

HYDROTHANE WP1

Elastomeric Single Component Polyurethane Waterproofing Membrane

Description:

HYDROTHANE WP1 is a high build elastomeric single component moisture cured liquid applied waterproofing coating. It is based on Polyurethane resins, pitch free, for environmentally friendly applications. When cures, it forms a seamless continuous monolithic membrane that has excellent adhesion to most substrates including concrete, plaster, masonry, and metal surfaces.

HYDROTHANE WP1 membrane is characterized with high flexibility and high resistance to chemicals, and recommended for applications as a base coat where long lasting, maintenance free waterproofing system is required at building structures including foundations, kitchen and toilet floors, industrial wet processing areas.

Uses:

HYDROTHANE WP1 can be used only by experienced professionals as a water proofing membrane for:

- Wet areas: showers, bathrooms, kitchens, balconies, planters, pools, especially in public used utilities,
- Roofing and corrugated sheets waterproofing.
- Water proofing at meat, poultry, factories and food processing areas,
- Bridges, basements, retaining walls,
- Swimming pools and water parks waterproofing, where high features of waterproofing membrane are required.
- Intermediate layer in car parking flooring systems where a flexible PU membrane is required to create a deck water proof car parking systems for multi store parking area.

Advantages:

- High build liquid applied seamless waterproof membrane in single application.
- Fast drying chemically cured product.
- Low odour, tar free product.

- Highly flexible to be applied where movements are expected.
- Self-priming, requires no primer to adhere to substrate.
- Crack bridging ability, can serve as waterproofing membrane in car park systems.
- Chemical resistant to detergents, cleaning materials, brackish water and salt water.
- Easy applied by manual tools.
- Provides impermeable coating with outstanding mechanical properties.
- Ideal for applications in both new and old substrates.

Instructions for Use:

Surface Preparation:

The surface should be sound, clean, dry and free from loose and flaking materials, efflorescence, laitance, curing compounds, dirt, oil, rust, grease or other contaminants. All projections, rough spots, etc. should be dressed off to achieve a level surface prior to application. Concrete should be cured for at least 28 days and have moisture content less than 5%. In case of deep contamination, or for application on old or existing surface, use mechanical methods like grinding or grit captive blasting in order to remove deep contamination to ensure clean and sound open textured substrate.

All shrinkages and nonmoving structural cracks under 1.0 mm shall be filled with not less than 1.0 mm thick pretreatment strip of HYDROTHANE WP1 extended to 50 mm on both sides of the crack. For parapet walls, columns, make a 45° coving fillet at all corners using LAVAREP F40-a fiber reinforced shrinkage compensated repairing mortar.

Apply a reinforcing pretreatment strip of HYDROTHANE WP1, 1.0 mm thick extending 100 mm on both sides of the coving. Voids and honeycombs must be patched with concrete repair products. Allow the patched area to cure before applying the liquid membrane coating.

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Usually, for well-prepared surfaces, primer will not be needed. For porous surfaces, a 10% thinned coat of HYDROTHANE WP1 with ARMOSOLVENT can be applied to serve as a primer.

All metal surfaces are to be treated with sand blasting or mechanical preparation method to reach white metal condition. Apply the product directly to prevent steel reaction with humidity and formation of corrosion.

For expansion joints, treat the expansion joint with MEGASEAL PU1-a polyurethane sealant. When the sealant is cured, a layer strip of HYDROTHANE WP1, 200 mm wide should be applied centered over all sealed joints. While the membrane is still wet, cover with a correct cut strip of fiber mesh, then apply another coat of HYDROTHANE WP1 until it is fully covered. Allow the applied strip to cure before applying further coats of the waterproofing membrane.

Mixing:

HYDROTHANE WP1 is a single component product, shake the drum well to mix any settled material or, mix the contents with a slow speed mixer to ensure homogeneous mixture and uniform color.

Application:

HYDROTHANE WP1 can be applied using a squeegee, brush, roller or airless spray. Apply the recommended coverage rate using a squeegee or a trowel and back roll with a roller. Apply two coats to ensure an effective watertight system. Subsequent layers could only be done only after the first layer has been cured. Apply the first coat to the surface in a spread rate of 0.6 Ltr. per square meter per coat. The second coat must be applied once the first coat is completely dry with the same rate of application at right angle to the first coat.

In below ground structures, wet areas and roofs, the minimum recommended thickness should not be less than 1.0mm. Ensure that the material is not applied at excessive film thicknesses in single layer as this may create blisters.

Do not leave HYDROTHANE WP1 membrane exposed for elongated periods, as mechanical damages might occur to the monolithic membrane. Apply protection sheets to ensure proper coverage.

HYDROTHANE WP1 membrane must be cured for a minimum of 24 hours before placing protection.

If the product is to be totally exposed to sun and atmosphere, apply ARMOFLOOR UVR or ARMOGUARD UV protective layer on top of the membrane after curing, while applying the product in wet areas, an additional strip of product is to be applied around penetrations such as pipes and conduits to ensure proper sealing and waterproofing features. HYDROTHANE WP1 can receive further toppings once it is fully cured.

For tile flooring it is recommended to provide a good mechanical grip key with the membrane, by spreading the final wet coat of HYDROTHANE WP1 with silica sand. If utilized, as a membrane in car park waterproofing systems, it can be applied as a monolithic water proofing membrane. Broadcasting QUARTZ to the membrane will enhance the mechanical grip of subsequent layers of polyurethane coatings, however the flexibility of the membrane will be reduced.

Standards:

- ASTM D2240, ASTM C836, ASTM D412, ASTM D624

Packaging:

HYDROTHANE WP1 is available in 15 liter pails.

Coverage:

HYDROTHANE WP1 achieves coverage of 1.3 liter per sq. meter per mm.

*Coverage rate is an approximate value, and subject to actual site conditions.

Storage:

Store in original packing in dry conditions away from direct sunlight and high humidity levels at temperatures from +5°C to +30°C

Shelf Life:

HYDROTHANE WP1 can be utilized within 6 months of production date if stored in proper conditions in an unopened original packing. Once a drum has

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been opened, its contents should, if possible, be used up completely since surface skimming will form on any remaining quantities.

TECHNICAL PROPERTIES	
Color	White, grey
Density	1.43 ± 0.03 kg/lit
Solid Content	85%
Touch Dry	12 hours
Full Cure@25°C	7 days
Adhesion to Concrete	1.0 N/mm ²
Shore A Hardness (ASTM D2240)	40 ± 5%
Tensile Strength	>1.5 N/mm ²
Elongation (ASTM D412)	>200%
Crack Bridging (ASTM 836)	Passed 2 mm, no loss of bond
Tear Resistance (ASTM D624)	11 N
Water Vapor Transmission (ASTM E96)	0.3 g/h/m ²
Swelling in water@3 days	NIL
Service Temperature	-5°C to 80°C
VOC	127 g/l
Chemical Properties	Good resistance against acidic and alkali solutions, detergents, seawater and oils

*Values indicated may vary depending on the environment and conditions of the material. Figures given are tested according to standard laboratory conditions.

Cleaning:

Clean all tools with ARMOSOLVENT before product hardens. Hardened materials can only be removed mechanically.

Remarks:

- The relative humidity must be greater than 50% and no more than 85%. The substrate temperature must be at least 3°C above measured dew point temperature.
- In order to avoid blistering, it is recommended to apply the coating during falling temperatures. Control film thickness during application using a thickness gauge.

- HYDROTHANE WP1 should not be applied on surfaces with a risk of rising dampness.
- It should not be applied at temperature below 5 °C,
- Don't apply the product with imminent rain forecast.
- Water test should be run after the membrane is fully cured
- Incorrect assessment treatment of cracks may lead to a reduced service life and reflective cracking.

Health and Safety:

Avoid contact with eyes and skin. Wear suitable protective clothing such as coveralls, goggles, dust mask and gloves. Use barrier cream. Ensure that there is adequate ventilation. Do not breathe vapour or spray mist. The product is flammable, keep away from sources of ignition. DO NOT SMOKE. Take precautionary measures against static discharge.

FIRST AID:

- Eyes: In the event of accidental splashes, flush with warm water and seek medical advice.
- Skin: Wash skin thoroughly with soap and water
- Inhalation: Remove to fresh air, keep patient rested
- Ingestion: Do not induce vomiting. Seek immediate medical attention.

For further safety information, please refer to HYDROTHANE WP1 Material Safety Data Sheet

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