Powercrete®
Liquid Coating Technology
SEALFORLIFE

PRODUCT DATA SHEET

POWERCRETE® R-95

Product Information

Product description: Powercrete® R-95 is a high-build solvent free novolac epoxy coating designed for protecting new line pipes and pipeline rehabilitation projects that operates at temperatures up to 95˚C (203˚F). Powercrete® R-95 can be used for extra protection on top of FBE mainline coatings or as a DTM (drirect to metal) coating when an increased temperature-and chemical resistance is required.

Features:

- 100% Solids Novolac Epoxy
- no VOC
- high temperature and chemical resistance
- Excellent adhesion to FBE and abrasive blasted steel
- Excellent cathodic disbondment characteristics
- Excellent wastewater and sulphuric acid resistance
- Suitable for pipeline operating temperatures to 95°C (203°F)
- Can be sprayed and hand applied up to 1000micron (40mils) in one multi-pass layer

Application examples

Application: coating system for pipe bends, fittings, valves, girth welds, field joints, directional drilling, buried tanks and vessels, Offshore risers, piles, waste water pipes, sulphur hoppers and chutes and other steel structures in need of protection that operates temperatures up to 95°C (203°F).

Product Performance (processing under laboratory conditions)

	Test Method	Typical Value
Cathodic Disbondment	ASTM G8 (25˚C) (77˚F) 30 days	3 mm
	ASTM G95 (95˚C) (203˚F) 30 days	8mm
Flexibility	NACE RP-0394	0.27/PD at 23˚C/73˚F
Impact Resistance	ASTM-G14	>44.25in/lb/>5Nm/>5J at 40mils/1000micron
Adhesion to FBE	ASTM D4541	3000psi/20MPa
Adhesion to Steel	ASTM D4541	3500psi/24MPa
Adhesion to Steel, 90D HWI at 85˚C (185˚F)	ASTM D4541	3130psi/21MPa
Abrasion Resistance	ASTM D4060	850 cycles a mil (34 cycles/micron)
Resistance to Acids and Alkalies	ASTM C581	Excellent
Dielectric Strength	ASTM D149	690V/mil (27V/micron)
Thin Film Water Absorption	ASTM D570	0.15% (24 hours)
Hardness	ASTM D2240	85 Shore D

General Product Information

Colour	Grey
Finish	Gloss
Primer	Self-priming on FBE and DTM
Dry Film Thickness	40mils (1000micron) for most applications
Coverage Rate (theoretical)	40.8 sq.ft/USG at 40mils (1000micron)DFT. 1,00m^2/l at 40mils (1000micron)DFT.
Volume Solids	100%
VOC Content	0 g/l
Flash Point	154˚C (309˚F) mixed product
Mixing Ratio	3.6:1 (A to B in volume) 100:16 (A to B by weight)
Potlife	14 minutes at 25˚C (77˚F)

Application Instruction: Surface Preparation Steel

General	The area to be coated has to be clean, dry and free from oil, grease and dust. All contamination that could interfere with the adhesion of the coating has to be removed according to SSPC-SP1.
Preventing condensation on the substrate	Prior and during the surface preparation, the temperature of the substrate(s) must be at least 5˚F (3˚C) above the dew point.
Abrasive Blasting	Minimum Sa2½ (SSPC-SP10/ NACE2) .
Recommended Surface Profile	3-4mils (75-100micron) angular profile.

Application Instruction: Surface Preparation FBE

General	The area to be coated has to be clean, dry and free from oil, grease and dust. All contamination that could interfere with the adhesion of the coating has to be removed according to SSPC-SP1.
Preventing condensation on the substrate	Prior and during the surface preparation, the temperature of the substrate(s) must be at least 5˚F (3˚C) above the dew point.
Abrasive Blasting	Sa1 (SSPC-SP7/NACE4, sweep-blasting for optimum performance.
Recommended Surface Profile	Minimum 2mils (50micron) angular profile.

Application Safety

General	Read the Product Data Sheet and follow the caution statements on the Material Safety Data Sheet . Personnel who will come into contact with the product should be using appropriate protection equipment. Follow national safety guidelines.

Application Conditions

	Product	Surface	Ambient	Humidity
Optimum	130˚F (55˚C)	70-90˚F (21-32˚C)	70-90˚F (21-32˚C)	25-50%
Minimum	122˚F (50˚C)	50˚F (10˚C)*	-20˚F (-30˚C)	0%
Maximum	140˚F (60˚C)	200˚F (93˚C)	120˚F (49˚C)	85%

* If the surface to be coated is below 10˚C (50˚F), preheating of the substrate is recommended. Preheat temperatures should not exceed 93˚C (200˚F). Prior and during the application, the temperature of the substrate must be at least 3˚C above the dew point.

Application Instruction: Plural Component Spray

Step 1	Mix the Part A and B until uniform in consistency.
Step 2	Use only heated plural component Airless equipment capable to maintain a 3.6:1 ratio in volume and 1.25 Gallon/4,73 Liter per minute output, with heated drums, insulated (heated) hoses and minimum 193bar (2800psi.) fluid pressure for Part A and 207bar (3000psi) for Part B. Use Binks 1M Airless spray-gun or equal with preferably changeable spray tips. Consult Powercrete® for specific information.
Step 3	Part A must be heated up and maintained to a temperature of 60-65˚C (140-150˚F) and Part B must be heated up and maintained at 38-49˚C (100-120˚F).
Step 4	Apply Powercrete® R-95 in the recommended DFT. Use a WFT gauge to check. Do not dilute the product.

POWERCRETE® R-95

Curing Times at 25˚C (77˚F)	
Gel Time:	31 minutes
Dry time:	1.3 hours
65 shore D:	2.2 hours (ready for Holiday test)
75 shore D:	5.0 hours (full cure)
Cure time is based on 40 mils (1000micron) DFT. Recoat interval at 21˚C (70˚F) is 34-60minutes and 4-7 minutes at 65˚C (150˚F).	

Inspection and Repair	
Inspection	The finished coating must be visually inspected for any defects, such as runs and sags, fisheyes, blistering, pinholes, missed spots and possible contaminants. Pinhole/Holiday detection must generated according to NACE SP0188.
Coating Thickness	The coating thickness (DFT) must be within the specified DFT range. Use calibrated equipment and measure according to SSPC-PA 2 or other specified standard.
Repair	Pinholes/Holidays must be located and repaired with approved material. Consult Powercrete® for specific information. Retest the repaired area.

Cleaning	
Cleanup	Use Acetone or MEK.

Handling	
General	Transport and stacking is possible after full cure of the coating and generating a Holiday test (NACE SP0188). This time can be reduced by increasing the curing temperature. Consult Powercrete® for specific information.

General Order Information		
Product	**Powercrete® R-95**. Product dimensions and contents:	
Drum		
Part A	42.80 gal/162,00 l	(635.71 lb/288,36 kg)
Part B	47.55 gal/180,00 l	(408.33 lb/185,22 kg)
Pail		
Part A	3.56 gal/13,50 l	(52.99 lb/24,04 kg)
Part B	3.96 gal/15,00 l	(34.01 lb/15,43 kg)
Kit Options	0.52 gal/2,0 l 0.26 gal/1,0 l 0.13 gal/0,5 l	(7.23 lb/3,28 kg) (3.61lb/1,64 kg) (1.8 lb/0,82 kg)
Cartridges	On request.	
Handling	Handle with care. Keep containers upright.	
Storage	Store indoor, clean and dry, away from direct sunlight in a cool place between 18-30°C (65-85˚F). Keep from freezing. Shelf life 24 months in the original unopened containers.	

Additional Information	
Documentation	Application instructions and other documentation can be obtained by contacting our head office, from our local distributor or by sending email to **info@sealforlife.com**
Certified staff	Application of the described coating system should be carried out and inspected by certified personnel.
Specification info	Product Performance values shown are not to be interpreted as product specification or PQT values. Consult Powercrete®.

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