Plasite 4503

PRODUCT DATA SHEET

SELECTION & SPECIFICATION DATA

Generic Type	High performance epoxy
Description	Plasite 4503 is a solvent-free, highly wetting (penetrating), high performance epoxy coating designed as a primer for internal tank linings for chemical or other commodity storage. It is ideally suited as a primer for both new steel and tank relines where severely pitted steel bottoms are common. It has exceptional chemical resistance properties and is recommended with an appropriate topcoat for petroleum-based cargoes including crude oil; fuel oils, gasoline and gasoline blends, and ethanol storage. It has extremely fast cure times for turnaround projects that require placing the tank back in service quickly. The product has a unique ability to be applied as a prime coat for severely pitted steel for complete coverage while providing a suitable base coat for subsequent lining systems.
Features	• Outstanding wetting properties • Quick walk on time • Fast recoat time and return to service • Superior adhesion to steel • Resistance to a broad range of chemicals • Can be applied to substrate as low as 35°F/2°C • Suitable for use with a variety of lining systems
Color	Standard: Lt. Grey Special Order: Blue
Finish	Gloss (70-85)
Dry Film Thickness	203 - 254 microns (8 - 10 mils) per coat The above thickness range is a guideline only. Film thickness depends on service and existing condition of the substrate. It is typically applied in thicknesses as needed to fill pits and prime steel welds, corners, edges, etc.
Solids Content	By Volume 100%
Theoretical Coverage Rate	39.4 m²/l at 25 microns (1604 ft²/gal at 1.0 mils) 4.9 m²/l at 200 microns (200 ft²/gal at 8.0 mils) 3.9 m²/l at 250 microns (160 ft²/gal at 10.0 mils) Allow for loss in mixing and application.
VOC Values	**As Supplied** : 0.02 lbs/gal (3 g/l)
Topcoats	May be topcoated with appropriate tank lining. Contact Carboline Technical Service for recommendation.

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	Abrasive blast to a Near-White (NACE No.2; SSPC-SP10) with a minimum 3 mil/75 microns blast profile with a dense, sharp anchor profile free of peening, as measured by ASTM D4417. Defects such as; but not limited to, slivers, exfoliated steel, etc exposed by blasting must be repaired.

SUBSTRATES & SURFACE PREPARATION

Concrete	Concrete: Clean and dry. Remove all loose, unsound concrete. Do not apply coating unless concrete has cured at least 28 days @ 70°F (21°C) and 50% RH or equivalent. Prepare surfaces in accordance with ASTM D4258 Surface Cleaning of Concrete and ASTM D4259 Abrading Concrete. Voids in concrete may require filling/surfacing.

MIXING & THINNING

Mixing	This product may be applied by plural component spray equipment with static mixers. Alternatively, the product may be batch mixed and rolled or squeegeed onto the steel surface.
Ratio	1:1 Ratio (A to B)
Pot Life	20 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	Before mixing and applying any material, make sure environmental conditions are satisfactory for application. Weather conditions, and especially dew point, should be constantly monitored in light of the work being done. Final blast cleaning and application of the lining system must only be performed when it is clear the temperature of the steel substrate will not fall below the dew point. Dehumidification and/or temperature control may be necessary to meet this requirement. Use a surface thermometer to frequently monitor the temperature of the steel substrate.
Airless Spray	Use a fixed ratio (1:1 by volume) plural component spray rig with heated hoppers, heated hoses to a mixer manifold through (at least two) static mixers to a 15 to 25 ft ¼" whip hose (depending on tip size used) attached to an appropriate spray gun utilizing self-cleaning reverse "a" tips from .017-035 inches. Note: Both the "A" and "B" side should be around 70-110°F/38-43°C. This will ensure proper spraying of product. Take care to prevent the mixed material from setting up in your hoses. For best results, keep hoses as short as possible, purge them immediately if work is interrupted, keep them out of direct sunlight and insulated from hot surfaces.
Roller	See application procedures.

APPLICATION PROCEDURES

General	Material has a workable (though short) 20 minute pot life at 75°F/24°C. Batch mixing can be performed provided the material is mixed, poured or ribboned onto the floor, and then rolled or squeegeed in all directions for severely pitted steel to work the material down into any pits to ensure complete coverage.
Airless Spray	Apply material to the surface using a criss-cross, multi-pass procedure, moving gun at a fairly rapid rate, maintaining a wet appearing film. Immediately back roll (or squeegee) in all directions to ensure complete coverage. Extra passes may be necessary to fill-in severely pitted areas. Before any touch-up or recoat material can be applied, the first 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.

APPLICATION CONDITIONS

Condition	Material	Surface	Ambient	Humidity
Minimum	21°C (70°F)	2°C (35°F)	2°C (35°F)	0%
Maximum	49°C (120°F)	54°C (130°F)	38°C (100°F)	85%

This product 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 Recoat	Dry to Touch	Maximum Recoat
2°C (35°F)	15 Hours	10 Hours	15 Days
24°C (75°F)	3.5 Hours	2 Hours	15 Days
32°C (90°F)	3 Hours	90 Minutes	7 Days

Cure for Service: Cure for service times are dependent on the specific topcoat/lining used over this product. See specific data sheet for that lining material. If this product cures beyond its maximum recoat time(non UV exposure) de-gloss and roughen by light sanding or mechanically abrade the surface and remove dust prior to topcoating.

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 MSDS 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 with flamable 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)
Shipping Weight (Approximate)	Weight Per Gallon: 11.7 lbs (5.3 kg) packaged in 2 and 10-gal kits.
Storage Temperature & Humidity	40° - 110°F (4°-43°C) 0-90% Relative Humidity
Flash Point (Setaflash)	Part A: 205°F (96°C) Part B: 201°F (94°C)
Storage	Store indoors

WARRANTY

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