

# ShaliUrethane<sup>®</sup> PC

2K Zero VOC Polyurethane Protective Tough Coating



STP Limited

## Description

**ShaliUrethane<sup>®</sup> 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<sup>®</sup> PC** is spray applied by plural component airless spray gun and has excellent mechanical properties / abrasion resistance.

**ShaliUrethane<sup>®</sup> 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 <sup>2</sup> , 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 <sup>2</sup> /24 hrs	ASTM E 96	< 0.24
	ASTM G 154	No Blister / Flaking. Colour may change with passage of time without applicable change in mechanical properties
Accelerated weathering, 2000 hrs		
Abrasion resistance Taber Abraser 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

- Stir drums of component A (resin parte) 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 part-A @ 50-70 °C and Part-B @ 35 - 45 °C.
- Once Component B drum is open, used within the same day.

#### ➤ Application of Material

- Apply **ShaliUrethane® PC** by plural feed airless spray gun to the required thickness on the prepared substrate.
- 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 - 35 Thou orifice.

### 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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**Advisory Cell**  
STP Limited  
**+91 81302 81114**  
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