carboline®
Coatings - Linings - Fireproofing

Plasite® 9573
PRODUCT DATA SHEET

SELECTION & SPECIFICATION DATA

Generic Type	A low temperature bake high solids epoxy phenolic cured with an amine curing agent.
Description	This lining is a highly resistant film for chemical tank lining service. It has excellent resistance to many caustic solutions up to 200°F (93°C), combined with chemical resistance to a wide range of acids, solvents and water solutions. Consult Carboline for specific cargo.
Color	White and Lt. Gray.
Finish	N/A 35 ± on 60° meter
Dry Film Thickness	6 - 7 mils (152 - 178 microns) per coat 0.15-0.18 mm film is produced in one multi-pass spray coat.
Solids Content	By Volume 83% +/- 2%
Coverage Rate	Theoretical coverage is 1330 mil sq. ft./gal. Two separate coats to obtain 12 to 15 mils total are required for immersion service. For estimating, use 79 sq. ft/gal to achieve 12 to 15 mils dry. (20% loss assumed).
Theoretical Coverage Rate	1331 ft²/gal at 1.0 mils (32.7 m²/l at 25 microns) 222 ft²/gal at 6.0 mils (5.4 m²/l at 150 microns) 190 ft²/gal at 7.0 mils (4.7 m²/l at 175 microns) Allow for loss in mixing and application.
VOC Values	**As Supplied** : 144 g/l Thinned with 10% Plasite Thinner #71 VOC is 205 g/l. VOC content varies between colors. Contact Carboline Technical Service for VOC of specific colors.
Approvals	Plasite 9573 is suitable for direct food contact use in accordance with FDA regulations (Conditions C thru G of 21 CFR 175.300(b)(3)(viii)) including hot-fill applications above 150°F (66°C) as tested and reviewed by NSF.

SUBSTRATES & SURFACE PREPARATION

Steel	Immersion Service: All sharp edges shall be ground to produce a radius. All imperfections such as skip welds, delaminations, scabs, slivers and slag shall be corrected prior to abrasive blasting. Skip welds shall be welded solid. Abrasive blast the surface to achieve a white metal blast (SSPC SP5 or NACE No. 1 cleanliness) with a 3 mil angular profile.

PERFORMANCE DATA

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

Test Method	System	Results
Abrasion Resistance ASTM D4060	Plasite 9573	85 milligrams average loss per 1000 cycles, Taber CS-17 Wheel, 1000 gram weight.
Surface Hardness ASTM D4366	Plasite 9573	Konig Pendulum Hardness of 160 seconds (Glass Standard = 250 seconds).
Thermal Shock	Plasite 9573	Unaffected 5 cycles minus 70°F to plus 200°F.

MIXING & THINNING

Mixing | The curing agent and coating are supplied in separate containers at a 4:1 ratio. Thoroughly mix coating, then add curing agent slowly and mix completely with coating. Do not mix partial kits.

Thinning | Plasite Thinner #71 is recommended for thinning and clean-up. It will always be necessary to thin the coating. The applicator must make exact thinner adjustments based on his equipment and air and surface temperatures. The following thinning guidelines are appropriate. Normal application temperatures and conditions will require the addition of approximately 10 to 20% thinner by volume with approximately 5% additional thinner added for each 5°F/3°C of increased temperature. It is recommended that the amount of thinner included on each order amount to approximately 20% of the coating order.

Ratio | 4 A: 1 B

Pot Life | Approximately 1 hour at 70°F.

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 |
Thinning requirements are more than for conventional spray.
Apply a “mist” bonding pass. Allow to dry approximately 1 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. Observe the coating surface and when it appears to be flowing together, you will have an average of 4-5 mils/0.1-0.8 mm wet film. By allowing the solvents to flash-off a few minutes, several more fast multi-passes may be applied until you have a film thickness of approximately 5-7 mils/0.13-0.18 mm DFT (approximately 8-10 mils/0.2-.025 mm wet).
Repeat this procedure for the second coat to obtain a 12-15 mil/0.3-0.38 mm DFT. Maximum air dry time between second coat application and low bake force cure is 15 days at 70-90°F.
Remove all overspray by dry brushing or scraping if required. Air dry with ventilation a minimum of 60 minutes prior to introducing heat. After the air dry period has elapsed, the temperature should be raised approximately 30°F in increments of 30 minutes until the desired temperature is reached. Refer to CURING.
Equipment must be thoroughly cleaned immediately after use with Plasite Thinner #71 to prevent the setting of the coating.
Note: Prior to spray application, stripe brush all welds, attachments and surface irregularities using PLASITE 9573 thinned a minimum of 50% by volume with PLASITE Thinner #71.

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Spray Application	All spray equipment should be thoroughly cleaned and the hose, in particular, should be free of old paint film and other contaminants. This is a high solids coating and may require adjustments in spray techniques. Wet film thickness is easily and quickly achieved. The following spray equipment has been found suitable and is available from manufacturers such as Binks, DeVilbiss, GRACO and WIWA.
Conventional Spray	Pressure pot equipped with dual regulators, 3/8" I.D. minimum material hose, 0.070" I.D. fluid tip and appropriate air cap. Air supply shall be uncontaminated. Adjust air pressure to approximately 60-80 lbs/300-400 n of pot pressure. Adjust spray gun first by opening liquid valve and then adjusting air valve to give an 8-12 in/20-30 cm wide spray patter with best possible atomization.
Airless Spray	• Pump Ratio: 30:1 (min.)* • GPM Output: 3.0 (min.) • Material Hose: 3/8” I.D. (min.) • Tip Size: 0.017-0.021” (0.43-0.53 mm) • Spray Pressure: 1800-2200 psi/124-152 bars • Filter Size: 60 mesh • *PTFE packings are recommended and available from the pump manufacturer.
Brush	Recommended ONLY for touch-up, spot repairs or at weld striping prior to spraying.

CURING SCHEDULE

Surface Temp.	Tack Free	Minimum Recoat Time	Maximum Recoat Time
70°F (21°C)	24 Hours	24 Hours	15 Days
90°F (32°C)	16 Hours	16 Hours	15 Days

For Relative Humidity of 50%.
Drying time between coats may be decreased by force curing. Do not force cure at temperatures in excess of 150°F/66°C. When force curing at temperatures between 120-150°F (49-66°C), the length of cure must not exceed 12 hours.
The final bake is based on metal temperatures and coating on 18 gauge steel: 4 hours at 200°F (93°C) minimum (Metal Temperature).
Caution: Overbaking between coats will result in loss of adhesion.

CLEANUP & SAFETY

Safety	For tank lining work or enclosed spaces, it is recommended that the operator provide himself with clean coveralls and rubber soled shoes and observe good personal hygiene. Certain personnel may be sensitive to various types of resins which may cause dermatitis. THE SOLVENT IN THIS COATING IS FLAMMABLE AND CARE AS DEMANDED BY GOOD PRACTICE, OSHA, STATE AND LOCAL SAFETY CODES, ETC. MUST BE FOLLOWED CLOSELY. Keep away from heat, sparks and open flame and use necessary safety equipment, such as, air mask, explosion-proof electrical equipment, non-sparking tools and ladders, etc. Avoid contact with skin and breathing of vapor or spray mist. When working in tanks, rooms and other enclosed spaces, adequate ventilation must be provided. Refer to Plasite Bulletin PA-3 as well as SDS. Keep out of the reach of children.

PACKAGING, HANDLING & STORAGE

Packaging	1 gallon and 5 gallon units
Shelf Life	12 months at 70°F (21°C)
Storage	Store indoors
Shipping Weight (Approximate)	Approximately 13 lbs/gal (1.56 kg/l)
Flash Point (Setaflash)	• Part A: 25°F (-4°C) • Part B: 219°F (104°C)

WARRANTY

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