

# HYDROTHANE A100

## Single Component Aliphatic Polyurethane Waterproofing Membrane

### Description:

HYDROTHANE A100 is a single component, liquid applied, elastomeric, aliphatic polyurethane based waterproofing coating. It cures with moisture in the atmosphere to produce a highly elastic UV stable membrane with strong adhesion to many types of substrates.

HYDROTHANE A100 membrane is distinguished by its high flexibility and high chemical resistance. It is 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 A100 could be used as a seamless, impervious waterproof UV resistant coating on the following:

- Roofs, sunken slabs, concrete domes, profile sheets
- Kitchen and bathrooms
- Water proofing at meat, poultry, factories and food processing area.
- Bridges tunnels, basements, retaining walls
- Balconies and patios
- Swimming pools and other water retaining structures
- Can be successfully applied on tiles, concrete, cement roof tiles, wood and galvanized steel.

### Advantages:

- When applied, forms a seamless membrane without joints or leak possibilities
- Excellent crack bridging properties. Provides impermeable coating with outstanding mechanical properties.
- High build liquid applied seamless waterproof membrane in single application
- UV Resistant and withstands extreme weather conditions
- Crack bridging ability, can serve as waterproofing membrane in car park systems

- Offers excellent durability and superior abrasion resistance
- High tensile strength and elastic recovery
- Low odour, tar free product.
- Highly flexible to be applied where movement is expected.
- Ideal for applications in both new and old substrates.
- Corrosion resistant, mildew proof and frost-resistance.

### 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. 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 substrate.

New concrete or cementitious surfaces should be at least 21 days old and have moisture content not exceeding 5%. Old or existing floor should be refurbished mechanically to ensure clear and sound substrate.

All shrinkages and non-moving structural cracks under 1.0mm shall be filled with not less than 1.0mm thick pretreatment strip of HYDROTHANE A100 extended to 75mm on both sides of the crack. For parapet walls, columns pipes penetrations etc. make a 45° coving fillet at all corners using LAVAREP F40. Apply a reinforcing pretreatment strip of HYDROTHANE A100 1mm thick extending 150mm on both sides of the coving to form an over flashing. Voids and honeycombs must be patched with MATEX concrete repair products. Allow the patched area to cure before applying the membrane.

Expansion and movement joints should be sealed with MEGASEAL PU1-a polyurethane sealant. When cured a layer strip of HYDROTHANE A100, 200mm wide should

# HYDROTHANE A100

be applied centered over all sealed joints. While the membrane is still wet, cover with a correct cut strip of fiber mesh with another coat of HYDROTHANE A100 until it is fully covered. Allow curing before applying further coats of the waterproofing membrane.

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.

## Priming:

Apply ARMOPRIME EP100 primer to the prepared surface at a rate of approx. 0.15 – 0.2 kg/m<sup>2</sup> depending on the porosity of the concrete substrate. For metal and other non-porous substrate ARMOPRIME EP100 can be used. Primer should be applied without leaving excess fluid on the surface. Allow the primer to dry for at least 24 hours.

## Mixing:

HYDROTHANE A100 is a single component product. Mix the contents in the pail thoroughly with a paddle mixer fitted to a slow speed drill, until a uniform consistency of the product is achieved. Leave the mixed material for a period of 2 minutes to relax and release entrapped air within the mix

## Application:

HYDROTHANE A100 should be applied by a brush or roller in two coats to achieve a minimum dry film thickness of 1.0 mm. The second coat should be applied at right angle to the first coat, once the first coat is completely dry (but before 48 hours). Apply two coats to ensure an effective watertight system. Subsequent layers could only be done only after the first layer has been cured

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 A100 membrane exposed for elongated periods, as mechanical damages might occur to the monolithic membrane. Apply protection sheets to ensure proper coverage. HYDROTHANE A100 membrane must be cured for a minimum of 24 hours before placing protection. 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 A100 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 A100 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 C836, C501, D412, D624, D4541, E96, D2240, D1004

TECHNICAL PROPERTIES	
Form	liquid
Color	White, Grey (special color upon request)
Density	1.2 ± 0.03 kg/lit
Initial Cure @ 35°C	24 hour
Full Cure @ 35°C	7 days
Elongation	500%
Tensile Strength	8 N/mm <sup>2</sup>
Tear Strength	15 N/mm <sup>2</sup>
Crack Bridging	2.5 mm
Shore A Hardness	60
Application Temperature	+5°C to +35°C
Service Temperature	-5°C +80°C
Solid Content	100%
Adhesion to concrete	>2.0 N/mm <sup>2</sup>
Elongation	700%
Water Penetration	Nil
Modulus of Elasticity	2 N/mm <sup>2</sup>

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

## Coverage:

HYDROTHANE A100 achieves coverage of 1.4 liter per sq. meter per mm.

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

# HYDROTHANE A100

## Packaging:

HYDROTHANE A100 is packed in 4 and 15 Lt. Drums.

## Storage Conditions:

Keep the product in dry and sheltered place at temperature between +5°C and +35°C.

## Shelf Life:

HYDROTHANE A100 can be utilized within 12 months of production date if stored in proper conditions in an unopened original packing.

## Cleaning:

Clean all the tools and application equipment with ARMOSOLVENT immediately after use. Hardened or cured material can only be removed mechanically.

## Recommendation:

- Never allow HYDROTHANE A100 to be stored under direct exposure to sunlight or other heat sources
- Elastic properties of the product are best maintained at temperatures between -20°C and +80°C.
- Never apply HYDROTHANE A100 on porous surfaces such as blocks, cement boards and lean cement/sand screed without priming the surface first.
- For exposed areas such as roofs and external walls, it is highly recommended to apply HYDROTHANE A100 at early mornings or evenings when the temperature is low.
- HYDROTHANE A100 should not be applied on surfaces with a risk of rising dampness.
- Don't apply the product with imminent rain forecast
- Water test should be run after the membrane is fully cured (min. 7 days).
- 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 A100 Material Safety Data Sheet

MATEX Rev.00-0823

MATEX warrants that its products are free from material and manufacturing defects. Instructions on how to use the product should be strictly followed to ensure effectivity and safe use. MATEX shall not be liable either directly or indirectly for any damages to personal, equipment or products that may occur as a consequence of the failure of any products application because it has no direct or continuous control over where or how its products are applied. It is the user's responsibility to acquire always the updated version of datasheets.

