

**TYPE**

A high solids, modified epoxy cured with an amine curing agent. Formulated with particular attention to providing abrasion and chemical resistance, ease of handling and conformance to government regulations limiting volatile content. Silicon carbide filler greatly enhances abrasion resistance.

**INTENDED USE**

As a tank lining and industrial maintenance. May be applied to metal or concrete. **FOR INDUSTRIAL USE ONLY!**

**TEMPERATURE RESISTANCE**

Dry temperature basis is 350°F for short periods; 250°F continuous. Immersion temperatures depending on particular reagent.

**COLORS**

Lt. Gray only: (color U74P)

**FILM THICKNESS PER COAT**

A 6 to 7 mil film is easily produced in one multi-pass spray coat.

**COVERAGE**

1,435 mil ft<sup>2</sup>/gallon ± 2% (theoretical). For estimating purposes 88 ft<sup>2</sup>/gallon will produce a 13 mil film (20% loss included). Two to three coats will produce a 12 to 15 mil film for immersion service.

**DRYING TIME**

Surface will normally be tack free in 10 to 12 hours at 70°F. Cure time is 7 days at 70°F or 14 days at 50°F. For more complete cure information, refer to curing section.

**OVERCOATING TIME**

Do not exceed 130°F metal temperature for 3 hours or 14 days ambient temperature prior to applying top-coat.

**THINNERS**

PLASITE Thinner #71 (a medium fast thinner to be used under most conditions) is recommended.

**PHYSICAL SPECIFICATIONS**

**Pigments:** Titanium dioxide, inerts, tinting colors and special abrasion resistant pigments.

**Solids:** 95% ± 2% by weight; 89.5% ± 2% by volume.

**Pot Life:** Approx. 2 to 4 hours at 70°F. A slight decrease in film build properties may be noted after 11/2 to 2 hours.

**Shelf Life:** 24 months at 70°F.

**Shipping Weight:** Approximately 15 lbs/gal.

**Abrasion Resistance:** 12.4 milligrams average loss per 1000 cycles, Taber CS-17 Wheel, 1000 gram weight, Lt. Gray color.

**Surface Hardness:** Konig Pendulum Hardness of 164 seconds (Glass Standard = 250 seconds); ASTM Method D4366-84.

**Thermal Shock:** Unaffected 5 cycles, minus 70°F to plus 200°F.

**Gloss:** 83 at 60°F degrees.

**CHEMICAL RESISTANCE**

Excellent chemical resistance to a wide range of acids, alkalies, solvents and water solutions.

The amounts of thinner required will vary depending upon air and surface temperatures and application equipment. Normal application temperatures and conditions will require addition of approximately 5 to 10% by volume with approximately 5% additional thinner added for each 5° of increased temperature.

It is recommended that the amount of thinner included on each order amount to approximately 20% of the coating order.

**CLEANUP THINNER:** Thinner #71

January 2006 replaces August 2003

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# PLASITE® 9081 SC

High Solid Amine Cured Epoxy

## 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
Lt. Gray	.72 ± 2%	86 ± 2%	1.27 ± 2%	152 ± 2%

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

## CURING

For immersion service, complete curing will normally take place in 7 days at 70°F or 14 days at 50°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. When exposure is severe, force curing is recommended to obtain maximum resistance.

Listed below are a few curing schedules that may be used for time and work planning. When applying at temperatures of 50°F to 60°F, allow 16 to 24 hours air dry time prior to raising the metal to the force curing temperature. When applying at temperatures above 60°F to 70°F, allow 2 to 5 hours air dry time. After the appropriate air dry period, raise metal temperature approximately 30°F each 30 minutes until the desired force curing metal temperature is reached.

METAL TEMPERATURE	CURING TIME	METAL TEMPERATURE	CURING TIME
130°F	18 Hrs	170°F	4 Hrs
140°F	10 Hrs	180°F	3 Hrs
150°F	6 Hrs	190°F	2 ½ Hrs
160°F	5 Hrs	200°F	2 Hrs

Final cure may be checked by exposing coated surface to MIBK for ten minutes. If no dissolving and only minor softening of film occurs, the curing can be considered complete. The film should reharder after exposure if cured.

## SURFACE PREPARATION

### Steel

#### High Temperature & 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 a SSPC-SP5 or NACE No. 1 white metal using a Venturi blast nozzle supplied with 80 to 100 psi. 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, or 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.

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° 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.

### Concrete

All concrete surfaces require whip blasting for immersion service. Fully cured concrete must be blasted to provide a hard, firm, clean and neutral surface for coating. All concrete surfaces must be filled and sealed with SEMSTONE 6028 or SEMSTONE 9029, applied in accordance with SEMSTONE product data sheet 9028 or SEMSTONE product data sheet 9029. All surface imperfections, "bug holes," etc. must be completely repaired before application of PLASITE 9081SC.

Severity of expected service will dictate minimum concrete surface preparation. Severe service (strong fumes, spillage, etc.) will probably require immersion service surface preparation and SEMSTONE 6028 or SEMSTONE 9029 filling and sealing before application of PLASITE 9081SC.

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## 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 Technologies  
32100 Stephenson Highway  
Madison Heights, MI 48071

IRIDITE 14-2 produced by  
MacDermid Incorporated  
245 Freight Street  
Waterbury, CT 06702

OAKITE CRYSCOAT 747LTS  
and  
OAKITE CRYSCOAT ULTRASEAL  
Produced by Oakite Products  
50 Valley Road  
Berkeley Heights, NJ 07922

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

## MIXING

The curing agent and coating are supplied in separate containers at a 5:1 ratio. For splitting purposes, use 1 part curing agent to 5 parts coating by volume. Thoroughly mix coating, then add curing agent slowly and mix completely with coating. The coating should stand approximately 15 minutes after the curing agent has been thoroughly mixed.

**Note:** CONTINUOUS MIXING DURING USE IS REQUIRED.

## APPLICATION

### 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:

GUN	FLUID	AIR
DeVilbiss JGA-510	E	797
Binks #2001	66-SS	63-PB
Graco P800	04	02

A heavy-duty trigger spring is recommended. Atomizing air spray is recommended because of the high wear rate of tips and pump parts on airless spray equipment.

Air supply shall be uncontaminated. Adjust air pressure to approximately 50 lbs. at the gun and provide 10 to 15 lbs. of pot pressure. Adjust spray gun first by opening liquid valve and then adjusting air valve to give an 8" to 12" wide spray pattern with best possible atomization.

Apply a "mist" bonding pass.

Allow to dry approximately 1 minute but not long enough to allow film to completely dry.

Apply crisscross multi-passes, moving gun at fairly rapid rate, maintaining a wet appearing film. Fast multi-passes may be applied until you have a film thickness of approx. 6 to 7 mils (approx. 7 to 8 wet mils).

OVERCOAT TIME will vary both with temperature and ventilation and will require from 10 to 12 hours at 70°F for enclosed spaces. Less time is required for exteriors. Remove all overspray by dry brushing or scraping if required.

A second coat may be applied as above to obtain a 12 to 15 mil DFT.

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 9081SC previously thinned a minimum of 50% by volume of PLASITE Thinner #71.

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## Brush

Normally not recommended except for touch-up, repairs or at weld areas prior to spraying. Frequent stirring of coating is required.

## INSPECTION

Refer to PLASITE Bulletin PA-3 for inspection requirements.

## SAFETY

### READ THIS NOTICE SAFETY AND MISCELLANEOUS EQUIPMENT

For tank lining work, 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.

**CAUTION** - Read and follow all caution statements on this product data sheet, material safety data sheet and container label for this product.

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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