FIBSEAL PUR 1K

Pure Polyurethane - Liquid Applied Waterproof Membrane

Product # 114.33
Version no: 16.11.23

Data Tech

PRODUCT DESCRIPTION: Fibseal Pur 1k is a premium, liquid applied, Pure Polyurethane highly permanent elastic, cold applied and cold curing, one component polyurethane membrane used for long-lasting waterproofing. Fibseal Pur 1k is based on pure elastomeric hydrophobic polyurethane resins, which result in excellent mechanical, chemical, thermal, UV and natural element resistance properties. Cures by reaction with ground and air moisture.

AREAS OF APPLICATION

Waterproofing of:

- Roofs
- Balconies, Terraces and Verandas
- Wet Areas (under tile) in Bathrooms, Kitchens, Balconies, Auxiliary Rooms, etc.
- Pedestrian decks
- Green Roofs, Flowerbeds, Planter Boxes
- Old Bitumen felts, Asphalt felts, EPDM and PVC membranes and old Acrylic Coatings.
- Protection of Polyurethane Foam Insulation Waterproofing and protection of Concrete constructions like Bridge- Decks, Tunnels, Stadium Stands, Car Parks, etc.

ADVANTAGE

- Simple application (roller or airless spray).
- When applied forms give seamless membrane without joints.
- Resistant to water.
- Resistant to frost.
- Resistant to root penetration, so it can be used in green roofs.
- Crack-bridging up to 2mm, even at -10°C.
- Provides water vapor permeability, so the surface can breathe.
- Provides excellent thermal resistance, it never turns soft.
- Provides excellent weather and UV resistance.
- Waterproofs old bitumen-, asphalt felts by covering them, without the need to remove them prior to application.
- 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 used for domestic and public pedestrian traffic
- Resistant to detergents, oils, seawater and domestic chemicals.
- Even if the membrane gets mechanically damaged, it can be easily repaired locally within minutes.

APPLICATION METHODOLOGY

Surface preparation

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 25MPa, cohesive bond strength at least 1.5MPa.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 CRACK & 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 Eversil PRIMER and allow 2-3 hours to dry. Then apply a layer of FIBSEAL PUR 1K, 200mm wide centered over all cracks and while wet, cover with a correct cut stripe of the FIBFLEX GEOMAT/FIBREX Fabric. Press it to soak. Then Saturate the FIBREX Fabric with enough FIBSEAL PUR 1K, 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. Apply some FIBSEAL PU 21/22 OR FIBSEAL JSP 700/JSE 700 Joint- Sealant on the bottom of the joint only. Then with a brush, apply a stripe layer of FIBSEAL PUR 1K, 200mm wide centered over and inside the joint. Place the FIBREX Fabric over the wet coating and with a suitable tool, press it deep inside the joint, until it is soaked and the joint is fully covered from the inside. Then fully saturate the fabric with enough FIBSEAL PUR 1K. Then place a polyethylene cord of the correct dimensions inside the joint and press it deep inside onto the saturated fabric. Fill the remaining free space of the joint with sealant. Do not cover. Allow 12-18 hours to cure.

PRIMING

Prime absorbent surfaces like concrete, cement screed or wood with FIBSEAL PUR 1K as PRIMER. Prime surfaces like bitumen, asphalt felts, non-absorbent surfaces like metal, ceramic tiles and old coatings. Allow the primer to cure.

MIXING

FIBSEAL PUR 1K requires no pre-blending and should be used directly from the container but stir well before use.

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APPLYING AND LAYING

Pour the mixed Fibseal Pur 1k 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 Fibseal Pur 1k. For demanding applications, apply a third layer of the Fibseal Pur 1k.

LIMITATION

Do not apply the Fibseal Pur 1k over 0.6 mm thickness (dry film) per layer. For best results, the temperature during application and cure should be between 5°C and 35°C. High humidity may affect the final finish. If a color stable and chalking free surface is desired, apply one or two layers of the Fibseal Pur 1k Top-Coat over the Fibseal Pur 1k. The application of the CGSEAL Top-Coat, is especially required, if a dark final color, is desired. (e.g. red, grey, green)

STANDARDS

Fibseal Pur 1k is manufactured under ISO 9001, ISO 14001 & IATF 16949 : 2016

CLEAN UP

Uncured materials on the surface may be cleaned with Fibrex Paint Remover. All tools and equipment's need to be cleaned with Fibrex Paint Remover before its sets or harden.

TECHNICAL SPECIFICATIONS

Chemical Properties	Good resistance against acidic and alkali solution (5%) detergents, seawater and oils.	
Solid content %	Min 85%	(ASTM C-836)
Appearance	Viscous liquid	
Color available	Grey / White	
Density @ 27˚C	1.30 ± 0.1gms/cc	
Light Pedestrian Traffic Time	12 hours	Conditions: 25˚C , 50 % R.H
Curing Time	1mm thick in 24 hrs.	Conditions: 25˚C , 50 % R.H
Typical cured membrane properties (@ 28 days)		
Rain Stability Time	4 hours	4 hours
Service Temperature	-40°C to +90°C	In house Lab
Resistance to Flying sparks and radiating heat	Pass	DIN 4102 - 7
Construction material Fire class	B2	DIN 4102 - 1
Recovery from 200% elongation (ASTM D 412)	92%	
100% Modulus Elongation (ASTM D 412)	2.5 N	
Extensibility after heat ageing (ASTM C 836)	>6mm	
Weight Loss (ASTM C 836)	15 + 2%	
Peel adhesion to primed concrete, Pull strength MPa (ASTM D 4541)	≥ 2.0 (concrete failure)	
Recommended Application Temperature	15°C to 30°C	
Water absorption %	0.20%	
Hydrolysis (5% KOH 7 days cycle)	No significant elastomeric change	In house Lab
Resistance after water aging	Passed	EOTA TR - 012
UV accelerated ageing, in the presence of moisture	Passed - No significant elastomeric change	EOTA TR - 010
Thermal Resistance (80 C for 100 days)	Passed - No significant elastomeric change	EOTA TR - 011
Solar Emittance	0.89	ASTM E 408 -71
Solar Reflectance (SR)	0.87	ASTM E 408 -96
Resistance to Roof penetration	Resistant	UNE 53420
Shore 'A' Hardness	>50	ASTM D 2240 (15")
Crack Bridging Capability	Up to 2mm Cracks	EOTA TR - 008
Adhesion to concrete	3.05 Mpa	3.05 Mpa
Resistance to water pressure	No Leak (1m water column, 24h)	DIN EN 1928
Resistance Dynamic Impression	High Resistance (class: P3)	EOTA TR - 006
Resistance Static Impression	High Resistance (class: P3)	EOTA TR - 007
Water Vapor Permeability	> 25 gr / m² / day	ISO 9932: 91
Tensile Strength	> 3 N / mm²	ASTM D 412 / DIN 52455
Elongation at break	Approx. 600 %	ASTM D 412 / DIN 52455
Permeability to water vapour	> 28.5 g/m²/ day	Passes
Reaction to fire	Resistant to sparks	Passes
Dangerous substances	Does not contain any heavy metals	Passes
Coverage	1.5 kg/m²/mm(two or three layers)	

All technical data stated in this Product Data Sheet are based on laboratory tests. Actual measured data may vary due to circumstances beyond our control.

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PACKAGING

Fibseal Pur 1k is supplied in 20 kg bucket.

STORAGE

Fibseal Pur 1k pails should be stored in dry and cool rooms for up to 12 months. Protect the material against moisture and direct sunlight. Storage temperature: 5-35°C. Products should remain in their original, unopened containers/buckets/pails, bearing the manufacturers name, product designation, batch number and application precaution labels.

PRECAUTIONS

During mixing and application the following precautions should be observed: ensure adequate ventilation and avoid contact of the material with the eyes, nasal passages, mouth and unprotected skin. Avoid contact with the hands by wearing protective gloves and busing, if necessary, a suitable barrier cream. In case of contact with the eyes, rinse immediately with plenty of water and seek medical advice and after contact with the skin wash immediately with plenty of soap and water (do not use solvents). Prolonged contact with the skin should be avoided, especially where the user has an allergic reaction to pu-based materials. Always wear gloves and eye/face protection as necessary. Observe personal hygiene, particularly washing the hands after work has been completed or at any interruption whilst work is in progress. Care should be taken when removing gloves to avoid contaminating the insides. In case of accidents seek medical advice.

DISPOSAL / SPILLAGE

Spillage of any of the component products should be absorbed onto sand or other inert material and transferred to a suitable disposable vessel. Disposal of such spillage or empty packaging should be in accordance with local waste disposal authority regulations.

NOTE

The information supplied in this datasheet is based upon extensive experience and is given in good faith in order to help you. Our company policy is one of continuous Research and Development; we therefore reserve the right to update this information at any time without prior notice. We also guarantee the consistent high quality of our products; however as we have no control over site conditions or the execution of the work, we accept no liability for any loss or damage which may arise as a result thereof.

HEALTH AND SAFETY

This material is intended to be used by trained professionals with proper equipment's. The following safety measures are recommended:

- Wear protective gloves, clothing, goggles, hearing protection for noise reduction and hard hats for falling debris.
- Do not eat, drink or smoke while in active contact with these materials.
- Avoid skin contact.
- Wash hands thoroughly with soap and cool water.
- Never wash the skin with a solvent.
- Anyone experiencing difficulty breathing when working with these materials or showing an allergic reaction should seek fresh air immediately and consult a physician if symptoms persist.

DISCLAIMER:

Fibrex Construction Chemicals pvt. ltd. products though are guaranteed against defective materials and manufacture and are sold subject to its standard terms and conditions of sale, copies of which may be obtained on request. Fibrex wishes to clarify that any advice, recommendation, specification or information is accurate and correct, though it cannot, at any time assume any liability either directly or indirectly arising from the use of its products. This is because it has no direct or constant control over where or how its products are applied, and whether or not in accordance with the advice specification, recommendation or information given by it.

FIBREX OTHER PRODUCTS – WE DO

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