CHEMFIT PU FLOOR 350

Two-Part, Solvent Free, Highly Elastic Polyurethane Resin for Hot/Tropical Climates – For Car Park Decks, Garage Floors & Bridges

PRODUCT DESCRIPTION

ChemFit PU Floor 350 is a two-part, solvent free, highly elastic polyurethane resin specifically formulated for application in hot and tropical climates. The system cures to form a durable, crack-bridging, trafficable wearing layer with a slip-resistant finish. It is designed to withstand the thermal expansion and contraction of substrates like concrete and steel decks in extreme temperature fluctuations, making it an ideal solution for car park decks, bridges, and garage floors.

PRIMARY APPICATIONS

ChemFit PU Floor 350 is recommended for use in conditions such as:

- Trafficable wearing layers (top coats) for car park decks
- Garage and industrial workshop floors
- Pedestrian and light vehicle bridge decks
- Areas requiring high elasticity to bridge dynamic cracks
- Renovation of existing failing epoxy or PU membranes

KEY FEATURES AND BENEFITS

- **Solvent free** – Low odor and environmentally friendly; safe for confined spaces during application
- **Highly elastic** – Excellent crack bridging capacity (>4 mm) for structural movement
- **UV stable** – Aliphatic formulation ensures no yellowing under intense sunlight
- **Slip resistant** – Can be formulated with aggregates to achieve required slip resistance for ramps
- **Trafficable** – High mechanical strength for vehicle traffic including cars and forklifts
- **Hot climate formulation** – Extended pot life and controlled viscosity for high ambient temperatures
- **Good chemical resistance** – Resists oils, fuels, de-icing salts, and mild chemicals

MECHANICAL PROPERTIES

Property	Value
Tensile Strength	> 10 N/mm²
Elongation at Break	> 100% (Highly elastic)
Shore D Hardness	60 – 75
Adhesion to Concrete	> 1.5 N/mm² (substrate failure typical)
Crack Bridging Capacity	> 4 mm (at 23°C)

PHYSICAL AND CHEMICAL PROPERTIES

Property	Specification
Appearance	Part A: Pigmented liquid; Part B: Clear/Amber liquid
Colour	Range of RAL colours available (e.g., RAL 7032, RAL 7037, RAL 9005)
Basis	Two-part, solvent-free aliphatic polyurethane resin
Mix Ratio (by weight)	Part A : Part B = 1 : 2 (9 kg + 18 kg = 27 kg unit)
Density (mixed)	~1.4 – 1.6 kg/L (TBC)
Solids Content	~100% (by weight and volume)
Pot Life (at +30°C)	~20 – 30 minutes (TBC)
Touch Dry (at +30°C)	~4 – 6 hours
Full Cure	7 days
Application Temperature	+10°C to +40°C (substrate and ambient)
Substrate Temperature	Must be ≥3°C above dew point
Relative Humidity	Max. 80%
Substrate Moisture	< 4% (no rising moisture)

PACKAGING AND STORAGE

Packaging:

- 27 kg unit (9 kg Part A + 18 kg Part B)

Storage:

- Store in original sealed containers at +15°C to +30°C
- Protect from direct sunlight, moisture, and freezing
- High temperatures reduce shelf life; store in cool, dry conditions

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

DOSAGE AND COVERAGE RATE

Application Type	Consumption (approx.)	Coverage per 27 kg unit
Seal coat (neat)	0.35 – 0.50 kg/m²	54 – 77 m²
Textured wearing layer (with aggregate)	0.80 – 1.20 kg/m²	22 – 34 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, and loose particles
- Mechanically abrade (shot blasting or grinding) to achieve open texture (CSP 3-4)
- Substrate moisture content must be < 4% with no rising moisture
- Fill blowholes and repair damaged areas with suitable epoxy mortar

Priming:

- Apply compatible epoxy primer (e.g., **ChemFit EpoxyPrime 1400**) at 0.30-0.50 kg/m²
- For moisture-sensitive substrates, use a moisture-tolerant epoxy primer
- Allow primer to cure (6-12 hours) before applying **PU Floor 350**

Mixing:

- Pre-mix Part A thoroughly before combining
- Add Part B to Part A according to ratio (1:2 by weight)
- Mix with low-speed drill (300-400 rpm) for 2-3 minutes until uniform
- Pour into another container and mix again for 1 minute to ensure thorough blending
- Use within pot life (20-30 minutes at +30°C)

Application:

- **Seal coat:** Apply by short-pile roller or squeegee; back-roll crosswise for uniform coverage
- **Textured wearing layer:** Apply by short-pile roller; for slip resistance, broadcast anti-slip aggregate (0.4-0.7 mm) into wet coating; allow to cure; apply second seal coat if required
- Maintain wet edge to avoid lap marks; work in manageable sections

Curing Times (at +30°C):

Stage	Time
Touch dry	4 – 6 hours
Light foot traffic	12 – 16 hours
Vehicle traffic	48 – 72 hours
Full cure	7 days

Limitations:

- Do not apply below +10°C or if relative humidity exceeds 80%
- Do not apply if substrate temperature is below dew point (+3°C margin)
- Protect from rain and water for at least 24 hours after application

HEALTH AND SAFETY

Polyurethane resins may cause skin and eye sensitization. Isocyanates can cause respiratory sensitization. If eye contact occurs: rinse with water for 15-20 minutes, seek medical attention. Skin contact: wash with soap and water. If swallowed: do not induce vomiting; rinse mouth, drink water, seek medical aid. Use nitrile gloves, safety glasses, protective clothing. Ensure ventilation – use respiratory protection with organic vapor cartridges if ventilation is poor. Refer to SDS.

CLEAING OF TOOLS

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

APPROVALS AND STANDARDS

ChemFit PU Floor 350 complies with the following standards:

- **EN 1504-2** – Surface protection systems for concrete (Coating)
- **EN 13813** – Screed material and floor coatings
- **ASTM D4541 / EN 1542** – Pull-off adhesion strength testing
- **ASTM D4060** – Abrasion resistance testing
- **DIN 53505** – Shore hardness testing
- **ISO 9001** – Quality management system certified
- Two-part, solvent free, highly elastic polyurethane resin for hot/tropical climates
- Suitable for highly elastic, crack bridging, trafficable, slip resistant wearing layers on car park decks, garage floors, and bridges

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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