

Dr. Fixit Roofseal Ultra



ACRYLATE WITH FLUTYNE

Description

Dr. Fixit Roofseal Ultra is a polyurethane hybrid next-generation liquid-applied roof top coat waterproof coating with flutyne protection technology. Designed to resist water intrusion and heat. It forms a highly elastic, seamless membrane that provides excellent protection from moisture and is resistant to ponding water. It also exhibits excellent resistance to UV radiation and thermal aging.

Standard Compliance / Specification

It not only meets but also exceeds the ASTM D 6083 - Type I standard specification.

Areas of Application

Ideal as top coat for waterproofing of terraces, flat and slope, curved roofs etc.

- Brick-Bat Coba finish.
- Cement mortar screed
- China mosaic tile roofs
- Complex detailing, up-stands, penetrations and terminations

Features & Benefits

- Waterproofing: Offers long-term protection in severe weather conditions.
- Long Life: Demonstrates excellent weathering resistance (up to 12 years) when reinforced with glass fiber mesh.
- High-Build System: Provides a higher dry film thickness of up to 1mm in two coats.
- Crack Bridging: Exhibits outstanding flexibility with crack bridging up to 3mm.
- Reflective Roof Coating: Reduces surface temperatures by up to 10°C in peak summer.
- User-Friendly: A single-component, ready-to-use product that is easy to apply.
- Low VOC: Achieves green building certification from the Singapore Council and GRIHA (India).

Methods of Application

1 SURFACE PREPARATION:

- The terrace roof must be cleaned with stiff nylon and wire brushing, followed by high-pressure water jet cleaning. Algae and fungus on the parapet walls and terrace roof shall be treated with a fungicidal solution.
- Freshly laid cement-sand concrete screed should be designed to be greater than 80 mm thick and have a 50 mm thickness at the end slope.
- For a full roof repair, according to IS 456-2000, the minimum grade of concrete screed should be M25 or M20 with a maximum free water-to-cement ratio of 0.5 and a minimum cement content of 300 kg/m³. This screed should be admixed with Integral waterproofing liquid Dr. Fixit LW+ and 12 mm and 6 mm micro polypropylene fibers.
- Allow the concrete to complete a wet and dry cure for 8 weeks before applying the top coat coating.
- Ensure that the roof slope have a minimum of 1 in 80 or 100 is already provided.
- Remove concrete screed, brickbat coba, China mosaic or Ceramic tile if they are found to be de bonded by more than 30% from the substrate during a hammer test and reach up to the base slab level.
- Thoroughly inspect the terrace roof for cracks, tears, blisters, ponding, exposed foam, and open seams. Evaluate the debonding of screeds or tiles on the terrace roof by tapping with a nylon hammer. Pay special attention to areas around roof penetrations, ponding spots, parapet wall cracks.
- Ensure there is a single water drain outlet of at least 100 mm in diameter for a 500-square-foot floor area, and gaps around pipe inserts should be sealed properly with polymer-modified mortar.
- Stagnant water due to undulation in the roof surface should be marked and repaired with PMM.
- All joints / corners / penetration points, rainwater outlets, marble / tile strip joints should be grouted with polymer modified mortar.
- Ensure that all penetration points, mechanical equipment, HVAC & solar panels are suitably placed.



SCREED REPAIR:

- Remove loose and damaged / hollow sound concrete roof screed in pockets with mechanical cutter.
- Clean the concrete screed with water to remove dirt and loose particles.
- Brush applies a bond coat of SBR based polymer & cement mixed in the ratio of 1:1 (SBR polymer 1: Cement 1) by volume to make it lump free slurry coat. Repair the damaged concrete screed surface with Polymer Modified Mortar mixed with SBR based polymer 10% by weight of cement in (M20) concrete in ratio of 1:1.5:3 i.e., one bag of 50kg cements: 1.5 times volume of sand: 3 times volume of aggregates: 25L water.
- Level the repair mortar and finish with trowel by providing proper slope. Moist cures the repaired surface for 7 days. Air cure screed for 4-5 days, before application of roof topcoat coating system.

TREATMENT OF ROOF WITH STAGNANT WATER:

- Make the surface rough by hacking and chipping out the undulations portion. Extend it on the larger area to create slop towards drain.
- Apply a bond coat of Dr. Fixit Pidicrete URP mix in the ratio of 1:1 (URP 1: Cement 1) by volume to make it lump free slurry when applied on in the pre wet surface.
- Prepare the Polymer modified mortar (PMM) mixing with Dr. Fixit Pidicrete URP 10 by weight of cement in the ratio of 1:3 when the bond coat is tacky, finishing with trowel. Moist wet curing must be done up to 3-4 days.

SCREED CRACK REPAIR:

- All visible hairline cracks on concrete roof screed > 0.50 mm and not giving hollow sound, should be cut and widen in V shape with mechanical cutter in the size (10mm W x 6mm D) and filling the same with Hybrid / PU sealant with suitable gun.
- Allow sealant to cure a minimum 72 hours (about 3 days).
- Apply a bandage of Dr. Fixit Roofseal Ultra in 2 coats reinforce with 45 GSM glass fiber mesh over and above the crack repair surface in the length of crack.

RAINWATER OUTLETS TREATMENT:

- Hacking and chipping the surface around the rainwater drain outlet mouth up to 25mm in depth.
- Apply a bond coat of SBR based polymer Dr. Fixit Pidicrete URP & cement mixed in the ratio of 1:1 (polymer 1: Cement 1) by volume over the corners and pipe insert outlet gaps. Filling the gaps around drain mouth with (PMM) polymer modified mortar mixed with Dr. Fixit Pidicrete 10 by weight of cement in the ratio of 1:3. Providing & fixing 100 mm width 45gsm glass fiber mesh all around the periphery of drain mouth of rainwater outlet sandwiched with Dr. Fixit Roofseal Ultra waterproof coating. Apply the second coat on an interval of 4-6 hours, all over the rainwater outlet.

VERTICAL UP STAND DETAILING:

- Providing 100mm x 100 mm Square / rectangle up-stand of M20 grade concrete or with Polymer Modified mortar around mechanical equipment like HVAC, air-conditioning, solar panels. Etc.
- Apply 2 coats of Dr. Fixit Roofseal Ultra dilute without water dilution sandwiched with 45 Gsm glass fiber mesh in the interval of 4 -6 hrs. Ensure that all the reinforcement is properly placed and embedded with material.

2 WATERPROOFING APPLICATION

- Dilute 2 parts of Dr. Fixit Primeseal with 1 part of water to cover 8 sq. m. Allow the primer coat to dry for 6 to 8 hours.
- Stir well before using. Apply the 1st coat of Dr. Fixit Roofseal Ultra waterproof coating without dilution at a rate of 0.70-0.75 liters per sq. m. per coat.
- Lay down a 45 GSM fiber glass mesh into the coating as a sandwich layer while the first coat is still wet.
- Second coat application: Allow the first coat to dry for approximately 4-6 hours before applying the second coat at a 90° angle to the first coat.
- Apply the second coat of Dr. Fixit Roofseal Ultra waterproof coating without dilution at a rate of 0.70-0.75 liters per sq. m. per coat, ensuring total material consumption of 1.40-1.50 liters per sq. m. in 2-3 coats.
- Ensure there are no pinholes or air bubbles on the membrane.
- Allow the system to air cure for a minimum of 7 days.



FOR VERTICAL WALL AND PARAPET WALL SURFACES

- Apply the Dr. Fixit Raincoat Classic / Select external wall coating system on vertical surface and parapet wall for complete waterproofing of terrace roofs.

3 MAINTENANCE & RECOATING

- If Dr. Fixit Roofseal Ultra coating develops cracks due to weathering or temperature variations over time, it can be easily repaired. Simply cut any cracks into a V-groove up to 8mm in width and depth and fill them with PU / hybrid sealant. Allow the sealant to air cure for 72 hrs, then place a 45-gsm glass fiber mesh over length of crack and apply with Dr. Fixit Roofseal Ultra. Apply the second coat after the interval of 4-6 hrs ensuring no void areas are left uncoated with the second coat.

4 POST APPLICATION

- let the waterproofing cure for at least 7 days before you proceed with your flood / pond testing by ponding water up to 50mm height for 24 hrs.

5 DRYING/ CURING TIME AT 300C/ 85 RH

- Touch Dry - 60 min.
- Hard Dry - 5 to 6 hours.
- Drying times may vary depending on the prevailing climatic conditions; low temperature and higher relative humidity may prolong the drying process.

6 TOOLS CLEAN-UP

- Brush & Roller can be cleaned up with water while it is still wet.

Precautions & Limitations

- All corners, gaps, joints, Roof leak repair area & outlets shall be coated with two extra coats.
- Do not apply if rain is expected within 48 hours after application.
- The product is designed only for foot traffic and not vehicular or movement of machinery or equipment.
- Do not apply Dr. Fixit Roofseal Select over expansion or moving joints.
- To achieve the full proof waterproofing, parapet walls should be covered with Dr. Fixit Raincoat.
- Dr. Fixit Roofseal Ultra is recommended over existing building Flat/ Slope roof surface like Brick-Bat Coba finish, Screed China mosaic roof tile surface, Clay tile roof. Apply Dr. Fixit Primer AC for application on non-porous surfaces like Marble, Granite, glazed ceramic tiles surfaces not recommend for application on Kota, & kadappa stone tiles and mud phuska roof, and over mangalore tile surface.
- Do not apply when ambient temperature is below 10°C or above 36°C.
- Keep the material in close when not in use.
- Pidilite Industries does not provide a warranty for dirt pick-up on Roofseal Ultra.

Technical Information

PROPERTIES	UNIT	TEST METHOD	RESULTS
Solid Content		ASTM D1644	69± 2
Density	(gm/cc)	ASTM D 1475	1.43
Elongation at Break %		ASTM D 412	300
Tensile Strength with 45 Gsm	N/mm ²	ASTM D 412	4
Pull off Adhesion	N/mm ²	ASTM D 4541	1.8
Shore A Hardness	Values	ASTM D 2240	72
Crack Bridging Ability	mm	EN 1062 -7	3



Water Vapour transmission	g/m ² /day	ASTM E 96	26
Tear Resistance with 45 Gsm GF mesh	K/Nm	ASTM D 624	69
Water immersion test	Visual	ISO 2812- 2	Resistant
Dry Film Thickness	μ	EN 1062 -1	950

Test Conducted	Test method	Specification as per ASTM D 6083 M Type I	Test results
----------------	-------------	---	--------------

Solid Content w/s	ASTM D 1644	> 60	69 ± 2
Stormer Viscosity @23 °C KU	ASTM D 562	80 -145	128
Initial Elongation at Break %	ASTM D 2370	Min. 100	300
Tensile Strength N/mm ² with GF mesh	ASTM D 2370	Min 1.4	4
Permeance	ASTM D 1653	Max 50	26
Peel Adhesion to Concrete N/m ²	ASTM D 903	Min 350	475
Adhesion to Aluminum N/m ²	ASTMD C 794	Min 350	430
Adhesion to Mortar N/m ²	ASTMD C 794	Min 350	450
Adhesion to Glass N/m ²	ASTMD C 794	Min 350	380
Low temperature flexibility after 1000 Hrs. accelerated weathering	ASTM D 522	Min Pass 13 mm mandrel @ 10 °C	Pass
Final Elongation after 1000 Hrs. Accelerated weathering	ASTM D 2370	Min 100	130
Accelerated weathering 1000 Hrs.	ASTM D 4798	Visual	No Cracking
Fungi resistance	ASTM G 21	Zero Rating	Zero
Tear resistance K/Nm	ASTMD 624	>21	25
Tear resistance K/Nm with GF mesh	ASTMD 624	>21	69
Water swelling	ASTM D 471	Max 20	0.2
Shore A Hardness	ASTM D 2240	Value	72
Crack bridging ability mm	ASTM C 1305	Visual	Pass - No sign of cracking, Splitting and pinholes
Resistance to Fire	ASTM E 108:2020	Spread of Flame	Class A
Adhesion to Concrete N/mm ²	ASTM D 4541		1.8
SRI Index	ASTM E 1980-01		106
Water permeability @5 bar	EN 12390-8		Nil

The values in the above table are obtained in controlled lab conditions when tested properly by competent laboratory.
Note: Tolerance up to 5 % on the lower side from the above values is allowable.

Theoretical Coverage*

Consumption at the rate 1.40- 1.50 / Litre Sq.mt in 2-3 heavy coats to achieve dry film thickness of 900 to 1000 microns.

*Coverage may vary based on surface conditions and the application method. Additional material may be needed to achieve the desired dry film thickness (DFT)..

**The thermal performance of Dr. Fixit Roofseal Ultra was assessed on roofing surfaces using infrared thermometry. The actual temperature reduction depends on factors such as external wall and window heat gain and environmental conditions.



Packaging

20,4 Litre (Colour: White)

Shelf Life & Storage

- Shelf life is 36 months from the date of manufacturing in unopened conditions. To be stored in original and unopened packaging in a cool and dry place away from direct sunlight.
- Recommend temperatures of (10°- 30°Celsius) for storage of Dr. Fixit Roofseal Ultra and anything below 10° Celsius and above 30°Celsius is certainly not recommended.

Health & Safety

- Skin Contact: Wash skin with soap & water. Remove contaminated clothes
- On eye contact: Immediately splash eyes with plenty of water. Consult Physician if irritation persists
- Ingestion: It is based on Water Based Coating system, however, seek medical help.

Other Products Categories available

Dr. Fixit brings you the widest range of Construction Chemicals



Pidilite Industries Limited
Construction Chemicals Division
Ramkrishna Mandir Road, Post Box No. 17411
Andheri (E) Mumbai 400059 INDIA
Tel +91-22-2835 7000 • Fax +91-22-2835 7008
www.drfixit.co.in • info.drfixit@pidilite.com

Dr. Fixit Advice Centre (Toll Free No.) 1800 209 5504

DISCLAIMER The product information & application details given by the company & its agents has been provided in good faith & meant to serve only as a general guideline during usage. Users are advised to carry out tests & take trials to ensure on the suitability of products meeting their requirement prior to full scale usage of our products. Since the correct identification of the problems, quality of other materials used and the on-site workmanship are factors beyond our control, there are no expressed or implied guarantee / warranty as to the results obtained. The company does not assume any liability or consequential damage for unsatisfactory results, arising from the use of our products.