

**PRODUCT DESCRIPTION**

PLASITE 4555 S is a 100% solids, flake filled, premium, novolac epoxy coating designed for internal steel tank lining. It is a two component system consisting of four-parts by volume of Part A resin and one part by volume of Part B hardener. It is applied by plural component or single component spray equipment, typically at a total thickness of 25-30 mils/625-750 microns in a one coat application for internal lining applications.

**USES/APPLICATIONS**

- Food grade lining
- Liquid food products such as orange juice, beer, wine, grape juice, tomato products
- FDA Compliant 21CFR175.300

**PRODUCT ADVANTAGES**

- High impact resistance
- Superior bond strength to steel and concrete
- Resistance to a broad range of chemicals
- Can be applied in a one-coat application up to 30 mils/.75 mm
- Easily repaired using inter-coat prep procedures

**CHEMICAL RESISTANCE**

PLASITE 4555 S is resistant to a broad range of chemicals such as salts, alkalis, some solvent, and many acids (including concentrated sulfuric acid).

**COLORS**

PLASITE 4555 S is offered in light gray

**PACKAGING**

PLASITE 4555 S is available in one, five gallon units, and 55 gallon kits.

One gallon unit includes:

- 1 gallon can of Part A (resin)
- 1 quart can of Part B (hardener)

Five gallon unit includes:

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

**FILM THICKNESS**

PLASITE 4555 S is typically applied at 25-30 mils/.63-.75mm in a one coat application.

**COVERAGE**

The theoretical coverage of PLASITE 4555 S is 1604 mil sq ft/gal. For estimating purposes, one gallon will cover 43 sq. ft/gal at 30 mils/.75 mm (20% loss included).

**THINNERS**

**NO THINNER IS RECOMMENDED**

**VOC CONTENT**

Color	Coating as Supplied (Determined Theoretically)	
	Lbs./Gal.	g/L
Lt. Gray	.04 +/- 2%	18.16 +/- 2%

**STORAGE CONDITIONS**

Keep PLASITE 4555 S products tightly sealed in their original containers until ready for use. Store at 50-85°F/10-29°C, out of direct sunlight. Properly stored Plasite 4555 S has a shelf life of 6 months.

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**PHYSICAL CHARACTERISTICS**

**Weight per Mixed Gallon**.....10 lbs.

**Pot-life**.....@75°F/24°C: 45-60 minutes.

**Cure Time (Approx.):**

**Dry To Touch**.....@ 75°F/24°C: 12 hours

**Firm**.....@ 75°F/24°C: 24 hours

**Chemical Service**.....@ 150°F/65°C: 4 hours

**Flammability**.....Nonflammable

**Shelf Life**.....6 months

To ensure maximum film build, PLASITE 4555 S should be used within three months of the manufacture date.

Proper jobsite storage of PLASITE 4555 S 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.

**SUBSTRATE PREPARATION****Steel**

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" 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.

The steel must be blasted to a minimum near White Metal Finish (NACE No. 2, SSPC SP 10) with a 4 mil/100 micron 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.

**MASKING & PROTECTION**

Mask or remove adjacent surfaces and equipment that are not to be lined. Once applied, PLASITE 4555 S is difficult to remove.

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

# Plasite® 4555 S

## APPLICATION GUIDELINES

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/3°C 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

### Single Component Airless Spray

Consult manufacturer.

All pumps and hoses must be in proper working order, clean and free of foreign matter. Use air motor with an air ratio of 45:1 or larger such as Graco "King" airless spray pump.

All filters should be removed from the pump. Use a 3/8 in. spray hose from pump to gun, not to exceed 100 ft. It is best to bring the material directly to the gun body and not go through a tube in the handle.

The size of airless spray tip will depend on the area being sprayed, the viscosity, and the temperature of the materials. Use sizes from 0.019-0.035 inches. If using an inline filter, use a 60-mesh screen size.

The mixed material temperature should be 75-85°F/24-38°C for best spraying.

**Note:** Ambient temperature above 85°F/29°C will shorten pot life.

To prepare the material for spraying, mix Part A with a jiffy type mechanical mixer for two minutes, mix Part B until color is well blended, then mix Part A and Part B together for two minutes using the jiffy mixer.

When using a 45:1, set the mixed material under the pump (it is best to remove the siphon tube and pump directly from the bottom of the pump) and start spraying. The air pressure required will vary between 55-65 lbs. If using a 56:1, the siphon tube may remain attached.

When spraying is completed or after every 30 minutes (75°F), solvent purge the lower unit and spray gun, then remove the bottom ball valve and clean thoroughly. At higher temperatures more frequent flushing of the equipment and lines will be required.

## Plural Spray

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. whip hose followed by a silver gun (Binks 1M or equal) utilizing self-cleaning reverse "a" tips from 0.019 to 0.035 inches. See equipment specifications for more details.

Note: The "A" side should be at a minimum of 110°F/43°C and the "B" side at 90-100°F/32-38°C. This will ensure proper spraying of Plasite 4555 S.

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.

## APPLICATION

### 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. Brush, roller or spray.

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.

## Spray

Immediately before applying a spray coat, stripe all continuous welds with a brush applied stripe coat. A stripe coat, applied by spray, may be applied to all sharp edges to adequately protect these critical areas.

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

## CURING

PLASITE 4555 S will be dry to the touch in 12 hours at 75°F/24°C and ready for immersion service when force cured at 150°F/65°C for four hours. Flash for 15 minutes and raise temperature 30°F every 30 minutes. Hold at 150°F for four hours.

## LINING REPAIR

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

## INSPECTION

Degree of surface preparation shall conform to appropriate specifications as outlined in SURFACE PREPARATION section. Total dry film thickness of the coating system shall be determined with a non-destructive magnetic gauge properly calibrated.

## RECOMMENDATIONS

- Apply only on a clean, sound, properly prepared substrate.
- Maximum material and surface temperatures are 150°F/66°C and 100°F/38°C respectively, at the time of application.
- Relative humidity should be between 0-85%.
- Substrate temperature should be 5°F/3°C above the dew point.
- Application and curing times are dependent upon ambient conditions. Consult Carboline's Technical Service Department if conditions are not within recommended guidelines.
- At a minimum coating should be rinsed with potable water

## Cleanup & Safety

<b>Cleanup</b>	Use Thinner #2 or Acetone. In case of spillage, absorb and dispose of in accordance with local applicable regulations.
<b>Safety</b>	Read and follow all caution statements on this product data sheet and on the MSDS for this product. Employ normal workmanlike safety precautions. Hypersensitive persons should wear protective clothing, gloves and use protective cream on face, hands and all exposed areas.
<b>Ventilation</b>	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.
<b>Caution</b>	This product contains 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.



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