

PRODUCT DESCRIPTION

PLASITE 4600 is a 100% solids, high performance, flake filled, solvent resistant, premium novolac epoxy coating designed for internal steel tank linings. It is a two component system consisting of 4-parts by volume of Part A resin and 1-part by volume of Part B hardener. It is applied by plural component spray equipment, typically at a total thickness of 40 mils/1 mm in two coats in alternating colors, or in a one coat application for internal lining applications. The mil thickness may be reduced for lighter service duty.

TYPICAL USES/APPLICATIONS

- Chemical Storage Tanks
- Wastewater Clarifiers
- Plating Vats
- Equipment Supports
- Oil Storage Tanks

PRODUCT ADVANTAGES

- High impact resistance
- Superior bondability to steel and concrete
- Resistance to a broad range of chemicals
- Can be applied in temperatures as low as 35°F/2°C
- Can be applied in a single 40 mil/1 mm coat

CHEMICAL RESISTANCE

PLASITE 4600 is resistant to a broad range of chemicals such as fuels, salts, alkalis, weak acids and strong solvents including most chlorinated solvents.

PACKAGING

PLASITE 4600 is packaged in 1 gallon, 5 gallon, and 20 gallon units.

A 1 gallon unit consists of:

- (1) one gallon can of Part A
- (1) one quart can of Part B

A 5 gallon consists of:

- (1) 5 gallon pail of Part A
- (1) One gallon can of Part B

A 20 gallon unit consists of:

- (4) 5 gallon pails of Part A
- (1) 5 gallon pail of Part B

COVERAGE

1604 mil sq. ft./gal.(theoretical). For estimating purposes, one gallon will cover approximately 32 sq. ft./gal./1.79 sq. at 40 mil/1mm DFT (20% loss included).

STORAGE CONDITIONS

Store all components between 50-85°F/10-29°C in a dry area. Keep out of direct sunlight. Avoid excessive heat and do not freeze. The shelf life is 1 year in the original, unopened container.

Proper jobsite storage of PLASITE 4600 is essential to its performance. Follow these general procedures for storage at the jobsite:

Store components (Part A and Part B) unopened, in a dry place, at 50-85°F/10-29°C, out of direct sunlight, and protected from the elements. Keep away from heat and flame.

For the 24-48 hours just prior to use, narrow the storage temperature to 70-85°F/21-29°C to facilitate ease of mixing.

PHYSICAL CHARACTERISTICS

Flexural Strength.....10,000 psi(ASTM D-790: Neat)
Reinforced.....15,000 psi

Hardness.....80(ASTM D-2240 Shore D: Neat)

Flexural Modulus of Elasticity.....7.8 psi x 10⁶(ASTM D-790: Neat)

Bond Strength: Steel.....1,500 psi

Weight per Mixed Gallon.....9.3 lbs

Pot-life.....@ 35°F: 30-to-40 min

@ 75°F: 15-to-25 min

Cure Time (approx.).....Dry To Touch @ 35°F: 8 hrs

@ 75°F: 6 hrs

Firm @ 35°F: 16 hrs

@ 75°F: 8 hrs

Chemical Service @ 35°F: 36 hrs

@ 75°F: 24 hrs

Flammability.....Nonflammable

Color.....Light Gray & Off White

SURFACE PREPARATION

Immediately prior to application of the coating or lining, the steel substrate must be clean of all oil, grease, dirt, dust, mill scale, rust, flash rust, corrosion products, salts, solvents, chlorides, other chemicals, and existing coatings.

All welds must be smooth and continuous; no skip welds. All weld splatter, buckshot, laminations, and slivers must be removed and ground smooth; undercuts and pinholes must be ground smooth and filled with weld metal. All projections, sharp edges, high points and fillets must be ground smooth to a radius of at least 1/8 inch and all corners must be likewise rounded.

All pitting, gouges, scratches, and other defects must be repaired either by welding or by filling with repair materials that are compatible with the coating or lining system and suitable for the intended service conditions.

All surfaces to be coated or lined must be readily accessible.

For interior tank linings, the steel must be blasted to a White Metal Finish (NACE No. 1, SSPC SP 5) with a 2-4 mils/50-100 microns dense, sharp anchor profile free of peening, as measured by ASTM D 4417.

Defects exposed by blasting must be repaired.

Refer to Plasite bulletin PA-3.

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PLASITE® 4600

MASKING & PROTECTION

Mask or remove adjacent surfaces and equipment that are not to be lined. Once applied, PLASITE 4600 is difficult to remove.

Protect nearby pumps, motors and other equipment from spent abrasive venting from the tank during blasting.

READ THIS SECTION PRIOR TO APPLICATION

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 within 5°F of 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.

EQUIPMENT

Use a fixed ratio (4:1 by volume) plural component spray rig such as: Graco King Hydro-Cat (or equal) with heated hoppers, heated hoses to a mixer manifold through a static mixer to a 50 ft/15.2 m whip hose followed by a silver gun (Binks 1M or equal) utilizing self-cleaning reverse "a" tips from .017-.035 in./0.43-0.88 mm size. See equipment specifications for more details.

Note: The "A" side should be at 110-125°F/43-52°C and the "B" side at 90-100°F/32-38°C. This will ensure proper spraying of PLASITE 4600.

Take care to prevent the mixed material from setting up in your hoses. For best results, keep your hoses as short as possible, purge them immediately if work is interrupted, keep them out of direct sunlight and insulated from hot surfaces.

MIXING

For touch-up only

We recommend using Jiffy type mixers for all mixing and stirring. When operating the mixer avoid plunging it up and down in the bucket. This can fold air into the resin, which may cause bubbles to form in the coating after it has been applied.

Individually stir each separate Part A and Part B component to a smooth, uniform consistency and color. Any sediment in the container must be thoroughly scraped up and redispersed.

APPLICATION

Spray

Immediately before applying a spray coat, stripe all continuous welds and edges with a brush-coat to assure adequate protection of these areas.

All spray equipment should be clean and in proper working order. Contact Technical Service for start-up and clean-up procedures. Adjust pressure to 50-70 lbs./3.5-4.8 bars and open the valves at the manifold and purge materials at the spray gun. Attach spray tip and begin to spray. Dependent upon tip size, each pass will be 8-14 mils/0.2-0.35 mm per pass.

Apply criss-cross multi-passes, moving gun at a fairly rapid rate, maintaining a wet appearing film. Use a wet film thickness gauge to monitor film build.

Note: Force curing may be desirable in certain circumstances. Check with Carboline Technical Service Department.

TOUCH-UP OR RECOATING

Before any touch-up or recoat material can be applied, the first coat must be properly prepared for intercoat adhesion.

The first coat must be cured firm to the touch. Coating on floors must be able to support foot traffic.

Scrub the first coat with soap and water and thoroughly rinse and dry it.

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If the first coat cures more than 24-hours, lightly sand or mechanically abrade the surface after scrubbing it down with soap and water.

Any surface to be touched up or recoated should be protected. When the recoat material is applied, the surface must be dry and free of all dirt, dust, debris, oil, grease and other contamination.

CLEANUP

Before PLASITE 4600 gels it can be cleaned from hand tools and equipment using hot, soapy water.

Spray equipment should be cleaned before coating and lining material begins to gel. Follow equipment manufacturer's recommendations for proper cleaning and care instructions.

After PLASITE 4600 gels, xylene or MEK will be required for cleaning. Chlorinated solvents may be used if flammable solvents are not allowed.

CLEANUP THINNER: Thinner #71

RECOMMENDATIONS

Application and curing times are dependent upon ambient conditions. Steel substrate application temperatures range from 35-110°F/2-43°C. Please consult the Carboline Technical Service Department if conditions are not within recommended guidelines.

SAFETY READ THIS NOTICE

FOR INDUSTRIAL USE ONLY. When using PLASITE 4600 products, be aware of these safety precautions:

- Avoid contact with eyes and skin.
- Do not ingest or inhale.
- Always wear chemical goggles, rubber gloves, and appropriate work clothing.
- Make provisions for forced ventilation when working in a confined area.
- Wear fresh air hood when spraying in confined area.
- Wear fresh air hood or an organic mist respirator when spraying in an open area.
- Prolonged or repeated exposure to the mixed material or the unreacted Part A and Part B components may cause skin irritation or allergic reaction.
- Refer to material safety data sheets (MSDS) regarding individual components.

This data sheet provides standard information on the coating and application procedure. Since varying conditions may not be covered, consult with your local sales representative or Carboline Technical Service Department for further information.



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