Dr. Fixit Superseal 4500 PUH

TWO-COMPONENT SPRAY APPLIED INSTANT SETTING LIQUID HYBRID POLYUREA POLYURETHANE BASED ELASTOMERIC WATERPROOFING MEMBRANE

Description

Dr. Fixit Superseal 4500 PUH is a two-component, sprayable, 100% solids (VOC free), instant setting hybrid polyurea polyurethane waterproofing membrane suitable for waterproofing, and protection to structural concrete membrane consists of two main components i.e. Part A ISO and Part B AMINE. Dr. Fixit Superseal 4500PUH to be applied using specific spray equipment, to form an aromatic, seamless high performance waterproofing membrane for long lasting performance.

Standard Compliance/Specification

Dr. Fixit Superseal 4500PUH meets the requirements of ASTM C836.

Areas of Applications

- Podium & Roof terraces
- Balcony - Decks and Parking slabs
- Unconfined Retaining walls
- Cut and cover Tunnels
- Sloping roofs
- Green roofs
- Waterbodies and Swimming Pools

Features & Benefits

- Fast setting within seconds.
- Excellent toughness and flexibility.
- Excellent abrasion and puncture resistance
- Dynamic crack bridging ability
- Environvment friendly-zero VOC
- Quick turn around time
- Tested for 25 yrs of service life

Method of Application

SURFACE PREPARATION

- Concrete substrate compressive strength should be at least 25 MPa, New concrete surfaces needs to cure for atleast 28 days and with residual moisture content < 8 %. Old, loose coatings, dirt, fats, oils, organic substances and dust need to be removed by a suitable mechanical surface preparation methods to achieve CSP 3 profile. Possible surface irregularities need to be repaired.

TREATMENT OF CRACKS & CONSTRUCTION JOINTS

- Cracks on the substrate (wider than 1 mm) required to be open in V-groove manner (5mm x 10 mm size) by using mechanical cutter, clean the same and seal with Feviseal HY 300 sealant before overcoating with waterproofing membrane.
- It is recommended to carry out 100 mm wide strip coating over treated cracks and construction joints using 60 gsm geotextile sandwitched between 2 coats of Dr.Fixit Superseal 900.

APPLICATION OF PRIMER

- Mix base and hardener components in 1:1 volumetric ratio of Dr.Fixit Cipoxy 16D using slow speed drill (100-300 rpm) fitted with mixing paddle for 2-3 mins to achieve homogeneous mix. Apply the mixed material using suitable brush/roller on prepared concrete surface coverage @ 150-200 ml/m^2 as per application guidelines.
- Recommended to broadcast anti slip grains of 200-300 micron thickness (Dry Sand without any moisture/ dust/dirt etc.) on wet primer at coverage of 0.8-1.0 kg/m^2 and allow the same to become tack free for 3-4 hrs

depending upon atmospheric temperature. Remove unstuck or loose grains and continue to spray Dr. Fixit Superseal 4500 PUH for optimum adhesion property.

Note : If concrete surface found to be defective with pinholes/bug roles/honeycombs etc., it must be filled/ repaired using scratch coat (prepare scratch coat by mixing Dr. Fixit Cipoxy 16D primer and 200 mesh silica flour in 1:1 ratio). Apply the scratch coat by using suitable spatula/squeeze to get level surface forthe upcoming primer.

- Spray Dr. Fixit Superseal 4500 PUH when the primer is tack free or before 24 hours from application of primer. In case if it exceeds 24 hours, then a thin coat of primer is recommended.

PRIMER ON METAL SURFACE

- All metal surfaces should be grit blasted to obtain minimum Sa 2.0 to $2^{1/2}$ surface finish . If blasting is not practically possible, make full use of power tools to remove loose rust and scale to Sa.2.0 standard. The surface should be dry, free from dust, grease and loose particles. After surface preparation immediately apply primer coverage @ 150 ml/m^2 and allow the same to become tack free before application of sucessive coating.

WATERPROOFING MEMBRANE
APPLICATION REQUIREMENTS (SPRAY EQUIPMENT)

- Dr. Fixit Superseal 4500 PUH must be applied utilizing a high pressure plural component pump such as Graco EXP2 or similar reactor equipped with a gun.
- The application equipment must be capable to have the capacity to continuously maintain high temperature and high pressure. Low pressures or temperatures can result in poor mixing of product and subsequent failure of the coating films.

Processing Parameters

Block temperature (Part A & Part B)	+70°C to +80°C
Hose temperature	+70°C to +80°C
Mixing ratio (by Volume)	1:1
Pressure	120-150 Bar

SPRAY APPLICATION

- Dr. Fixit Superseal 4500 PUH waterproofing membrane to be sprayed to achieve a minimum system thickness of 1.5mm in two or more passes in both directions coverage @ 1.6 kg/sqmt.

PROTECTION SCREED

- Loosely lay minimum 100 gm/m2 geotextile over cured polyurea coating as separation layer, before concrete screed modified with polypropelyne fiber is laid. Protect the liquid applied membrane in maximum 10 days of application using M20 grade concrete screed modified with polypropelyne fibers in 1:100 slope or with any other suitable means to protect the membrane from extended UV exposure and/or from mechanical damages and fill the saw cut joints using Dr.Fixit PU Sealant.

COLOUR STABLE TOP COAT

- Dr. Fixit Superseal 4500PUH is not a permanently colour stable system. Apply Dr. Fixit Superseal TC1000 Ultra - UV and weather resistance polyaspartic protective coating to achieve colour stability.

Refer Dr. Fixit Superseal TC 1000 Ultra technical datasheet for further details.

Precautions & Limitations

- This product is for professional use only for specific areas mentioned in TDS.
- Avoid moisture contamination in containers.
- Application should not be planned if forecast indicates possible rains
- Do not apply epoxy primer over polyurea before application of UV stable top coat.

Technical Information

Properties	Units	Results	Test Standard
Viscosity	cps	Part A : 500-900 Part B : 500-1400	Brookefeild Viscometer
Solid Content (Zero VOC)	%	100	ASTM D 2369
Density/Specific Gravity at 23°C	g/cc	Mixed : 1.06 +/- 0.1 Part A : 1.09 +/- 0.1 Part B : 1.03 +/- 0.1	ASTM D 4669
Gel Time	Sec	10-15	
Tack free time at 23°C	Min	1	
Cured time at 23°C	hours	24	
Tensile Strength at 23°C	MPa	15	ASTM D 412
Elongation at break at 23°C	%	450	ASTM D 412
Tear Strength	kn/m	60	ASTM D1004/ASTM D624
Adhesion (on concrete)	MPa	2	ASTM D 4541
Abrasion resistance (1 Kg,CS 10 Wheels,1000 cycles)	mg	60 loss	ASTM D 4060
Shore A Hardness	-	85	ASTM D2240
Resistance to hydrostatic water pressure	Bar	7	ASTM D 5385/ DIN 16726
Puncture Resistance	N	1000	ASTM E 154
Water vapour permiability	mg/m²/day	25	ASTM E 96
Impact resistance	N.m	17	ASTM D 2794
Service Range temperature	°C	- 20 to 90	
Dynamic Crack Bridging ability	-	Pass	EN 1062-7, Method B,Class B 4.2
Resistance to root	-	Pass	CEN TS/14416
Fire Resistance	-	Pass	EN 13501-1,Class B
Water Absorption	%	< 2 %	ASTM D570

Note:

Mechanical properties are derived from testing of Dr. Fixit Superseal 4500PUH applied as per recommended application method in controlled laboratory environment after completion of 14 days of curing. Test results achieved from testing of site-applied samples may vary depending on circumstances beyond our control such as variation in sample preparation, variation of UTM machine, rate of loading, manual errors, atmospheric conditions, curing conditions & film thickness etc.

Recommended Coverage

For 1.5 mm DFT typical consumption shall be 1.6 kg/sqmt.

Packaging

420 Kg Metal Drum Set (Part A : 220 Kg, Part B : 200 Kg)
435 kg Metal Drum Set (Part A : 225 kg, Part B : 210 kg)

Shelf Life

The shelf life is 12 months if stored as per the recommendations. In a covered and secured storage space. Excessive exposure to sunlight, UV rays and other source of heat will result in considerable deterioration of the product and reduce its shelf life.

Health and Safety

These safety recommendations for handling, are necessary for the implementation process as well as in the pre and post, on exposure to the loading machinery. During application wear protective clothing, gloves and eye goggles during application. Avoid product to contact eyes and skin.

- Respiratory Protection: When handling or spraying use an air-purifying respirator.
- 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.
- Waste: Waste generation should be avoided or minimized. Incinerate under controlled conditions in accordance with local laws and national regulations.
- Vapor and atomized liquids are harmful. Use only in ventilated areas, wear approved respirators when necessary.
- Keep out of reach of children.
- Do not use near high heat or open flame.

Other Products Categories available

Dr. Fixit brings you the widest range of Construction Chemicals

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