

Dr.Fixit Hydrolastic PU Seal

Liquid Polyurethane-Bitumen Elastomeric Waterproofing Membrane

Description

Dr.Fixit Hydrolastic PU Seal is a one-component polyurethane-bitumen elastomeric waterproofing membrane. It is applied as liquid and quickly dry to forms seamless flexible membrane that protects structure against water. The application can be cold applied with spray, roller and brush, easy to use and fast drying. The application can be applied on inclement weather continued. Passed the Japanese standard (JIS R3106), vibration from the earthquake and the durability of the movement.

Areas of Application

- Underground structure
- Retaining walls
- Roof Terrace
- Terrace
- Deck and back concrete
- Reinforced Concrete tanks

Rate of uses

* **Theoretical consumption without allowance for loss.**

Rate of uses				
	Litre/m ²			m ² /pails (20L)
	Standard	At Least	At Most	
1 Coat	0.91	0.82	1.00	22
2 Coats	0.91	0.82	1.00	22
Total 2 Coats	1.82	1.64	2.00	11

Thickness

Dry Film Thickness (micron)			
	Standard	At Least	At Most
1 Coat	500	450	550
2 Coats	500	450	550
Total 2 Coats	1,000	900	1,100

Method of Application

1. Surface Preparation

Old & Fresh Concrete Surface

- Allow fresh concrete to cure for 28 days.
- Concrete surface must be clean, strong, free of all loose dirty materials, dust free, oil stain, wax, liquid coating/paint, concrete curing agent, grease or other stains that would affect waterproof coating adhesion.
- Concrete surface where their laitance, algae, mold, remove them with mechanical help and clean surface afterwards.
- Prepare cement surface or mineral mix cement surface by cleaning by using concrete saw or concrete drill 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 concrete saw to smoothen surface and remove all loose.

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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 to be if apply slope 1:100 on roof terrace application to allow water to drain and avoid standing water.

High Elasticity Waterproof Polyurethane Acrylic

- For areas with standing water remove standing water and moist damage concrete and apply 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.

Repair Cracks & Plug Holes

- For concrete surface with, weak concrete, peel off surface, hollow sound checks from knock at concrete condition remove by concrete saw or wire brush till reaching strong concrete surface area.
- For concrete surface with holes and burrow apply structural 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.
- For concrete surface with >3mm crack saw off crack area to a U shape or big enough to apply **Dr. Fixit MS 25 Sealant** to plug crack area and allow to cure a day prior to working on area.

Apply on various angle joints

- For concrete surface that show grooves and joints marks apply **Dr.Fixit PU Sealant** or other structure joint sealant that PU or Bitumen based.
- All joints over 1/8" (3 mm) must be sealed with Sealant. Any working joint less than 1/8" (3 mm) should be routed to a minimum of 1/4" (6 mm) and filled with a sealant. Use **Dr. Fixit MS 25 Sealant**.
- Do not use silicone sealant as PU Bituminous coating may not adhere to silicone.
- If a sealant that will not adhere to PU Bituminous and water proofing membrane is already in use. Apply a tape over and completely cover the cured sealant. Then apply one or two extra stipe coat of **Dr.Fixit Hydrolastic PU Seal** over the tape before apply full coats.
- Allow sealant to cure for a day prior to work on surface.
- Reduce shape of square & angular angle fillet/chamfer wall and floor with **Dr.Fixit MS 25 Sealant**.

2. Priming

- For highly porous concrete surfaces, Dilute Dr. Fixit Hydrolastic PU Seal with water in a 2:1 ratio and stir thoroughly until homogeneous. Apply as a primer coat on porous substrates at a coverage rate of 0.12 L/m². Allow to dry for 1–2 hours before proceeding with the application.

3. Mixing

- **Dr.Fixit Hydrolastic PU Seal** is a ready to use product, stir thoroughly to achieve a homogenous mixture. For electric stirrer apply at approx. 300-400 rpm speed for around 1 to 2 minutes. Do not add water.
- After stirring let the product settle in order to let entrapped air escape to avoid air bubble formation.

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4. Application

- Apply by trowel, roller, or spray at a coverage rate of 0.91 L/m²/coat without adding additional water, to achieve a total dry film thickness of 1,000 microns.
- Prior to applying the next coat, allow the first coat to dry completely for 1–2 hours. Do not add water to the mixture during application.
- At floor-to-wall joints, apply **Dr. Fixit Hydrolastic PU Seal** to a minimum height of 30 cm above floor level.
- For high-strength applications, reinforce the first coat with **Dr. Fixit Roofkote Polymat** or **Roofkote Fibernet** immediately after application, and allow the first coat to dry completely before applying the second coat.
- It is recommended to spray apply **Dr. Fixit Hydrolastic PU Seal** using the **Dutymax Airless Sprayer**.

5. Cleaning

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

6. Curing and Protection

- Appreciable properties develop within 24–48 hours at 30°C and 50% relative humidity. Protect **Dr.Fixit Hydrolastic PU Seal** from traffic during curing.
- For protection during backfill only, install protection board as soon as possible following cure of **Dr.Fixit Hydrolastic PU Seal**.
- The integrity of the cured membrane on a horizontal surface may be verified by damming the entire area and flooding with water to a minimum depth of 2" (51 mm) and allowing the water to stand for 24–48 hours. Visually inspect the bottom surface to check for any water penetration. If repairs are necessary, the area should be drained and allowed to dry before reapplying **Dr.Fixit Hydrolastic PU Seal**. After reapplication, the area should be tested again for membrane integrity.

7. Limitations & Precautions

- Apply **Dr.Fixit Hydrolastic PU Seal** when substrate is dry and ambient temperatures are 5 to 35°C.
- Check humidity and dew point. Apply **Dr.Fixit Hydrolastic PU Seal** when surface temperature is at least 5 °C above dew point to prevent droplets of water forming on the surface.
- Do not apply to expose reinforcing bars before concrete topping.
- Do not directly heat containers with flame, stove, hot plate or oven. Use airless spray to get high application rate.
- Patch and fill all voids and deep depressions in surface with appropriate patching material before applying **Dr.Fixit Hydrolastic PU Seal**. Carefully work material over irregular concrete to avoid pinholes.
- Before applying **Dr.Fixit Hydrolastic PU Seal**, dam all drains and drain openings.
- Do not leave **Dr.Fixit Hydrolastic PU Seal** without top coating & do not leave **Dr.Fixit Hydrolastic PU Seal** to be contact with direct sunlight without protection board install to protect surface.
- **Dr.Fixit Hydrolastic PU Seal** surface cannot be open to traffic prior to apply top coat.

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Technical Information

Properties	Standard/Test Method	Results
1.Appearance	Vistual	Brown Liquid
2.Viscosity	Brookfield	10,000 to 20,000 CPs
3.Solid Content by weight	SS-133:1987: Appendix D	64 ± 2 %
4.PVC	-	55%
5.Density @ 25 °C	ASTM D70-03	1.00 to 1.20 kg/L
6.pH	ASTM E-70-07(2015)	10
7.Water Resistance	SS-133:1987: Appendix I	Pass
8.Heat Resistance	SS-133:1987: Appendix G	Pass
9.Fire Resistance	SS-133:1987: Appendix J	Pass
10.Tensile Strength	ASTM D-412	>1.0 N/mm ²
11.Elongation at Break	ASTM D-412	>600 %
12.Hardness Shore A	ASTM D-2240	60
13.Hardness Shore OO	ASTM D-2240	86.40
14.Drying Time At Thickness 200 micron @Temp 25 °C - Touch dry - Hard dry @Temp 35 °C - Touch dry - Hard dry	ISO 1517-1973	20 mins. 1.15 Hrs. 5 mins. 0.30 Hrs.
15.Water Vapour Transmission Rate	ASTM E-96-00	32.5 g/m ² .day
16.Modulus at 100% elongation	ASTM D-412	1.07 N/mm ²
17.Recovery from 200% elongation	ASTM D-412	139.3%
18.Tear Strength	ASTM D-624	15.15 N
19.Vibration durability test against earthquake	JIS C 60068-2-59	No water leak after all test.
20.Intensity level of earthquake	JIS C 60068-2-59	Upper 6
21.Moisture vapor permeability	ASTM E-96	1.86 x 10 ⁻¹⁰ g/Pa.s.m
22.Crack bridging test	ASTM C1305-16	Pass@ 3.0 mm.

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23. Extensibility after heat aging	ASTM C1522-05	Pass. No tears,cracks,or holes after the extension
24.Dirt pick-up resistance	ASTM WK 38233	Pass
25.Extensibility after heat ageing	ASTM D412:06ae2	No Crack
26.Content	ISO-11890-2	0 g/L
27.Flashpoint	ASTM D3278-20	33.5 °C

Drying and Curing time

Substrate temperature	10 °C	25 °C	30 °C	40 °C
Surface (touch) dry, hrs.	3	1,30	1	0,45
Dry to over coat, minimum, hrs.	24	12	10	8
Dried/cured for service, day	3	2	1.5	1
Thickness Recommend, mm. At least At most	0.7 mm. 1.0 mm.			

- Drying and curing times are determined under controlled temperatures and relative.
- humidity below 60%, and at average of the DFT range for the product.
- Surface (touch) dry: The state of drying when slight pressure with a finger does not leave an imprint or reveal tackiness.
- Dry to overcoat, minimum: The recommended shortest time before the next coat can be applied.
- Dried/cured for service: Minimum time before the coating can be permanently exposed to the intended environment/medium.

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Packaging: Pail 22 kg. (20 Ltr.)

Storage: 6 months maximum in shaded sealed container. Store in unopened containers in clean, dry conditions at 5 to 30°C.

Health & Safety Precautions

- Nontoxic & Non-flammable
- Avoid skin and eye contact, in case of contact, rinse with clean water & soap

Disclaimer

The product information and the recommendations relating to the application and end-use of Dr.Fixit products, are based on Dr.Fixit's current knowledge and experience of the products when properly stored, handled and applied under normal conditions in accordance with Dr.Fixit's recommendations. In practice, the differences in materials, substrates and actual site conditions are such that no warranty in respect of merchantability or of fitness for a particular purpose, nor any liability arising out of any legal relationship whatsoever, can be inferred either from this information, or from any written recommendations, or from any other advice offered. The user of the product must test the product's suitability for the intended application and purpose. Dr.Fixit reserves the right to change the properties of its products without notice, so the company does not assume liability of any legal from this product information.



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