardener) according to specified ratio (refer to product label)
- Mix with low-speed drill (300-400 rpm) for 2-3 minutes until uniform
- Use within pot life (typically 20-40 minutes at 25°C)

Application:

- Apply by brush, short-pile roller, or airless spray
- Apply evenly at specified consumption rate (0.2 – 0.3 kg/m²)
- For two-coat system, apply second coat crosswise to the first after first coat is dry (minimum 4-24 hours at 25°C)
- Maintain wet edge to avoid lap marks

Curing:

- Protect from rain, dew, and mechanical damage for minimum 24 hours
- Light foot traffic after 24 hours
- Full chemical and water resistance after 7 days
- Do not apply below +5°C or if rain expected within 24 hours
- Do not apply if relative humidity exceeds 85%

HEALTH AND SAFETY

Polyurethane coating may cause skin and eye sensitization and irritation. If eye contact occurs, rinse with water for 15 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 advice. Use gloves (nitrile), safety glasses, and protective clothing during handling. Ensure adequate ventilation – use respiratory protection with organic vapour 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 polyurethane thinner immediately after use. Dried material requires mechanical removal. Dispose of cleaning materials in accordance with local regulations.

APPROVALS AND STANDARDS

- **EN 1504-2** – Surface protection systems for concrete (Coating) – CE marked
- **EN 13813** – Synthetic resin screed material – CE marked
- **EN ISO 527** – Tensile strength and elongation testing
- **EN 1542** – Adhesion testing for repair mortars and coatings
- **EN 1062-6** – CO₂ permeability testing
- **EN ISO 7783-2** – Water vapour permeability testing
- **EN 1062-11** – Artificial weathering resistance (2000 hours – no blistering, cracking, or flaking)
- **DIN 1048** – Water impermeability at hydrostatic pressure
- **EN 13892-4** – Abrasion resistance testing
- **ASTM E903-96 / ASTM G159-98** – Solar reflectance testing (white)
- **ASTM C1371-04a** – Infrared emittance testing (white)
- **ASTM E1980-01** – Solar Reflectance Index (SRI) calculation (white)
- **ASTM G154 / ASTM G53** – QUV accelerated weathering testing
- **ISO 9001** – Quality management system certified
- PU UV topcoat for exposed roof systems

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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