

ShaliProtek[®] PU HG

2K Zero VOC High Gloss High Abrasion PU Protective Coating



STP Limited

Description

ShaliProtek[®] PU HG is a two component, solvent free, 100% solid, fast curing, high gloss, high abrasion protective polyurethane tough coating system for internal surface of concrete / steel structures specially for mineral powder storage silo consisting of base coat and high gloss top coat.

ShaliProtek[®] PU HG is spray applied by plural component airless spray gun and has excellent mechanical properties / abrasion resistance / scratch resistance.

Characteristics – Physical

Colour	White / Grey	Mixing Ratio by Volume	3 : 1
Cure Time, hrs		Flash Point, °C	
• Touch Dry	< 1	• Part A	250
• Cure Time Overcoat	4 - 6	• Part B	110
Ambient temperature, °C	5 - 50	Substrate temperature, °C	5 - 40
Theoretical Coverage, L / m ²	2	DFT, Micron	1000
Mixed Density, kg / L	1.30 ± 0.05	Sagging	No
Ambient moisture, % RH, Max	65	Scratch Hardness, 2 kg	Pass

* Depending upon surface condition.

Characteristics – Technical

Properties	Test Method	Result
Pot Life @ 30 °C 50% RH, minutes, for 100 gm	ASTM D 2471	10 - 20
Volume solid, %	ASTM D 2369	100
Hardness Shore D	ASTM D 2240	60 ± 5
Gloss, 60 deg angle, %	ASTM D 523	75 - 80
Tensile Strength, MPa	ASTM D 638	> 10
Adhesion pull off test, MPa	ASTM D 4541	
• On Steel		> 10
• On Concrete		>3
Impact Resistance, 0.8 mm, kg / cm	ASTM D 2794	86
Abrasion resistance Taber Abraser H-10 wheel 1000 g, 1000 cycle, mg	ASTM D 4060	< 40
Co-efficient of friction	ASTM D1894	0.6

Application

- On shore and off shore structures, pipes and marine piles.
- Sewer lines and STP tanks.
- Cooling towers in thermal power plants including basins.
- Hydro electric penstocks and dam gates.
- Inner / Outer coating for pipe line for water and waste water.
- Steel / concrete structure like-
 - Storage tanks.
 - Mounded bullets.
 - Reservoirs.
 - Marine and offshore structures.
 - Ship decks / ship hulls
 - Coke oven silo

- Mineral powder Hopper
- Concrete tunnel.
- Coating for pipes used for bore / directional drill applications.
- Repair / rehabilitation (recoating) of existing pipelines and coating repairs.

Advantages

- Excellent resistance to sea water.
- Excellent adhesion to steel / concrete.
- Excellent resistant to most of chemicals / acids.
- Resilient to accelerated weathering conditions.
- High mechanical / physical properties.
- High abrasion resistance.
- Protects against microbiologically induced corrosion.
- VOC Free.
- Suitable for potable water pipe line / waste water applications.

Application Methodology

➤ Surface Preparation

- Remove all loose gravel, dirt, oil, grease or other loose foreign particles by sand blasting / iron brush / compressed air.
- In case of steel pipe / structure, prepare surface by mechanical grinding, shot blasting conforming to SA2½.
- In case of concrete surface, ensure that the surface is free of honey combs etc. Repair all honey combs fill with PMC mortar prepared in the ratio of ShaliCrete: Cement : Sand (1 :2 : 5).
- Ensure that the surface is free of condensation / moisture before priming. Moisture should be less than 5%.

➤ Material Preparation

- Stir drums of component A (resin part) thoroughly for uniformity. For best result, use a variable speed mixer with a spiral type blade at the bottom of stirrer rod. The speed may be 100-200 rpm.
- Pre heat Component A @ 50-70 °C and Component B @ 35 - 45 °C where pipeline length is up to 7 mtrs.
- Once Component B drum is open, used within the same day.

➤ Application of Material

- Apply **ShaliProtek® PU HG (Base Coat)** by plural feed airless spray gun to build the desired thickness as reduced by 1 mm.
- Having built up the base coat, apply 1 mm of top coat of **ShaliProtek® PU HG** to achieve the required thickness.
- For higher DFT exceeding 3 mm, apply multiple base coats as may be required after achieving touch dry condition of each coat.
- The tip pressure typically should be 2500 - 4000 psi (the tip pressure should be adjusted to achieve good atomization of the spray).
- Tip size typically should be 27 - 39 Thou orifice.
- For any stoppage, use STP Thinner for flushing the equipment and pipe line.

Cleaning & Maintenance

- Clean tools and equipment with **STP Thinner** before the material hardens.
- Do not use water to clean any tool or equipment.

Health & Safety

- Avoid contact with skin / eyes and avoid swallowing.
- Ensure adequate ventilation and avoid inhalation of vapour.
- Wear suitable protective clothing, gloves and eye protection.
- In case of skin contact, rinse with plenty of clean water, then cleanse with soap and water. Do not use solvent to clean the contacted area.
- In case of eye contact, wash with plenty of clean water and seek medical advice.
- If swallowed, seek medical attention immediately. Do not induce vomiting.

Packing

Available in 200 L drum with 1 drum of Component B for every 3 drums of Component A.

Storage

Store in a cool dry place, under shed, away from heat.

Shelf Life

12 months in original unopened seal condition at 5 - 38 °C.



STP Limited
Enhancing Structures' Life

Product Range

- Waterproofing and Insulation
- Road Surfacing
- Sealants and Additives
- Pipeline Coating
- Protective / Anti-Corrosive Coating
- Epoxy Flooring
- Grouts / Admixtures
- RestoFix- Repair / Rehabilitation
- Other Construction Chemicals



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