

## PRODUCT DESCRIPTION:

SmartCare 2K Coal Tar Epoxy is a two component, coal tar epoxy protective coating for steel and concrete surfaces giving 135 – 165 micron in single coat on wet-on-wet basis. It has excellent corrosion / chemical / abrasion / scratch resistance and is used as direct to metal (DTM) application, without any requirement of primer.

## AREAS OF APPLICATION:

- MS / concrete pipes and metallic structures.
- 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.

## FEATURES AND BENEFITS:

- Flexible anti-corrosive / protective coating for structures – MS or concrete – even where the structure is in continuous contact with water.
- Compatible with controlled cathodic protection.
- 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 mineral.



## PRODUCT DETAILS:

### CHEMICAL PARAMETERS:

- Two component Coal Tar Epoxy

### PHYSICAL PARAMETERS:

- Colour: Black/ Semi-gloss
- Packaging: 20L (A+B)
- Shelf life: 12 Months from the date of manufacture when maintain in protected storage in original unopened sealed condition at 5 - 38 deg C.
- Coverage: 4 – 5 DFT 150 ± 15 micron (depend on surface)
- Mixing Ratio (by volume): 3:1
- Solid % by Volume = 80+/- 5

PROPERTY	METHOD	TYPICAL VALUES
Wet Film Thickness, micron	ASTM D 4414	150 -200
Elongation, %	ASTM D 638	> 30
Tensile Strength, MPa	ASTM D 638	> 3
Hardness, Shore A	ASTM D 2240	60 +-5
Specific Gravity, Mix, 30 OC	ASTM D 1457	1.30 ± 0.05
Flash Point, OC		
• Component A	ASTM D3278	> 25
• Component B	ASTM D93	>25
Pot Life, hrs, 30 OC	ASTM D 2471	4
Adhesion pull-off, MPa	ASTM D 4541	>4
Resistance to Micro-organisms	ASTM G 21	Passes
Flexibility	ASTM D 522	Good
Weather-ability, 1000 Hrs. QUV	ASTM G154	Good
		No blistering /
Immersion test, 30 days	AWWA C-210	peeling / disbonding
• DIW		
• 1% H2SO4		
• 1% NaOH		
Salt Spray, 500 hrs, @ 100 micron DFT	ASTM B 117	Excellent
Water Resistance, Immersion- 7 days	ASTM D 870	Passes
Abrasion Resistance 1000 cycles, CS 17 , mg	ASTM D 4060	110 +-10
Dielectric strength, V/mil	AWWA C 210	>250
Cathodic Disbondment, 30 days, mm	AWWA C 210	<10



APPLICATION TEMPERATURE				RESISTANCE TEMPERATURE		
Condition	Application	Surface	Ambient	Conditional	Continuous	Occasional
Min	10	10	10	High	95	120
Max	49	50	41	Low	-10	-25

CURING SCHEDULE				
Temperature	Touch Dry, Hours	Recoat		Full Cure Days
		Min	Max	
10 deg C (50 deg F)	10	12	30	15
30 deg C (86 deg F)	4	8	30	7
50 deg C (122 deg F)	1	3	24	3

## APPLICATION METHOD:

### 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 deg C and not more than 50 deg C at the time of coating.

### Material Preparation

Stir drums of each component of SmartCare 2K Coal Tar Epoxy 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 SmartCare 2K Coal Tar Epoxy direct to metal or prime surface with Zn-Ph primer. Allow minimum 4 hours for primer to touch dry.
- Apply first coat of SmartCare 2K Coal Tar Epoxy on the prepared surface by brush / roller / spray.
- Allow it to touch dry for 4 hours (depending on ambient condition)
- If required, apply second coat of SmartCare 2K Coal Tar Epoxy as above as per the technical data.
- In case of airless spray, use standard equipment having tip size minimum 23 thou and tip pressure 2200-2400 psi

**Cleaning & Maintenance:** Clean all tools immediately after use with Thinner. Do not allow the material to harden.

## SAFETY FEATURES & PRECAUTIONS:

- 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.

## STORAGE PRECAUTIONS:

Keep in cool and dry place, under shed, away from heat.