

HYDROTHANE HPE

Two Component, Solvent Free Spray Applied Hybrid Polyurea Coating for Waterproofing Applications

Description:

HYDROTHANE HPE is a non-solvented, two-component waterproofing membrane. It is an instant curing flexible membrane formulated from hybrid polyurea technology. It is spray applied and forms a monolithic waterproofing membrane on a wide range of substrates.

HYDROTHANE HPE provides a flexible, seamless, hard wearing surface protection solution to different types of substrates. It has excellent chemical resistance, exceptional flexibility which makes it suitable for application on structures requiring high-performance waterproofing membrane.

Uses:

HYDROTHANE HPE is used in variety of applications including:

- Waterproofing applications including plant rooms, trafficable roof decks
- Large scale waterproofing for commercial, industrial and manufacturing facilities
- Waterproofing of water features
- Protection of substrate on areas exposed to high wind abrasion
- Waterproofing of under concrete screed of large-scale podium decks, bridge, street and tunnel construction
- Waterproofing and containment applications where high humidity and high levels of residual moisture are not factors to be considered during application
- Anti-root sub terrain waterproofing

Advantages:

- Seamless waterproofing. No welding of joints – totally seamless
- Good abrasion and impact resistance
- Excellent thermal stability
- Seamless application and finish
- Excellent mechanical properties

- Excellent adhesion to concrete, steel, aluminum, wood, foam, etc.
- High elongation property
- Good tensile and structural strength
- Rapid application to any thickness
- Fast curing resulting in faster turnaround times
- Conforms exactly to substrate shapes eliminating potential stress points when covering with final floor slabs or other toppings such as pavers
- VOC free – environmentally friendly

Instructions for Use:

Surface Preparation:

All surfaces should be sound, clean, dry and free from loose material, efflorescence, laitance, curing compounds, dirt, oil and grease and any other contamination which might impair adhesion. In case of contamination, use mechanical methods like grinding or grit captive blasting in order to remove deep contamination. Damaged areas should be repaired with suitable repair materials prior to the application of the waterproofing.

Mixing:

The components are delivered in ready to use pail or drums. Mix part B component with power stirrer thoroughly prior to the spray application and periodically during the spraying process to ensure that no settling is formed within the component. It is not necessary to stir the component A. Never mix component A with component B component except through the approved application equipment.

Application:

HYDROTHANE HPE can only be applied using high pressure heated multi component spray equipment capable of preheating the chemical components, pressurizing and separately but simultaneously delivering the coating components to a specially designed impingement spray gun. It can only be applied by trained and approved applicators. Detailed application refers to METHOD STATEMENT

HYDROTHANE HPE

Standards:

- ASTM D638, D2240, D4060, D4541
- ISO 37-2005, 868-2003, 4662, 34-1 method A

TECHNICAL PROPERTIES	
Chemical Base	Comp. A: MDI: prepolymer Comp. B: Polyether amine and polyol - mixture
Mixing ratio: A to B comp. (by volume)	1 : 1
Solid Content (%)	100
Density (kg/lit)	1.0 ± 0.02 kg/lit
Tensile Strength (MPa)	≥ 14 - 16
Elongation at break (%)	500 – 550
Shore D Hardness	40 ± 5
Tear Resistance (kN/mm)	40
Taber Abrasion (mg)	<10 (wheel CS17 / 1.00g / 1000 cycle) <110 (wheel H18 / 1.00g / 1000 cycle)
Pull off strength (N/mm ²)	Concrete: ≥ 1.5 Steel: ≥ 4
Tack Free time @ 20°C (sec)	10 – 20
Overcoat window (h)	0 -12 (without additional prep and priming)
Curing/loading after (h)	Foot traffic: 1 Mechanical: 2 Chemical: 12 – 24
Application Temperature	-10°C to +50°C
Material Temp. (pre- conditioned)	25°C to 30°C
Material Temp. (spraying)	65°C to 75° C

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

Packaging:

HYDROTHANE HPE is available in 40 or 425 kg sets

Coverage:

HYDROTHANE HPE coverage rate is approx. 1 kg per square meter at 1 mm thickness.

*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. Temperature between 10°C to 30°C

Shelf Life:

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

Cleaning:

Clean tools and equipment with soapy water, once curing has commenced a suitable solvent can be used.

Remarks:

- Surrounding areas should be protected from overspray by masking off.
- Care should be taken to prevent spray mist being carried by wind by erecting suitable barriers.
- In ambient temperatures below 15°C chemical drums should be pre-heated using band heaters to 30 to 40°C
- Both A side and B side drums should be fitted with desiccant dryers
- Compressed air supply should be supplied via an air dryer
- Primary heaters should be set at 65 - 75°C. Adjustments can be made on-site based on environmental conditions, mixing module size and application circumstances
- Hose heaters should be set at 70°C. Adjustments can be made on-site based on environmental conditions, mixing module size and application circumstances

HYDROTHANE HPE

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.

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 HPE Material Safety Data Sheet.

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