SP-2882

PRODUCT DATA SHEET

SELECTION & SPECIFICATION DATA

Generic Type	Two-Component Epoxy Amine
Description	An ultra high solids, self-priming epoxy coating with excellent corrosion resistance to marine and petrochemical environments. SP-2882 is used primarily for the corrosion protection of buried pipes and tanks. SP-2882 is the same as and identical to Carboguard 102.
Features	• Outstanding protection of buried pipes and tanks to mechanical and abrasion damage • Excellent corrosion resistance to marine and chemical environments • Excellent corrosion resistance to buried pipes and tanks • Excellent resistance to mechanical and abrasion damage • Excellent resistance to cathodic disbondment • Excellent resistance to electric insulation (12000 volts/mm)
Typical Uses	• External surfaces for sea lines and pipelines, buried or immersed in sea and fresh water • External coating for elbows, valves, joints, fittings etc., buried or immersed in sea and fresh water • Piles and structures coating of steel and concrete piers • Jackets coating of off-shore platforms • Coating of immersed areas, topsides, splash zone of any steel or concrete surface to be immersed in sea or fresh water • Lining of tanks designed to contain industrial or brackish water, crude oil or refined petroleum products • Lining coat for penstocks • External/Internal coat for sea water inlets **Immersion Service:** Consult Carboline Technical Service for specific recommendations regarding fluids types, film thickness, etc.
Color	Standard color: Green
Finish	Semi-Gloss
Primer	Self-priming Can be overlapped over old coats such as polyethylene, polypropylene, bitumen or itself to fill the gap between the linings.
Wet Film Thickness	600 - 3000 microns (23.6 - 118.1 mils) Can be applied in a single coat. Recommended dry film thickness is 1500 microns (59 mils). Maximum dry film thickness in a single coat: 3000 microns (118.1 mils)
Dry Film Thickness	600 - 3000 microns (23.6 - 118.1 mils) in one or two coats
Solids Content	By Volume 98% +/- 2%
Theoretical Coverage Rate	1572 ft²/gal at 1.0 mils (38.6 m²/l at 25 microns) Allow for loss in mixing and application.
VOC Values	**As Supplied** : 70 g/L

SELECTION & SPECIFICATION DATA

Dry Temp. Resistance	Dry Temp. Resistance: -10°C to 110°C (14°F to 230°F) Buried Temp. Resistance:* Continuous: Up to 65°C (149°F) Non-Continuous: Up to 80°C (176°F) *Contact Technical Service to obtain specific information
Limitations	When exposed to atmospheric agents, condensation or ultraviolet rays, SP-2882 will discolor, chalk and lose gloss as is common with all epoxies. A urethane topcoat can be applied to add UV stability in atmospheric environments before the maximum recoat window has passed or the surface has been properly abraded.

SUBSTRATES & SURFACE PREPARATION

General	Surfaces must be clean and dry. Employ adequate methods to remove dirt, dust, oil and all other contaminants that could interfere with adhesion of the coating.
Steel	**In shop:** Prepare substrate in accordance with ISO8501-1 (SA 2 ½) to obtain a blast profile between 60-70 microns (2.4-2.8 mils) (Rz-DIN 30671) **On site:** Prepare substrate in accordance with ISO 8501-1 (SA 2 ½) to obtain a blast profile between 40-50 microns (1.6-2 mils) (Rz-DIN 30671)
Concrete or CMU	Concrete must be cured 28 days at 24°C (75°F) and 50% relative humidity or equivalent. Prepare surfaces in accordance with ASTM D4258 Surface Cleaning of Concrete and ASTM D4259 Abrading Concrete. Voids in concrete may require surfacing.
Special Instruction	**Repair For SMALL Areas (Up to 200 sq./cm.)** Power tool grind to profile steel or concrete and apply by brush of one coat of SP-2882 or SP-2884 as specified. **Repair for LARGE areas with substrate exposure:** Blast in accordance with ISO 8501-1 (SA 2 ½) of all exposed substrate and roughening the coating close to the edge of the bare substrate, and then apply SP-2882 or SP-2884 up to the specified DFT.

PERFORMANCE DATA

All test data was generated under laboratory conditions. Field testing results may vary.

Test Method	System	Results
EN 10289 Annex E Cathodic Disbonding	1 coat / 1500 micron DFT	23°C (73°F) / 28 days: Max. Radius 4.3mm / Area 92 mm²
EN 10289 Annex F Electrical Insulation Resistance	1 coat / 1500 micron DFT	23°C (73°F) / 28 days: Max. Radius 4.0mm / Area 50mm²
EN 10289 Annex F Electrical Insulation Resistance	1 coat / 1500 micron DFT	23°C (73°F) / 30 days: 9x10^10 Ohm m²
EN 10289 Annex H Indentation Resistance	1 coat / 1500 micron DFT	23°C (73°F): 2.1 mm
EN10289 Annex C Impact Test	1 coat / 1500 micron DFT	-5°C (23°F): 4.5Joule
EN10289 Annex C Impact Test	1 coat / 1500 micron DFT	23°C (73°F): 10Joule
ISO 4624 Pull-off	1 coat / 1500 micron DFT	>7 N/mm²

MIXING & THINNING

Mixing

Pre-mix the components (Base Part A and Hardener Part B) separately with suitable mechanical mixer, then combine and power mix until homogenous. DO NOT MIX PARTIAL KITS.

Component Details for Color:
Green: The base (part A) is yellow (0600) and the hardener (part B) is blue (0100)

Thinning

Do not thin

Ratio

1.75:1, A to B, by volume
1.5:1, A to B, by weight

Pot Life

60 minutes at 25°C (77°F) and less at higher temperatures.
Pot life ends when coating increases in viscosity and loses application properties.

CAUTION:
The reaction between the two components is exothermic; therefore, the mixture at the end of the pot-life produces heat.

APPLICATION EQUIPMENT GUIDELINES

Listed below are general equipment guidelines for the application of this product. Job site conditions may require modifications to these guidelines to achieve the desired results.

General

This product has been formulated to be solvent-free and may need particular arrangements during spray procedures in accordance with ambient temperature and equipment type.
The following information should help the applicator select proper application equipment.

APPLICATION EQUIPMENT GUIDELINES

Listed below are general equipment guidelines for the application of this product. Job site conditions may require modifications to these guidelines to achieve the desired results.

Airless Spray	Pump Ratio 68:1 LPM output: 12 liters minimum Material Hose: 3/8” ID minimum Max. Hose length: 15 meters (if not insulated and heating) Tip Size: 0.018-0.025” orphice size (Reverse Clean) Output Atm.: 272 minimum It is necessary to remove the rubber suction tube, or to install a hopper connected directly to the suction with a rigid connection. Remove all filters, unless when a hopper is installed. In which case, a filter no less than 30 mesh directly between the hopper itself and fitting should be used. The minimum working compression ratio is 60:1. It is possible to use pumps with lower ratios, provided the flow rates are equivalent. For airless spray application, SP-2882 must have a temperature between 20-29°C (68-84°F). During winter it is recommended to heat the product by water bath to reach above cited temperatures. **NOTE: Excessive heating reduces pot-life.**
Brush	For touch-up only of SMALL areas without substrate exposure. Use a medium bristle brush.
Roller	Not recommended.

APPLICATION PROCEDURES

Airless Spray	The required thickness is obtained by using a multiple pass technique (wet on wet). Frequently measure wet film thickness. It should be at least 10% higher than recommended DFT to ensure that the cured film is not below the specified DFT.

APPLICATION CONDITIONS

Condition	Material	Surface	Ambient	Humidity
Minimum	68°F (20°C)	50°F (10°C)	50°F (10°C)	0%
Maximum	90°F (32°C)	90°F (32°C)	90°F (32°C)	85%

Do not apply when the surface temperature is less than 3°C (5°F) above the dew point.
Inspection and tests, such as adhesion, holiday test, impact test and DFT measurements must be done only when hardness Shore D reaches a value of at least 70.

CURING SCHEDULE

Surface Temp.	Dry to Handle	Final Cure Time
73°F (23°C)	48 Hours	7 Days
104°F (40°C)	24 Hours	7 Days

Higher film thickness, insufficient ventilation, cooler ambient temperatures and or high RH% will require longer cure times.

Backfilling Time	Shore D Hardness ≥ 70

CURING SCHEDULE

Shore D Hardness

Surface Temp.	Hardness Shore D: 20	Hardness Shore D: 70	Hardness Shore D: 54	Hardness Shore D: 74	Hardness Shore D: 32	Hardness Shore D: 64	Hardness Shore D: 72
5°C (41°F)	24 hours	48 hours					
23°C (73°F)			24 hours	48 hours			
40°C (104°F)					14 hours	22 hours	24 Hours

Maximum Recoat Window:
Shore D value less than 65 (or before 48 hours at 20°C)
If maximum recoat is exceeded, special surface preparation is required. Contact your Carboline representative for details.

CLEANUP & SAFETY

Cleanup	The pumps must be cleaned every time the application is interrupted, even for short periods. Flush with Thinner #2 or Thinner #76 until liquid comes out clean and without residue or coloration. In case of spillage, absorb and dispose in accordance with local applicable regulations.
Safety	Read and follow all caution statements on this product data sheet and on the SDS for this product. Employ normal safety precautions. Hypersensitive persons should wear protective clothing, gloves and use protective cream on face, hands and all exposed areas.
Ventilation	When used in enclosed areas, thorough air circulation must be used during and after application until the coating is cured. The ventilation system should be capable of preventing the solvent vapor concentration from reaching the lower explosion limit for the solvents used. User should test and monitor exposure levels to ensure all personnel are below guidelines. If not sure or if not able to monitor levels, use MSHA/NIOSH approved respirator.
Caution	This product contains flammable solvents. Keep away from sparks and open flames. All electrical equipment and installations should be made and grounded in accordance with the National Electric Code. In areas where explosion hazards exist, workmen should be required to use non-ferrous tools and wear conductive and non-sparking shoes. The reaction between the two components is exothermic; therefore, the mixture at the end of the pot-life grows heat.

PACKAGING, HANDLING & STORAGE

Packaging	**<u>20 liter kit (5.6 gallons):</u>** Part A: 12.75 liters (3.7 gallons) Hardener (Part B): 7.25 liters (1.9 gallons)
Shelf Life	Part A: 18 months at 24°C (75°F) Hardener (Part B): 18 months at 24°C (75°F) *Shelf Life: (actual stated shelf life) when kept at recommended storage conditions and in original unopened containers.
Storage Temperature & Humidity	Store indoors in a cool, dry, well-ventilated area at temperatures between 4 - 35°C (39 - 95°F). Keep in a tightly sealed container when not in use.
Flash Point (Setaflash)	Part A: 27°C (81°F) Hardener (Part B): 31°C (88°F)

WARRANTY

To the best of our knowledge the technical data contained herein is true and accurate on the date of publication and is subject to change without prior notice. User must contact Carboline to verify correctness before specifying or ordering. No guarantee of accuracy is given or implied. Carboline warrants our products to be free of manufacturing defects in accord with applicable Carboline quality control procedures. THIS WARRANTY IS NOT VALID WHEN THE PRODUCT IS NOT: (1) APPLIED IN ACCORDANCE WITH CARBOLINE'S SPECIFICATIONS, AND/OR (2) PROPERLY STORED, CURED, AND USED UNDER NORMAL OPERATING CONDITIONS. Carboline assumes no responsibility for coverage, performance, injuries, or damages resulting from use of the product. If this product is found not to perform as specified upon inspection by a Carboline representative during the warranty period, Carboline's sole obligation, if any, is to replace the Carboline product(s) proven to be defective or refund the purchase price thereof, at Carboline's sole option. Carboline shall not be liable for any other losses or damages. This warranty excludes (1) labor and costs of labor for the application or removal of any product, and (2) any incidental or consequential damages, whether based on breach of express or implied warranty, negligence, strict liability or any other legal theory. NO OTHER WARRANTY OR GUARANTEE OF ANY KIND IS MADE BY CARBOLINE, EXPRESS OR IMPLIED, STATUTORY, BY OPERATION OF LAW, OR OTHERWISE, INCLUDING MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. All of the trademarks referenced above are the property of Carboline International Corporation unless otherwise indicated. The whole text of this Product Data Sheet, as well as the documents derived from it, have been written in English, and for legal purposes the English version shall prevail.