

Dr. Fixit Flexi PU 270(I)



SOLVENT BASED POLYURETHANE WATERPROOFING MEMBRANE

Dr. Fixit Flexi PU 270(I) is a liquid-applied, highly permanent elastic, cold applied and cold curing, one component polyurethane membrane used for long-lasting waterproofing. Solvent based with root resistance 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. Cures by reaction with ground and air moisture.

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

APPLICATION

Careful surface preparation is essential for optimum finish and durability. The surface needs to be clean, dry and sound, free of any contamination, which may harmfully affect the adhesion of the membrane.

Maximum moisture content should not exceed 5%. Substrate compressive strength should be at least 25 MPa, cohesive bond strength at least 1.5 MPa. New concrete structures need to dry for at least 28 days. Old, loose coatings, dirt, fats, oils, organic substances and dust need to be removed by a grinding machine. Possible surface irregularities need to be smoothened.

Any loose surface pieces and grinding dust need to be thoroughly removed.

WARNING: Do not wash surface with water.

REPAIR OF CRACKS AND JOINTS:

The careful sealing of existing cracks and joints before the application is extremely important for long lasting waterproofing results.



Clean concrete cracks and hairline cracks, of dust, residue or other contamination. Prime locally with the Dr. Fixit Primer PU or Dr. Fixit Pidipoxy MIEP and allow 2-3 hours to dry. Fill all prepared cracks with Dr. Fixit PU sealant. Then apply a layer 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. Then saturate the Geotextile Fabric with enough Dr. Fixit Flexi PU 270(I), until it is fully covered. Allow 12 hours to cure.

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.

PRIMING:

Prime absorbent surfaces like concrete, cement screed with Dr. Fixit Primer PU or Dr. Fixit Pidipoxy MIEP. Allow the primer to cure according its technical instruction.

WATERPROOFING MEMBRANE:

Stir well before using. Pour the Dr. Fixit Flexi PU 270(I) onto the primed surface and lay it out by roller or brush, until all surface 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). For detailed application instructions with the Geotextile Fabric, contact our R & D department.

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.

FINISHING

If a color stable and chalking-free surface is desired, apply one or two layers of the Dr. Fixit PUTC over the Dr. Fixit Flexi PU 270(I).

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. Please contact our R & D Dept. for more details.

Coating overlay with brickbat coba, china mosaic or mud phaska:

After the coating is dried lay sand and cement mortar (Plaster) prepared with Dr. Fixit Pidiproof LW+ covering the complete exposed flat area including up stand areas for the protection of applied coating.

Upon completion of the plaster and proper curing/drying, further finishing activities such as mud phaska brickbat coba china mosaic & tile fixing can be carried out with proper slope towards the drain water outlet.

OR

PROTECTION CONCRETE SCREED:

Spread minimum 100 gm/m² geotextile over cured Dr. Fixit Flexi PU 270(I) as separation layer, before a concrete screed is laid. Protect the coating with a concrete screed in M 20 grade. The protective screed of 40-50 mm (minimum) thickness maintaining an average slope of 1:100 towards the drain outlets for effective and efficient draining of water.

The composition of screed should be 1:1.5:3 i.e. Cement: Sand: Aggregate with aggregate size 20 mm down. The screed should also have poly propylene fibre 12 mm length & should not be less than 150 gram per 50 kg bag of cement.

Sprinkle the fibre in site mixer with little water. Keep rotating and add aggregate, sand, cement and balance water. Mix it for a few minutes. In case of manual mixing, for best results mix half the fibre in a bucket of water, stir well and mix in concrete. Likewise add balance fibre.

The addition of fibre will contribute in controlling cracking caused by volume change (Expansion & Contraction). Helps in increasing flexural strength.

Angle fillet to be provided while screed application using polymer modified mortar.

After the application of screed, provide control joints along the length and breadth of entire screed area.

The joint can be provided by using a saw cutting machine attached with a 3 mm blade within 18-24 hrs of application of screed. The panel size for providing joints should be 3.25 m x 3.25 m. 28-30 days later, these joints can be filled with a suitable elastomeric sealant.

OPTIONAL:

During surface preparation an important thing is the fitting of drain outlets. Dr. Fixit Roofix Drain is designed to prevent the possible leakages from this most critical area. Roofix Drain is aligned with the drain down take pipes. The drain is fitted by carefully aligning and fitting using Dr. Fixit Pidicrete URP modified mortar. During the fitting care is taken to provide a catchment area at the drain area aligned with the slope provided in the screed. Dr. Fixit Flexi PU 270(I) coating is done along the fitting area as an additional coating before proceeding for final coating.

Precautions & Limitations

- 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.

Technical Information

PROPERTIES	SPECIFICATION	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 Vapor 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 (%)	ASTM C836	90%
Fire resistance		Euroclass F
Resistant to plant roots	EN 13948	Resistant
Crack Bridging		Up to 2 mm if coating thickness is more than 2 mm



Coverage*

- 1.2 - 1.5 kg/m² total consumption when applied in two or three layers.

This coverage is based on application by roller onto a smooth surface in optimum conditions. Factors like surface porosity, temperature and application method can alter consumption.

Packaging & Colour

- Dr. Fixit Flexi PU 270(I) is supplied in 25 kg, Barrels.
- The Dr. Fixit Flexi PU 270(I) is supplied in grey, brown, white and red.

Other colors may be supplied on demand.

Shelf Life & 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. See information supplied by the manufacturer. Please study the Material Safety Data Sheet.

Other Products Categories available

Dr. Fixit brings you the widest range of Construction Chemicals



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