

Dr.Fixit Flexi PU 270(I)

Solvent Based Polyurethane Waterproof Membrane



Description

Dr. Fixit Flexi PU 270(I) is liquid-applied, highly permanent elastic, cold applied and cold curing, one component polyurethane membrane used for long-lasting waterproofing. Solvent based with low VOCs properties. The **Dr. Fixit Flexi PU 270(I)** is based on pure elastomeric hydrophobic polyurethane resins, which result in excellent mechanical, chemical, thermal and natural element resistance properties. **Dr.Fixit Flexi PU 270(I)** reacts with ground and air moisture to cure.

Areas of Application

- Waterproofing of Wet Areas in Bathrooms, Kitchens, Balconies
- Metal and asbestos roofs
- Swimming Pool, artificial lakes and ponds
- Roof gardens
- Retaining wall and foundations
- Auxiliary Rooms
- Roofs/ Metal/ Asbestos, Terraces and Podiums (to be protected with screed), etc.
- Can be coated only from positive side on substructure
- Cut and cover tunnels, UG metro station roofs

Features & Benefits

- Simple application (roller or airless spray).
- When applied forms seamless membrane without joints.
- Resistant to water.
- Resistant to frost.
- Crack-bridging.
- Provides water vapor permeability, so the surface can breathe.
- Adapt to any surface
- Maintains its mechanical properties over a temperature span of -40°C to +80°C.
- Provides excellent adhesion to almost any type of surface.
- The waterproofed surface can be walked on (rough finish can be obtained by using silica sand)
- Resistant to detergents, oils, seawater and domestic chemicals.
- Even if the membrane gets mechanically damaged, it can be easily repaired locally.
- Does not need the use of open flames (torch) during application.

Method of Application

1 Surface Preparation

1.1 Old & Fresh Concrete Surface

- Allow fresh concrete to cure 28 days.
- Concrete surface must clean, strong, free of all loose dirty materials, and dust free, oil stain, wax, liquid coating/paint, concrete curing agent, grease or other stains that would affect waterproof coating adhesion.
- Concrete surface where there laitance, algae, mould, remove them with grinding machine and clean surface afterwards.
- Prepare cement surface or mineral mix cement surface by cleaning by using grinding machine or chipping machine to remove all defect surfaces such as peel off surface, weak concrete, cavities, etc. Do not use water to clean surface to prevent accumulation of moisture. Use grinding machine or chipping machine to smoothen surface and remove all loose dirty materials, sweep off or use blower to blow off dirt or vacuum cleaner to suck in dirt.
- **WARNING:** Do not wash surface with water.

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Surface Levelling

- Surface must be smooth, for laitance remove laitance surface by saw concrete or scrubbing down with wire brush.
- Adjust slope 1:100 on roof terrace application to allow water to drain.
- All surface area must be smooth and any defects concrete surface can be apply by use structure repair cementitious mortar **Dr.Fixit UniRepair FC** to fill in damage area, afterwards allow repair area to cure for 7 days prior to other work.
- WARNING: Do not wash surface with water.

Repair Cracks & Plug Holes

- For concrete surface with, weak concrete, peel off surface, hollow sound check from knock at concrete condition remove by grinding machine or chipping machine till reaching strong concrete.
- For concrete surface with pinhole or honeycomb can be apply by using structural repair cementitious mortar **Dr.Fixit UniRepair FC** to fill in defects area, afterwards allow repair area to cure for 7 days prior to other work.
- For concrete surface with >3mm crack, groove U shape on crack area to big enough for apply **Dr.Fixit PU Sealant** to seal crack and allow to cure a day prior to working on area.
- Clean concrete expansion joints and control joints of dust, residue or other contamination. Widen and deepen joints (cut open) if necessary. The prepared movement joint should have a depth of 10-15 mm. The width: depth ratio of the movement joint should be at a rate of approx. 2:1.

Fillet on joints wall and floor

- For concrete wall and floor should be made fillet/chamfer with **Dr.Fixit PU Sealant**. Allow sealant to cure for a day prior to other work.
- Any corners or angles should be cut.
- Apply a coat of **Dr. Fixit Flexi PU 270(I)**, 200 mm wide centered over all large cracks and while wet, cover with a correct cut stripe of the Geotextile Fabric. Press it to soak.
- Saturate the Geotextile Fabric with enough **Dr. Fixit Flexi PU 270(I)**, until it is fully covered.
- Allow 12 hours to cure.

1.2 Metal Pipe & Metal Sheet Surface

- Metal surface must be in strong & good condition, scrub off any rust found on surface
- Metal surface must be free of all loose dirty materials, dust free, oil stain or other stains that would affect waterproof coating adhesion. For heavy rusted metal replace with new metal or repair and strengthen rusted metal until it appears as new.
- For glossy metal surface apply sand paper to sanded metal.

2 Priming

- Surface compressive strength should be at least 25 MPa, cohesive bond strength at least 1.5 MPa.
- Concrete surface moisture level must not exceed 5% if exceeded recommend use **Dr.Fixit Primer DA**.
- Allow the primer to cure 1-2 hrs. before coating with **Dr.Fixit Flexi PU 270(I)**.

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3 Mixing

- **Dr.Fixit Flexi PU 270(I)** is premix product; stir content till a homogenous paste is form prior to applying.
- Do not add more water when mixing.
- Strengthen **Dr.Fixit Flexi PU 270(I)** with Dr.Fixit Roofkote Fibernet or Dr.Fixit Roofkote Polymat system.

4 Application

- Pour the **Dr.Fixit Flexi PU 270(I)** onto the primed surface and lay it out by roller or brush, until all surfaces is covered. You can use airless spray allowing a considerable saving of manpower. After 12-18 hours (not later than 48 hours) apply another layer of the **Dr.Fixit Flexi PU 270(I)**.
- For demanding applications, apply a third layer of the **Dr.Fixit Flexi PU 270(I)**. Reinforce always with the geotextile fabric at problem areas, like wall-floor connections, 90° angles, chimneys, pipes, waterspouts (siphon), etc.
- In order to do that, apply on the still wet **Dr.Fixit Flexi PU 270(I)** a correct cut piece of geotextile fabric, press it to soak, and saturate again with enough **Dr.Fixit Flexi PU 270(I)**.
RECOMMENDATION: We recommend reinforcement of the entire surface, with the geotextile fabric. Use 5-10 cm stripe overlapping.
ATTENTION: For best results, the temperature during application and cure should be between 5°C and 35°C. Low temperatures retard cure while high temperature speed up curing. High humidity may affect the final finish.
- WARNING: The **Dr. Fixit Flexi PU 270(I)** system is slippery when wet. In order to avoid slipperiness during wet days, sprinkle suitable aggregates onto the still wet coating to create an anti-slip surface.

5 Finishing

- If a color stable and chalking-free surface is desired, apply top coat of the **Dr. Fixit Hydrolastic PU/ Dr.Fixit Hydrolastic PU Cool/Dr.Fixit Newcoat PU Cool/Dr.Fixit PU Roofkote** over the **Dr.Fixit Flexi PU 270(I)** for two coats at 300 to 350 micron approximately dry film thickness.
- Allow 1st coat to dry 1 to 2 hours prior to applying 2nd coat perpendicularly, do not add more water in mixture when applying
- When applying floor to wall joint apply top coat at least 30 cm height above floor level
- Allow top coat to cure 7 days after applying application steps above prior to opening to traffic

6 Cleaning

- Clean all tool and equipment with water immediately after use.

Limitations & Precautions

- Careful supervision during application is needed, particularly in ensuring proper curing of concrete and consistent thickness.
- Apply **Dr. Fixit Flexi PU 270(I)** directly on primed surface.
- Always protect the coating with proper and appropriate protection.
- Do not apply **Dr. Fixit Flexi PU 270(I)** directly in open sunlight when temperature is higher than 35°C.

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Technical Datasheet

Properties	Standard/Test Method	Results
Specific gravity	DIN 53217	1.320 ~ 1.420
Elongation at Break	ASTM D-412/ DIN 52455	400%
Tensile Strength (with accelerator)	ASTM D 412 / DIN 52455	4 ~ 6 MPa
Tensile Strength (without accelerator)	ASTM D 412 / DIN 52455	2 ~ 4 MPa
Water Vapour Permeability	ISO 9932:91	> 14 gr/m ² /day
Resistance to Water Pressure (1m water column, 24h)	DIN EN 1928	No Leak $\mu = 2.500$
Adhesion to concrete (concrete surface failure)	ASTM D 903	>2,0 N/mm ²
Hardness (Shore A Scale)	ASTM D 2240 (15")	75
Thermal Resistance (80°C for 100 days)	EOTA TR-011	Passed
Service Temperature		-40°C to +80°C
Tack Free Time		5 to 6 hrs.
Light Pedestrian Traffic Time		24 hours
Final Curing time Conditions: 20°C, 50% RH		7 days
Solid Content (%)		90%
Fire resistance		Euroclass F
Resistant to plant roots		Resistant
Crack Bridging		Up to 2 mm if coating thickness is > 2 mm

Coverage: 1.2 – 1.5 kg/m² total consumption when applied in two or three layers at 1 mm approximately dry film thickness.

Packaging: **Dr.Fixit Flexi PU 270(I)** is supplied in 25 kg, Barrels.
The **Dr.Fixit Flexi PU 270(I)** is supplied in white.

Storage:

- Pails should be stored in dry and cool rooms for up to 9 months. Protect the material against moisture and direct sunlight. Storage temperature: 5°-30°C.
- Products should remain in their original, unopened containers, bearing the manufacturers name, product designation, batch number and application precaution labels.

Health & Safety Precautions

- During application wear protective clothing, gloves and eye goggles during application. Avoid product to contact eyes and skin.
- Skin Contact: Wash immediately with plenty of clean water.
- Eye contact: In the event of eye contact splash plenty of clean water immediately and seek medical advice.
- **Dr.Fixit Flexi PU 270(I)** contains isocyanates.



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