

ShaliUrethane[®] PC

2K Zero VOC UV Resistant Polyurethane Protective Tough Coating



STP Limited

Description

ShaliUrethane[®] PC is a two component, solvent free, 100% solid, fast curing, protective polyurethane tough coating for external / internal surface of concrete / steel pipes and structures. **ShaliUrethane[®] PC** is spray applied by plural component airless spray gun and has excellent mechanical properties / abrasion resistance.

ShaliUrethane[®] PC is ideally suited for application where higher DFT is required as protective barrier as it has excellent film build capabilities and can achieve 500 - 1000 microns in single application. Higher DFT can be achieved with multiple passes.

Characteristics – Physical

Colour	Grey	Mixing Ratio by Volume	3 : 1
Mixed Density, kg / L	1.23 ± 0.02	Flash Point, °C	
Substrate temperature, °C	5 - 60	• Part A	250
Cure Time, hr		• Part B	110
• Touch Dry	< 1	Sagging	No
• Cure Time-Overcoat window	4 - 6	Ambient temperature, °C	5 - 50
Service Temperature, °C	60	Ambient moisture, % RH, Max	65
Recommended thickness, micron		Theoretical Coverage, L/m ² , 1 mm DFT*	1
• on Steel	500 - 1000		
• on Concrete	1000 - 3000		

* Depending upon surface condition.

Characteristics - Technical

Pot Life @ 30 °C 70% RH, minutes	ASTM D 2471	5 - 7
Volume solid, %	ASTM D 2369	100
Hardness Shore D	ASTM D 2240	60 ± 5
Salt Spray, hr, passes	ASTM B 117	5000
Tensile Strength, MPa	ASTM D 638	> 10
Adhesion pull off test, MPa	ASTM D 4541	
• on Steel		> 12
• on Concrete		7 - 9
Water vapour transmission, g/m ² /24 hrs	ASTM E 96	< 0.24
Accelerated weathering, 2000 hrs	ASTM G 154	No Blister / Flaking
Abrasion resistance Taber Abrasor H-10 wheel 1000 g, 1000 cycle	ASTM D 4060	< 40 mg

Application

- On shore and off shore structures, pipes and marine piles.
- Sewer lines and STP tanks.
- Thermal power cooling 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.
 - Overhead tanks.
 - Marine and offshore structures.
 - Ship decks / ship hulls.

- 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

- Mix Component A and Component B by using speed drill mixer with a spiral type blade at the bottom of stirrer rod with slow speed (400 RPM) for at least 2-3 minutes till a homogeneous mix is obtained. For best result, use a variable speed drill mixer with a spiral type blade at the bottom of stirrer rod.
- After stirring, wait for the product to settle in order to let entrapped air escape.
- Pre heat Component A @ 50-70 °C and Component B @ 50-60 °C.
- Do not heat Component A above 85 °C.
- Do not heat Comp B above 45 °C.

➤ Application of Material

- Prime surface with ShaliPrime Penetration and allow it to dry.
- Apply **ShaliUrethane® PC** by plural component airless spray gun.
- Allow it to dry for 6 – 8 hrs for subsequent coating.
- Do not apply ShaliUrethane PC at temperature < 5 °C or > 50 °C.

Cleaning & Maintenance

Clean all tools immediately after use with STP cleaner.

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 from the date of manufacture when maintain in protected storage in original unopened sealed condition at 5 - 38 °C.



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Waterproofers to the Nation

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