

HYDROTHANE HP

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

Description:

HYDROTHANE HP is a non-solvented, two-component waterproofing membrane. It is an instant curing flexible membrane formulated from pure polyurea. It is highly reactive and is spray applied which forms a monolithic waterproofing membrane on simple and complex surfaces.

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

Uses:

HYDROTHANE HP is used in variety of applications including:

- General waterproofing applications including exposed roof top.
- Substructure waterproofing of areas subject to impact, abrasion, traffic loads and back filling operations
- Waterproofing membrane on storage tanks, basins and hydraulic works.
- Applications on car park deck
- Protection of substrate against abrasion and impact in mining industries, concrete manufacturing, concrete batching plants, sand and gravel quarries.
- Secondary containment linings in the power, chemical, petrochemical, oil and gas industries
- Steel and concrete tank linings subject to corrosion and abrasion
- Suitable for waterproofing both new and existing structures

Advantages:

- Can be applied under extreme climatic conditions.

- Outstanding abrasion, impact and chemical resistance for most applications
- Suitable for exposed applications
- Seamless application and finish
- Excellent mechanical properties
- Excellent adhesion to concrete, steel, aluminum, plastics, fibers, wood, foam, etc
- Can be applied across multiple substrates in the same application process.
- Rapid application to any thickness
- Fast curing resulting in faster turnaround times
- 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 HP 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

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applied by trained and approved applicators. Detailed application refers to METHOD STATEMENT
Standards:

- ASTM D638, D2240, D4060, D4541
- ISO 37-2005, 868-2003, 4662, 34-1 method A
- DIN ISO 4649

TECHNICAL PROPERTIES	
Chemical Base	100% Pure Polyurea
Mixing ratio: A to B comp. (by volume)	1 : 1
Solid Content (%)	100
Density (kg/lit)	Comp. A: 1.02 ± 0.02 Comp. B: 0.98 – 1.02
Tensile Strength (MPa)	≥ 16
Modul (MPa)	100% elongation: ≥8
Elongation at break (%)	≥300
Shore D Hardness	45 ± 5
Rebound Resilience (5)	≥ 32
Tear Resistance (N/mm)	≥ 14
Abrasion Resistance (mm ³)	≤ 250
Taber Abrasion (mg)	<8 (wheel CS17 / 1.00g / 1000 cycle) <80 (wheel H18 / 1.00g / 1000 cycle)
Peel Off Strength (N/mm)	Concrete: ≥ 4 Steel: ≥ 8
Pull off strength (N/mm ²)	Concrete: ≥ 1.5
Impact Resistance (J/mm)	23°C: 9.0 -5°C: 7.0
Surface Resistance (ohm)	≥ 1.0 x 10 ¹¹
Volume Resistance (ohm)	≥ 1.0 x 10 ¹¹
Tack Free time @ 20°C (sec)	10 – 20
Overcoat cycle (h)	0-10 (without additional prep and priming)
Curing/loading after (h)	Walkable: 1 Mechanical: 2 Chemical: 12 – 24
Application Temperature	-5°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 HP is available in 40 or 425 kg sets

Coverage:

HYDROTHANE HP coverage rate is approx. 1-1.1 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 HP 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

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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 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 HP Material Safety Data Sheet.

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