

# HYDROTHANE WP2

## Elastomeric Two-Part Polyurethane Waterproofing Membrane

### Description:

HYDROTHANE WP2 is a high solid, high build elastomeric two component liquid applied waterproofing based on aromatic polyurethane resins for high elasticity and high durability.

HYDROTHANE WP2 contains no coal tar and cures by chemical reaction between base and hardener. Once cured, it forms high dense, seamless, continuous, monolithic membrane with excellent adhesion to most substrates including concrete, plaster, masonry, and metal surfaces.

The cured membrane has high flexibility and high resistance to chemicals. It is recommended for waterproofing application where high flexibility and chemical resistance is required at building structures including foundations, kitchen and toilet floors, and industrial wet processing areas. It can also be applied as an intermediate waterproofing membrane in car park systems.

### Uses:

HYDROTHANE WP2 can be used only by experienced professionals, as a waterproofing membrane for:

- Wet areas: showers, bathrooms, kitchens, balconies, planters, pools, especially in public used utilities.
- Roofing and corrugated sheets waterproofing.
- Waterproofing at meat, poultry, factories and food processing area.
- For construction works, tunnels, bridge decks, 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 odor, tar free product.
- Highly flexible to be applied where movement is expected.
- 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, high bond strength.

### 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 1.1 mm shall be filled with not less than 1.0 mm thick pretreatment strip of HYDROTHANE WP2 extended to 50 mm on both sides of the crack. For parapet walls, columns, make a 45°C coving fillet at all corners using LAVAREP F40-a fiber reinforced.

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Apply 1 mm thick reinforcing pretreatment strip of HYDROTHANE WP2 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.

Apply a rich coat of ARMOPRIME EP100-solvent free high performance epoxy primer to enhance mechanical adhesion between the coating and the substrate in case of porous substrates.

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

For expansion joints, treat the expansion joint with MEGASEAL PU1-single component flexible polyurethane sealant. When the sealant is cured, a layer strip of HYDROTHANE WP2, 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 WP2 until it is fully covered. Allow the applied strip to cure before applying further coats of the waterproofing membrane.

## Mixing:

The system consists of pre-weighed base & hardener components. Mix the contents of component A (Base) with a low speed mixer for one minute to homogenize the content of the container. Slowly add the contents of part B (Hardener) to Part A container and mix thoroughly the materials with low-speed mixer fitted with a suitable paddle for 3-4 minutes to achieve a homogenous, color consistent, lump free mixture. Over mixing must be avoided to minimize air entrapment. Note that the mixing process is exothermic (heat generating), if excess heat is noticed, avoid excessive mixing, and/or control the speed of mixing machine.

## Application:

HYDROTHANE WP2 can be applied using a squeegee, brush, roller or airless spray. Apply two coats to

ensure an effective watertight system. Subsequent layers could only be done only after the first layer has been cured tack free. Apply the first coat to the surface in a spread rate of 1.2 lit/m<sup>2</sup> @ 1mm thickness. The second coat must be applied once the first coat is completely dry with same rate of application preferably at right angle to the first coat. In below ground structures, wet areas and roofs, the minimum recommended thickness should not be less than 1.2mm. Ensure that the material is not applied at excessive film thicknesses in single layer as this might create blisters.

Do not leave HYDROTHANE WP2 membrane exposed for elongated periods, as mechanical damages might occur to the monolithic membrane. Apply protection sheets to ensure proper coverage. If the product is to be totally exposed to sun and atmosphere, apply ARMOFLOOR UVR protective layer on top of the membrane after curing. While applying the product in wet areas, an additional strip of product to be applied around penetrations such as pipes and conduits to ensure proper sealing and waterproofing features

HYDROTHANE WP2 can receive further toppings once it is fully cured. If utilized as a membrane in car park waterproofing systems, it can be applied as a monolithic waterproofing 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 C836, ASTM D412, ASTM D624, ASTM D4541, ASTM 2240, ASTM E96

TECHNICAL PROPERTIES	
Color	White, gray (other colors available upon request)
Density	1.50 ± 0.03 kg/lit
Potlife @25°C	30 minutes
Application Temperature	+5°C to +40°C
Touch Dry	24 hours
Full Dry	7 days

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Adhesion to Concrete (ASTM 4541-02)	2.5 N/mm <sup>2</sup>
Shore A Hardness (ASTM 2240)	>70
Tensile Strength (ASTM D412)	>5 N/mm <sup>2</sup>
Elongation (ASTM D412)	> 500%
Crack Bridging (ASTM 1305)	Up to 2 mm, no effect
Modulus of Elasticity (ASTM D412)	>2 N/mm <sup>2</sup>
Tear Resistance (ASTM D624)	15 N/mm
Recovery from 100% extension (ASTM D412)	97%
Water Impermeability (EN 12390, part 8)	Impermeable
Water Vapor Transmission (ASTM E96)	0.3 g/h/m <sup>2</sup>
Chemical Resistance: Acidic solutions Alkali solutions Sea, brackish water Oil and Grease Detergents Thinners and solvents	Resistant Resistant Resistant Resistant Resistant Moderate resistance

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

## Coverage:

HYDROTHANE WP2 achieves coverage of 1.2 liter per 1 m<sup>2</sup> @ 1.0 mm thickness.

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

## Packaging:

HYDROTHANE WP2 is available in a set of 4 and 15 liter supplied in metal dual pack.

## Storage:

Store in original packing in dry conditions away from direct sunlight in a temperature-controlled warehouse. Stored at +5°C to +25°C.

## Shelf Life:

HYDROTHANE WP2 can be utilized within 12 months of production date if stored in proper conditions in an unopened original packing.

## Cleaning:

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

## Remarks:

- 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 temperature. Control film thickness during application using a thickness gauge.
- HYDROTHANE WP2 should not be applied on surfaces with a risk of rising dampness.
- 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 (min. 7 days).
- Don't mix more material than can be used within the pot life of mixture.
- Incorrect assessment treatment of cracks may lead to a reduced service life and reflective cracking.
- HYDROTHANE WP2 is not designed to be exposed in external applications.

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## 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 vapor or spray mist.

## 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 WP2 Material Safety Data Sheet.

MATEX Rev.10-0226

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