Plasite® 7159

PRODUCT DATA SHEET

SELECTION & SPECIFICATION DATA

Generic Type	Epoxy Polyamine
Description	A water-resistant, phenolic epoxy coating polymerized with a polyamine type curing agent. A high performance lining for elevated temperature and pressure immersion services in high purity water, as well as the oil/water separating processes encountered in the petroleum industry.
Features	• Easy-to-apply high performance thin film lining • Protects I high temperature demineralized water immersion - 212°F (100°C) • Recommended in high pressure three phase service up to 250°F (121°C) • Can be air dried or force cured for prompt service
Color	U84P (Ivory), U74P (Light Gray)
Dry Film Thickness	5 - 6 mils (127 - 152 microns) per coat A total film thickness of 10-12 mils/250-300 microns is required for immersion service.
Solids Content	By Volume 68% +/- 2%
Theoretical Coverage Rate	1092 ft²/gal at 1.0 mils (26.8 m²/l at 25 microns) 218 ft²/gal at 5.0 mils (5.4 m²/l at 125 microns) 182 ft²/gal at 6.0 mils (4.5 m²/l at 150 microns) Allow for loss in mixing and application.
VOC Values	**As Supplied** : 2.38 lbs/gal (285 g/l) ± 2% Plasite Thinner #71 : 2.79 lbs/gal (334 g/l) ± 2% Plasite Thinner #19 : 2.82 lbs/gal (338 g/l) ± 2% VOC Content varies between colors. Contact Carboline Technical Service Department for VOC of specific colors.
Dry Temp. Resistance	Non-Continuous: 350°F (177°C) Continuous immersion temperature and pressure limitations have been established for certain exposures. Please contact Carboline Technical Service for specific recommendations.

SUBSTRATES & SURFACE PREPARATION

General	Remove any oil or grease from surface to be coated in accordance with SSPC-SP1.
Steel	SSPC-SP10; Surface Profile should be dense angular 2.0-3.0 mils (50-75 µ)
Stainless Steel	Profile should be dense angular 2.0-3.0 mils (50-75 µ). Remove all surface contaminants that would interfere with the performance of stainless steel for the intended service such as, but not limited to, imbedded iron or chlorides.

MIXING & THINNING

Mixing	Thoroughly mix part A and B separately, then add part B slowly to the part A and mix completely. The coating should stand approximately 30 minutes after the curing agent has been thoroughly mixed in.

MIXING & THINNING

Thinning	PLASITE Thinner #71 is recommended for normal application temperatures and conditions. PLASITE Thinner #19 is recommended for above normal application temperatures and where tank design requires a slower evaporating thinner to help control overspray. The amounts of thinner required will vary depending on air and surface temperatures and application equipment. Normal application temperatures and conditions will require the addition of approximately 10% by volume with approximately 5% additional thinner added for each 5°F(3°C) of increased temperature. Airless spray equipment and above normal temperatures require additional thinning. It is recommended that the thinner included on each order amount to approximately 20% of the coating order.
Ratio	4:1 A:B
Pot Life	Approximately 8 to 10 hours at 70°F (21°C)

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.

Conventional Spray	Pressure pot equipped with dual regulators, 3/8” I.D. minimum material hose, .070” I.D. fluid tip and appropriate air cap. Adjust air pressure to approximately 50 psi at the gun and provide 10-20 lbs. of pot pressure.
Airless Spray	• Pump Ratio: 30:1 (min.) • GPM Output: 2.5 (min.) • Material Hose: 3/8” I.D. (min.) • Tip Size: 0.017”-0.021” • Output PSI: 1500-2300 • Filter Size: 60 mesh • PTFE packings are recommended Apply a “mist” bonding pass. Allow to dry approximately one minute but not long enough to allow film to completely dry. Apply crisscross multi-passes, moving gun at fairly rapid rate, maintaining a wet appearing film. Fast multi-passes may be applied until you have a wet film thickness of approximately 6-8 mil (150-200 µ). Repeat this procedure for the second coat to obtain an 8-12 mil (200-300 µ) DFT. Call Tech. Service for Q&A
Brush	Recommended for small areas only. Use medium bristle brush. Not recommended for tank lining applications except when striping welds. Avoid excessive re-brushing for best results.
Roller	Not recommended for tank lining applications except when striping welds. Use a short-nap synthetic roller with phenolic core.

APPLICATION CONDITIONS

Condition	Material	Surface	Ambient	Humidity
Minimum	60°F (16°C)	50°F (10°C)	50°F (10°C)	0%
Maximum	90°F (32°C)	120°F (49°C)	120°F (49°C)	90%

CURING SCHEDULE

Surface Temp.	Dry to Recoat	Cure for Service
50°F (10°C)	24 Hours	14 Days
60°F (16°C)	18 Hours	10 Days
75°F (24°C)	12 Hours	7 Days
90°F (32°C)	8 Hours	6 Days

With adequate ventilation when applying at temperatures above 70 °F (21 °C) coating surfaces will normally be tack free in 2-4 hours.

Surface Temp.	Cure for Most Immersion Services
130°F (54°C)	18 Hours
140°F (60°C)	10 Hours
150°F (66°C)	6 Hours
160°F (71°C)	4 Hours
170°F (77°C)	4 Hours
180°F (82°C)	2 Hours
190°F (88°C)	2 Hours
200°F (93°C)	2 Hours

The chart above outlines the cure for service (immersion) times when the Force Cure schedule below is followed.

Force Cure

NOTE: Temperatures listed for 130°F (54°C) and above are for force cure.
Force curing at elevated temperature will increase resistance to certain exposures. When exposure is severe, force curing is recommended to obtain maximum resistance and service life.
Allow an air dry time of 16-24 hours @ 50-70°F (10-21°C) before heat curing. When applying at temperatures above 70°F (21°C) allow 2-5 hours air dry time.
After air drying, the substrate temperature should be raised by approximately 30°F (17°C) each 30 minutes until the desired force cure temperature is reached.
Final cure may be checked by exposing coated surface to MIBK for ten minutes. If no dissolving and only minor softening of film occurs the curing can be considered complete. The film should re-harden after exposure if cured.

CLEANUP & SAFETY

Cleanup

Plasite Thinner #71, Carboline Thinner #2 or acetone

In case of spillage, absorb and dispose of 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 workmanlike safety precautions.

Ventilation

When used as a tank lining or 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 insure all personnel are below guidelines. If not sure or if not able to monitor levels, use MSHA/NIOSH approved supplied air respirator.

PACKAGING, HANDLING & STORAGE

Shelf Life

Part A - 24 months at 70°F (21°C)
Part B - 9 months at 70°F (21°C)

PACKAGING, HANDLING & STORAGE

Storage	Store all components between 50-90°F/10-32°C in a dry area. Keep out of direct sunlight. Avoid excessive heat and do not freeze.
Shipping Weight (Approximate)	1 gal unit: 16 lbs (7.3 kg) 5 gal unit: 78 lbs (35.5 kg)
Flash Point (Setaflash)	Part A: 71°F (22°C) Part B: 219°F (104°C)

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.