Plasite® 4540

PRODUCT DATA SHEET

SELECTION & SPECIFICATION DATA

Generic Type	High performance epoxy lining
Description	This product is a solvent-free, edge retentive, blush-resistant high performance epoxy coating designed as an internal tank lining for chemical or other commodity storage. It is a two-component system applied by plural component spray equipment, at film thicknesses of 20-50 mils (500-1250 microns) in a monolithic application. It is particularly suited for petroleum-based cargoes including crude oil; fuel oils, gasoline and gasoline blends, jet fuel and diesel. It has excellent hot water resistance (deionized water up to 180°F/82°C). It has extremely fast cure times for turnaround projects that require placing back in service quickly. The product has a unique ability to be applied as a prime coat and immediately back-rolled after spraying. This is recommended to treat pitted steel, weld areas, and the like. A second coat can be applied right after the prime coat using the same product for a “two-coat” yet monolithic application.
Features	• Quick walk on time • Fast return to service • Excellent edge retention • Superior adhesion to steel • Blush resistant • Resistance to a broad range of chemicals • Excellent hot water resistance • Can be applied to substrate as low as 35°F/2°C • Can be applied as a single-coat 20-50 mil system
Color	Standard: 0700 (Grey)
Finish	Gloss
Dry Film Thickness	20 - 30 mils (508 - 762 microns) per coat Film thickness depends on service and existing condition of the substrate, Product is typically applied in a single coat application at the appropriate film thickness depending on the application. Typical film thickness is 20-30 mils however higher film thicknesses can be used for more aggressive or abrasive conditions. Additional coats may be applied as needed.
Solids Content	By Volume 100%
Theoretical Coverage Rate	1604 ft²/gal at 1.0 mils (39.4 m²/l at 25 microns) 80 ft²/gal at 20.0 mils (2.0 m²/l at 500 microns) 53 ft²/gal at 30.0 mils (1.3 m²/l at 750 microns) Allow for loss in mixing and application.
VOC Values	**As Supplied** : 5 g/l

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	Minimum: Near-White Metal Finish (NACE NO. 2 or SSPC SP10) with a 3 mil (75 microns) dense, angular profile as measured by ASTM D 4417. Defects exposed by blasting must be repaired.
Stainless Steel	Prepare by abrasive blasting to SSPC-SP 17 Thorough Abrasive Blast to a minimum of 3 mils (75 microns) dense angular anchor profile.

SUBSTRATES & SURFACE PREPARATION

Concrete	Concrete shall be designed, placed, cured, and prepared per NACE No. 6/SSPC-SP 13, latest edition. Abrade to remove all laitance, loose concrete, etc. and to create surface profile in accordance with the appropriate ICRI CSP 4-7. Do not apply coating unless concrete has cured at least 28 days @ 70°F (21°C) or equivalent. Voids in concrete may require filling and/or surfacing. Consult Carboline Technical Service for recommended primer/sealer.

MIXING & THINNING

Mixing	This product requires plural component spray equipment with multi-stage static mixers. It is recommended that two separate static mixers be used to ensure complete mixing. Component Details for Colors: Grey: The Part A is (0907) and the Part B is (0700)
Ratio	4:1 Ratio (A to B)
Pot Life	10-15 minutes @75°F (24°C); and less at higher temperatures

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 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 equipment manufacturers.
Airless Spray	Use a fixed ratio (4:1 by volume) plural component spray rig with heated hoppers, heated hoses to a mixer manifold through (at least two) static mixers to a 15-25 ft ¼" whip hose (depending on tip size used) attached to an appropriate spray gun utilizing self-cleaning reverse-a-tips from 0.017-0.035 inches. Note: For most applications both the "A" side should be maintained at 120-130°F/49-54°C and the "B" side to 90-110°F/32-43°C. This will ensure proper spraying of product. For higher film build applications on a vertical (30 mils/750 microns), raise material temperature to 130-140°F/54-60°C. Take care to prevent mixed material from setting up in your hoses. Use a short whip (from mix block to gun)if possible. Purge the whip and lines immediately if work is interrupted, keep them out of direct sunlight and insulated from hot surfaces. Prior to touch-up or additional coats, the previous coat must be cured firm to the touch. Coating on floors must be able to support foot traffic. Make sure that the coating surface is clean and dry. **If the first coat cures more than 7 days, de-gloss or roughen by light sanding or mechanically abrade the surface and remove dust just prior to successive coats.**

APPLICATION CONDITIONS

Condition	Material	Surface	Ambient	Humidity
Minimum	110°F (43°C)	35°F (2°C)	35°F (2°C)	0%
Maximum	140°F (60°C)	130°F (54°C)	100°F (38°C)	85%

This product simply requires the substrate temperature to be above the dew point. Condensation due to substrate temperatures below the dew point can cause flash rusting on prepared steel and interfere with proper adhesion to the substrate. Special application techniques may be required above or below normal application conditions.

CURING SCHEDULE

Surface Temp.	Dry to Handle or Recoat	Maximum Recoat
35°F (2°C)	12 Hours	7 Days
50°F (10°C)	6 Hours	7 Days
75°F (24°C)	1.5 Hours	7 Days
90°F (32°C)	1 Hour	7 Days

Cure for Service: Cure for service times are dependent on substrate surface temperatures. When the film passes a 25 solvent double-rub* (ex: ethanol or MEK); the lining is suitable for immersion service. Typically this can be from 6 to 48 hours depending on the steel temperature.
Low Temperature Cure: This lining will tolerate temperature drops to 20°F (-7°C) during cure (typical overnight drops) which may lengthen cure for service times. Follow "Cure for Service" recommendations prior to placing in service. *No color pick-up but down-glossing is acceptable.

CLEANUP & SAFETY

Cleanup	Use 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	While this is a solventless epoxy, it is common practice when used as a tank lining or in enclosed areas to circulate the air during and after application until the coating is cured. Follow all current OSHA requirements for respirator use.
Caution	If product is thinned or cleaned up with 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.

PACKAGING, HANDLING & STORAGE

Shelf Life	Part A & B: Min. 12 months at 75°F (24°C)
Storage Temperature & Humidity	40° - 110°F (4°-43°C) 0-90% Relative Humidity
Storage	Store indoors
Shipping Weight (Approximate)	Weight Per Gallon: 11.7 lbs (5.3 kg) packaged in 1 and 5-gal kits.
Flash Point (Setaflash)	Part A: 205°F (96°C) Part B: 201°F (94°C)

WARRANTY

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