

**TYPE**

A low VOC epoxy coating polymerized with a polyamine-type curing agent.

**INTENDED USE**

Primarily as a tank lining and heavy duty maintenance coating with low temperature cure properties.

**TEMPERATURE RESISTANCE**

Dry film basis is 350°F/177°C for short periods. Continuous immersion temperatures depend on particular reagent and temperatures.

**COLOR**

Charcoal Gray

**FILM THICKNESS PER COAT**

A 5-8 mils/0.13-0.20 mm film is produced in one multi-pass spray coat. Total film thickness recommended: DI water, tap water and refined petroleum products - 10-14 mils/0.25-0.35 mm; waste and brine water, crude oil, unrefined petroleum products, petroleum process water solutions and leachate - 12-16 mils/0.3-0.4 mm.

**COVERAGE**

1,267 mil ft<sup>2</sup>/gal. (theoretical). For estimating purposes, 84 ft<sup>2</sup>/gal.(2.06 m<sup>2</sup>/l) will produce a 12 mil/0.3 mm DFT film (20% loss included). Two multi-pass spray coats will produce the DFT recommended for immersion service.

**VOC CONTENT**

Color	Coating as Supplied (Determined Theoretically)		Thinned 10% by Volume with Plasite Thinner #71 (Determined Theoretically)	
	Lbs./Gal.	g/L	Lbs./Gal.	g/L
Charcoal Gray	1.4 ± 2%	166 ± 2%	1.88 ± 2%	225 ± 2%

VOC Content varies between colors. Contact Carboline Technical Service Department for VOC of specific colors.

**DRYING TIME**

Surface will normally be tack free in 6 to 8 hours at 70°F.  
Curing will take place in:

5 Days Minimum at 70°F	8 Days Minimum at 40-49°F
6 Days Minimum at 60-69°F	9 Days Minimum at 30-39°F
7 Days Minimum at 50-59°F	10 Days Minimum at 20-29°F

**THINNERS**

PLASITE Thinner #71 is recommended under most conditions. The amounts of thinner required will vary depending on air and surface temperatures and application equipment. Normal application temperatures and conditions will require addition of approximately 10% by volume with approximately 5% additional thinner added for each 5°F/3°C of increased temperature. Airless spray equipment and above or below normal application temperatures require additional thinning. It is recommended that the amount of thinner included on each order amount to approximately 20% of the coating order.

**Cleanup Thinner:** Thinner #71

**CURING**

Surface will normally be tack free in 6 to 8 hours at 70°F/21°C. For immersion service, curing will normally take place in 5 days at 70°F/21°C, 6 days at 60-70°F/16-21°C, 7 days at 50-60°F/10-16°C,

**PHYSICAL SPECIFICATIONS**

**Pigments:** Iron oxide and inerts.

**Solids:** 92% ± 2% by weight; 79% ± 2% by volume.

**Pot Life:** Approximately 1 hour at 70°F.

**Shelf Life:** 24 months at 70°F. Material in stock should be turned upside down every 3 months.

**Thermal Shock:** Unaffected in 5 cycles, minus 70°F to plus 212°F.

**CHEMICAL RESISTANCE**

The following list of laboratory tests is an indication of the range of chemical resistance. These tests consist of 1" x 5" mild steel test panels coated to a film thickness of 12 to 15 mils. The panels were cured at 20°F. The panels were then partially immersed in the solution at temperatures noted for a period of one year.

Crude Oil	150°F
Unleaded Gas	100°F
20% Sodium Chloride Sol.	212°F
10% Sodium Hydroxide	150°F
Jet Fuel A	100°F
Refinery Recycled Cooling Water	150°F

Non-pressurized Atlas Cell test condition consisting of DI water at 180°F. No effect after one year, cured at 70°F for five days.

**Note:** Although the chemical tests indicated show that PLASITE 9057 is unaffected as listed, it is not meant to imply an express guarantee in actual service. The service is dependent upon proper application and actual operating conditions, and it is recommended that users confirm adaptability of the product for a specific use by their own tests. PLASITE 9057 is not suitable for service in corrosive acids or oxidizing service for continuous immersion.

8 days at 40-50°F/4-10°C, 9 days at 30-40°F/-1-4°C and 10 days at 20-29°F. As ventilation and other factors affect the time/cure of coatings, additional time allowance is recommended at any temperature if cure time is questioned.

**SURFACE PREPARATION****Steel - Immersion Service**

All sharp edges shall be ground to produce a radius and all imperfections such as, skip welds, delaminations, scabs, slivers and slag shall be corrected prior to abrasive blasting. Skip welds shall be welded solid.

Degrease surface prior to sandblasting. Organic solvents, alkaline solutions, steam, hot water with detergents or other systems that will completely remove dirt, oil, grease, etc. may be used. Used tanks may require additional decontamination.

The surface shall be blasted to an SSPC-SP5 or NACE No. 1 white metal surface using a Venturi blast nozzle supplied with 80-100 psi/20-40 N. An anchor pattern or "tooth" in the metal shall correspond to approximately 20 to 25% of the total film thickness of the coating.

Contaminated grit shall not be used for the finish work. The blasting media used shall be a natural abrasive, steel grit or slag grit (similar or equal to BLACK BEAUTY®). These abrasives shall be sharp with a hard-cutting surface, properly graded, dry and of best quality. The media shall be of proper size to obtain the specified anchor pattern and shall be free of objectionable contaminants.

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# PLASITE® 9057

The anchor pattern shall be sharp and no evidence of a polished surface is allowed.

Remove all traces of grit and dust with a vacuum cleaner or by brushing. Care must be taken to avoid contaminating the surface with fingerprints or from detrimental material on the workers' clothes.

The surface temperature shall be maintained at a minimum of 5°F/3°C above the dew point to prevent oxidation of the surface. The coating shall be applied within the same day that the surface has been prepared. Visible oxidation or condensation is not allowed.

## Service in Corrosive Atmosphere

Degrease as described above.

SSPC-SP10 or NACE No. 2 (near white metal blast cleaning) - strong fumes and splash spill.

SSPC-SP6 or NACE No. 3 (commercial blast cleaning) - high temperature fumes.

SSPC-SP7 or NACE No. 4 (brush-off blast cleaning) - chemical atmosphere and weathering.

SSPC-SP3 (power tool cleaning) - chemical atmosphere and weathering.

Surface preparation for chemical atmosphere and weathering must result in a relatively rough surface. If the steel is new and this type of surface preparation does not leave a reasonably rough surface on the steel, then the heavy film system is not recommended.

Depending on service conditions, film thickness requirements may be reduced. Contact Carboline Technical Service Department for further information.

## Concrete

Contact Carboline for a recommendation.

## Aluminum

Surface shall be clean and grease-free with a blast produced anchor pattern or "tooth" as described earlier under STEEL. In addition, the blasted surface shall be given a chemical treatment such as:

ALODINE 1200S available from Henkel Surface Tech

IRIDITE 14-2 produced by MacDermid Incorporated

OAKITE CRYSCOAT 747LTS and OAKITE CRYSCOAT

ULTRASEAL produced by Oakite Products

For immersion, blasting with sharp grit followed by the chemical surface treatment is required.

Note: On metallic surfaces prepared only by chemical etching, the total coating film thickness applied should be restricted to only half the film normally applied to blasted surfaces. This reduced film thickness should be considered during the selection of the coating for the service and the type of surface preparation performed.

## APPLICATION

### Mixing

Mix Part B into Part A using mechanical agitator, making sure all of Part B is completely mixed with Part A. Mix well until obtaining a smooth liquid free of any unmixed particles of pigment. Add Part C and mix well. Part A is the liquid resin. Part B is the pigment and Part C is the curing agent. Splitting of kits is not recommended. If necessary, mix Part A and Part B thoroughly and proportion mixture accurately with Part C (using three parts by volume of the mixture to one part of the Part C by volume). Continuous slow agitation during use is recommended.

### Spray

All spray equipment should be thoroughly cleaned and the hose, in particular, should be free of old paint film and other contaminants.

Use standard production type spray guns:

When airless spray equipment is used, the recommended liquid pressure is 1800-2200 psi/100-150 bars with tip size from .017-.021 in./0.43-0.48 mm. Thinning requirements are more than for conventional spray.

Continuous mixing during use is recommended.

Air supply shall be uncontaminated. Adjust air pressure to approximately 50 lbs./200 N at the gun and provide 5-10 lbs./20-40 N of pot pressure. Adjust spray gun by first opening liquid valve and then adjusting air valve to give an 8-12 in./20-30 cm wide spray pattern with best possible atomization.

Apply a "mist" bonding pass.

Allow to dry approximately one minute but not long enough to allow film to completely dry.

Apply crisscross multi-passes maintaining an even continuous wet appearing film. This technique will enable an 8-10 mils/0.20-0.25 mm wet film (approximately 6-8 mils/0.15-0.20 DFT) to be applied per multi-pass coat. Repeat this procedure for the second coat to obtain a 12-16 mils/0.3-0.4 mm DFT.

Overcoat time will vary both with temperature and ventilation. Normal requirements are 8 to 12 hours at 70°F/21°C for enclosed spaces with 36 to 48 hours needed if coating is being applied at 20°F/-7°C temperature. Remove all overspray by dry brushing or scraping if required.

Equipment must be thoroughly cleaned immediately after use with Plasite thinner to prevent the setting of the coating.

**Note:** Prior to spray application, stripe brush all welds, attachments, and surface irregularities using PLASITE 9057 thinned a minimum of 50% by volume with PLASITE Thinner #71.

## Brush

Recommended for small areas and repairs only. Use a high quality brush and apply a very light crisscross brush coat. Allow to dry for approximately 5 minutes. Then apply a heavy coat using a crisscross brush pattern. "Flow" the coating on rather than try to "brush out." Allow to dry tack-free. Repeat until sufficient film thickness is obtained. Normally, a film thickness of 3-4 mils/0.75-0.1 mm can be obtained per coat by this method.

## INSPECTION

CAUTION!! Due to the type of pigmentation in PLASITE 9057, high voltage holiday inspection equipment cannot be used without damaging the coating film. The use of non-destructive type holiday inspection equipment, such as the Tinker Razor Model M1 A 67.5 volt wet sponge type detector, is recommended.

Degree of surface preparation shall conform to appropriate specifications as outlined in the SURFACE PREPARATION section. Film thickness of each coat and total dry film thickness of coating system shall be determined with a nondestructive magnetic gauge properly calibrated.

Refer to Plasite Bulletin PA-3, Section 3, for inspection requirements.

### SAFETY READ THIS NOTICE SAFETY AND MISCELLANEOUS EQUIPMENT

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. Keep out of the reach of children.



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