product data carboline®

PLASITE® 9573

TYPE
A low temperature bake high solids epoxy phenolic cured with an amine curing agent.

INTENDED USE
As a highly resistant film for chemical tank lining service.

TEMPERATURE RESISTANCE
Non-immersion basis is 300°F/149°C continuous. Immersion temperatures depend on particular reagent.

COLORS
White and Lt. Gray.

FILM THICKNESS PER COAT
A 6-7 mil/0.15-0.18 mm film is produced in one multi-pass spray coat.

COVERAGE
1331 mil ft^2/gal. (theoretical). Two coats will produce a 12-15 mil/0.3-0.38 mm DFT film required for immersion service. For estimating purposes, 79 ft^2/gal/1.94 m^2/l will produce a 12-15 mil/0.3-0.38 mm DFT (20% loss included).

DRYING TIME
Surface will normally be tack-free in 16 hours at 90°F/32°C or 24 hours at 70°F/21°C. Drying time between coats may be decreased by force curing. Do not force cure at temperatures in excess of 150°F/66°C. When force curing at temperatures between 120-150°F/49-66°C, the length of cure must not exceed 12 hours.

Caution: Overbaking between coats will result in loss of adhesion.

VOC CONTENT

	Coating as Supplied (Determined Theoretically)		Thinned 10% by Volume with Plasite Thinner #71 (Determined Theoretically)	
Color	**Lbs./Gal.**	**g/L**	**Lbs./Gal.**	**g/L**
Lt. Gray	1.20 ± 2%	144 ± 2%	1.71 ± 2%	205 ± 2%
White	1.20 ± 2%	144 ± 2%	1.71 ± 2%	205 ± 2%

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

CURING
The final bake is based on metal temperatures and coating on 18 gauge steel: 4 Hours at 200°F/93°C minimum (Metal Temperature).

THINNERS
Plasite Thinner #71 is recommended for thinning and clean-up.

It will always be necessary to thin the coating. The applicator must make exact thinner adjustments based on his equipment and air and surface temperatures. The following thinning guidelines are appropriate.

Normal application temperatures and conditions will require the addition of approximately 10 to 20% thinner by volume with approximately 5% additional thinner added for each 5°F/3°C of increased temperature.

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

PHYSICAL SPECIFICATIONS

Abrasion Resistance: 85 milligrams average loss per 1000 cycles, Taber CS-17 Wheel, 1000 gram weight.

Surface Hardness: Konig Pendulum Hardness of 160 seconds (Glass Standard = 250 seconds); ASTM Method D4366-84.

Pigments: Titanium dioxide, iron oxide black and inerts.

Solids: 90 ± 2% by weight; 83 ± 2% by volume.

Pot Life: Approximately 1 hour at 70°F.

Shelf Life: 12 months at 70°F. Material in stock should be turned upside down every 3 months.

Shipping Weight: Approximately 13 lbs/gal.

Mixing Ratio: 1 part curing agent to 4 parts coating material by volume.

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

Gloss: 35 at 60°.

CHEMICAL RESISTANCE
The following list of laboratory tests is an indication of the range of chemical resistance. These tests consist of mild steel test panels coated to a film thickness of 12 to 15 mils. The panels are one-half immersed in the solution at temperatures noted for a period of one year with no effect on the coating.

Acetone……..100°F
Diethylene Glycol……..100°F
Liquor, Weak Black (Sulfate Process)…...100°F
Methanol……..100°F
Methyl Ethyl Ketone……..100°F
Potassium Hydroxide, 50%……..150°F
Propylene Glycol Methyl Ether……100°F
Sodium Hydroxide, 10%……..150°F
Sodium Hydroxide, 50%……..150°F
Styrene……100°F

Note: Although the chemical tests indicated may show that PLASITE 9573 is unaffected by immersion 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 generally recommended that users confirm adaptability of the product for a specific use by their own tests.

PLASITE 9573 is classified as a relatively thin film coating and should not be used for total and continuous immersion in certain chemicals which have extremely high corrosion rates to mild steel and other substrates. Use in such chemical exposure should be confined to fumes and spills.

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. Prebaking of old tanks is recommended. Additional decontamination may also be necessary.

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/6-7 bars. The air supply shall be free of oil, water and other contaminants. An anchor patter 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.

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.

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 a 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 selection of the coating for the service and the type of surface preparation performed.

APPLICATION

Mixing

The curing agent and coating are supplied in separate containers at a 4:1 ratio. For splitting purposes, use 1 part curing agent to 4 parts coating by volume. Thoroughly mix coating, then add curing agent slowly and mix completely with coating.

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

When airless equipment is used, the recommended liquid pressure is 1500-1800 psi/100-120 bars with tip size from .017-.021 in./0.43-0.53 mm. Thinning requirements are more than for conventional spray.

Air supply shall be uncontaminated. Adjust air pressure to approximately 60-80 lbs./300-400 n at the gun and provide 30-35 lbs./150-155 n of pot pressure. Adjust spray gun first by 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 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. Observe the coating surface and when it appears to be flowing together, you will have an average of 4-5 mils/0.1-0.8 mm wet film. By allowing the solvents to flash-off a few minutes, several more fast multi-passes may be applied until you have a film thickness of approximately 5-7 mils/0.13-0.18 mm DFT (approximately 8-10 mils/0.2-.025 mm wet). Repeat this procedure for the second coat to obtain a 12-15 mil/0.3-0.38 mm DFT.

Overcoat time will vary both with temperature and ventilation and will require from 16 to 24 hours at 70 -90°F/21-32°C for enclosed spaces. Refer to DRYING TIME. Remove all overspray by dry brushing or scraping if required.

Air dry with ventilation a minimum of 60 minutes prior to introducing heat.

After the air dry period has elapsed, the temperature should be raised approximately 30°F in increments of 30 minutes until the desired temperature is reached. Refer to CURING.

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 9573 thinned a minimum of 50% by volume with PLASITE Thinner #71.

Brush

Normally not recommended except for touch-up, repairs or at weld areas prior to spraying.

INSPECTION

Degree of surface preparation shall conform to appropriate specification as outlined in 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 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.

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

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