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SmartCare Hypertron HN – Pure Polyurea

Asian Paints SmartCare Hypertron HN - Pure Polyurea is a two component, instant setting, 100% solid (low VOC) high performance pure polyurea based spray applied waterproofing membrane. The system consists of two components i.e., Polyol and Isocyanate prepolymer. It is designed to be applied at an ambient temperature for use through 1:1 volumetric spray equipment to form an aromatic, seamless, high density, elastic pure polyurea coating that exhibits excellent mechanical properties & high chemical resistance.

AREAS OF APPLICATION:

- Podiums, Roofs & Terraces
- Under thermal insulation foams on flat roofs
- In construction works such as highways, tunnels etc
- Retaining Walls & Foundations

FEATURES & BENEFITS:

- Speed, simplicity & reliability: Faster turnaround time, significant time saving during application, seamless waterproofing membrane
- High performance: The system offers excellent durability, high mechanical & chemical resistance, moisture ingress protection and elastomeric crack bridging properties that prolong the concrete life.

PHYSICAL PARAMETERS:

- **Polyol Component Appearance:** Grey or Neutral Liquid (Available in 2 shades) Density @23°C: 1.05 g/cc
- **Isocyanate Component Appearance:** Clear Liquid
- **Density @ 23°C:** 1.12 g/cc
- **Shelf Life :** Polyol & Isocyanate : 12 months in tightly sealed container which stored at a temperature of 0°C to 30°C
- **Available Pack Sizes:**
- **Polyol: 211 kg**
- **Isocyanate: 225 kg**

TYPICAL TECHNICAL DATA

PARAMETERS	STANDARD	UNIT OF MEASURE	VALUE
Mixing Ratio		By Volume	01:01
Elongation at Break	ASTM D 412	%	400±50%
Tensile Strength	ASTM D 412	Mpa	20±2
Shore A Hardness	ASTM D 2240		>95
Shore D Hardness	ASTM D 2240		>50
Tear Resistance	ASTM D 624	N/mm	>70
Puncture Resistance	ASTM E 154	N	1000±100
Impact Resistance	ASTM D 2794	N.m	17±2
Taber Abrasion	ASTM D 4060	mg	<15 mg/1000 cycles
Crack Bridging Ability	ASNZ 4548	mm	4.5
Resistance to Hydrostatic Pressure	ASTM D 5385/ DIN 16726	Bar	Upto 7
Pull-Off Adhesion Over Concrete	ASTM D 4541	Mpa	Upto 2*
Service Temperature Range		Degree Celsius	-20 to 90
Tack Free Time		Sec	8-10 sec
Full Cure Time		Days	7

Note: All values mentioned above are obtained under control lab conditions when tested by competent personnel. Tolerance of 10% is allowable

*Pull-off Adhesion values applicable for concrete surface and mode of failure is substrate failure not adhesion failure.

APPLICATION METHOD:

SURFACE TREATMENT BEFORE APPLICATION

- For Concrete Substrates
Prepare the concrete surface by grinding with grinder /wire brush and a high-pressure water jet. Ensure that it should be free if dust, oil, grease, grime, and loose particles.

The concrete substrate must be checked for its soundness, damaged portions. The hollow areas must be repaired with epoxy or polymer modified mortar.

Small Cracks, bug holes and pin holes should be opened, cleaned, and filled with Apcorep Epoxy Injection Grout or Epoxy Mortar made by adding sand into Solvent based

Apcoflor Epoxy Primer (Primer mixed with Silica sand (30-80 mesh size) in ratio 1:2.5/3 by weight). All corners and joints of the drainage pipes, channels etc. must be treated with epoxy mortar & Hybrid PU Sealant.

Prime the surface with solvent based Apcoflor Epoxy primer. For Surface with high porosity, two coats of primer is recommended.

- **For smooth and non-absorptive Substrates**

Substrates should be prepared by grinding, sand blasting, water jet blasting, shot blasting etc. depending on their nature. The surface should be well cleaned from dust with a high-suction vacuum cleaner. Small Cracks should be opened, cleaned with vacuum cleaner, and filled with epoxy mortar. Existing Bitumen membrane/ primer must be completely removed with mechanical means.

REFER TO DETAILED METHOD STATEMENT FOR APPLICATION.

- Application of Spray Polyurea by Plural Gun

High Pressure: 170-170 bar

Temperature: 70-90°C

- **Application & Consumption**

Consumption : 2.1 to 2.2 Kg/ m² for 2mm DFT in 2 coats**

**Consumption and corresponding DFT values may vary depending on the surface porosity/surface profile

PRECAUTIONS:

- SmartCare Hypertron HN Pure Polyurea must be applied utilizing a high-pressure plural component pump such as Graco Reactor EXP2 or higher model. The machine must be equipped to continuously maintain high temperature and high pressure.
- Lower pressures or temperatures can result in inadequate mixing & thus result in coating failure
- During application, the pressure between the polyol & isocyanate components should be balanced and not greater than 10-15%. Higher difference and an off ratio can result in coating with blisters, pinholes and soft or brittle films

- SmartCare Hypertron HN Pure Polyurea must be covered by protection screed, plaster, tiles, or other protection layers post application.
- In case of long-term exposure to UV rays please apply Aliphatic PU topcoat over the membrane.
- For application to surfaces other than concrete surface or PU Foam, please consult Asian Paints technical team.
- Use personal protective equipment (safety goggles, gloves etc) while applying the product.
- Do not apply during rains or extreme temperatures.
- Remove old coatings and treat the substrates accordingly.
- Do not apply directly on rusted or corroded surfaces.
- Application of the product should be done over Asian Paints Smart Care Solvent Based Epoxy primer when moisture content in less than 4%.
- Hardener contains isocyanate. It can cause skin/ eye irritation, allergic skin reaction, allergy or breathing difficulty if inhaled. Seek medical advice on irritation.
- Refer to the MSDS of base & hardener for detailed safe handling precautions.
- Do not store under direct sunlight or near source of heat or frame.
- Keep away from children.
- Store in a cool, dry place.

STORAGE & HANDLING:

Store the material in a cool, well ventilated place, away from direct sunlight or any source of ignition and fire. Keep it away from the reach of children.

HEALTH & SAFETY PRECAUTIONS:

Wear protective gloves, goggles, and nose masks while handling and using the material. In case of contact with skin and eyes wash thoroughly with plenty of water. In case of ingestion and inhalation remove the personnel to fresh air. Seek medical advice in all the above cases. The disposal of excess or spilled material shall be carried out in accordance with local regulations.

Disclaimer:

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