

ShaliPoxy® CTE 503

2K Anti-corrosive / Protective Flexible Coal Tar Epoxy Coating



Description

ShaliPoxy® CTE 503 is a two-component, polyamide, cold cure, abrasion resistant; Coal Tar Epoxy protective coating for steel, concrete structures giving 500 microns in single coat on wet-on-wet basis. It has excellent corrosion / chemical / abrasion / scratch resistance and is used as direct to metal application, without any requirement of primer.

It conforms to AWWA C-210: 2015: 2015 SSPC Paint 16 and Corp of Engineers C200 / C200a.

Characteristics – Physical

Application	By Brush / Roller / Airless Spray	Colour	Black / Semi-gloss
Theoretical Coverage, m ² / L* /Coat	2 @ 500 microns DFT	Chemical / Corrosion / Abrasion	Excellent
Solid % by volume	95 ± 2	Scratch Resistance	Up to 4.00 kg
Usable temperature, °C	Up to 75	Mixing ratio, by volume	3 : 1

* Depending upon surface condition

Characteristics – Technical at 30°C, 60 % RH

Property	Method	Result
Wet Film Thickness, μ /Coat	ASTM D 4414	525 - 500
Elongation, %	ASTM D 638	15-20
Tensile Strength, Mpa, 7 days	ASTM D 638	4-6
Hardness, Shore D, 7 days	ASTM D 2240	70 - 80
Specific Gravity, Mix,	ASTM D 1475	1.55 ± 0.05
Flash Point, °C		
• Component A	ASTM D93	> 70
• Component B		> 150
Pot Life, hrs., 100 g sample	ASTM D 2471	4
Adhesion pull-off, MPa	ASTM D 4541	> 5.5
Resistance to Micro-organisms	ASTM G 21	Passes
Flexibility	ASTM D 522	Good
Weather-ability, 1000 hrs. QUV	ASTM G154	Good
Immersion test, 30 days	AWWA C-210	No blistering / peeling / disbanding
• DIW		
• 1% H ₂ SO ₄		
• 1% NaOH		
Salt Spray, 1000 hrs., @ 300 microns DFT	ASTM B 117	Excellent
Water Resistance, Immersion- 7 days	ASTM D 870	Passes
Abrasion Resistance 1000 Cycles CS 10, mg	ASTM D 4060	112
Dielectric strength, V/mil	AWWA C 210	> 250
Cathodic Disbondment, 30 days, mm	AWWA C 210	< 10

Application Temperature, °C				Resistance Temperature, °C		
Condition	Application	Surface	Ambient	Conditional	Continuous	Occasional
Minimum	10	10	10	High	95	120
Maximum	49	50	41	Low	-10	-25

Curing Schedule				
Temperature	Touch Dry, hrs.	Recoat, hrs.		Full Cure, Days
		Minimum	Maximum	
10°C (50°F)	10	12	48	15
30°C (86°F)	4	8	30	7
50°C (122°F)	1	3	24	3

Field of Application

- Crude oil storage tanks / underground structures / other metal & steel structures & pipes.
- Sheet & pipe piling.
- Dams, Barrage gates, Penstocks.
- Foundation walls and sumps.
- Concrete and Steel surfaces in sewage treatment plant.
- Paper Mills / Chemical Plants.

Advantages

- Flexible anti-corrosive / preventive coating for structures – MS or concrete – even where the structure is in continuous contact with water.
- Provides excellent resistance to impact, thermal shock and abrasion.
- Cures to a hard, smooth and flexible surface with excellent resistance to sea / salt water, oil, acids, alkalis, crude oil and minerals.

Application Methodology

➤ Surface Preparation

- Prepare the surface by mechanical grinding or other suitable method.
- Remove dust, flakes, oil, grease or other loose foreign particles by sand blasting, iron brush or compressed air.
- In case of new concrete, ensure the concrete is at least 28 days old.
- Ensure the ambient temperature is not less than 10°C and not more than 50°C at the time of coating.

➤ Material Preparation

- Stir drums of each component of **ShaliPoxy® CTE 503** thoroughly to a homogenous and uniform mix with a slow speed stirrer fitted with a suitable mixing paddle.
- Ensure that there is no entrapped air.
- Then mix the entire component A and component B, which are pre-weighed.
- Place the spiral blade at the bottom of the container before starting the mixer. This will help avoiding inducting air into the mass. Slowly move the stirrer head up to the surface while stirring. Do not remove the blade while still it is spinning. This procedure is continued for 5 minutes up and down to have a homogeneous mixing.
- After stirring, wait for 5 minutes in order to let entrapped air escape.
- Stir again gently with a hand stirrer to ensure uniformity before application.

➤ Application of Material

- Apply **ShaliPoxy® CTE 503** direct to metal or prime the surface with **ShaliPrime CT/ ShaliPrime® Zn Ph 60**. Allow the primer to touch dry.
- If required, apply second coat of **ShaliPoxy® CTE 503** as above as per the technical data.
- In case of airless spray, use standard equipment having tip size of 0.66 - 0.98 mm and tip pressure > 6000 PSI for zero dilution coating. For lower capacity Airless Spray Machine, Max. 10% dilution can be done with STP Thinner as per the requirement of spray pattern.
- Dilution will provide reduced DFT of the coating. Consult STP's TMS Team for advice.
- However with any sort of dilution, the application WFT on the substrate has to be reduced/coat in order to prevent sagging.

Cleaning & Maintenance

- Clean all tools immediately after use with STP Thinner. Do not allow the material to harden.

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 20 L and 200 L drum.

Storage

Keep in cool and 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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