product data

carboline

PLASITE[®] 9062

TYPE

A high solids modified epoxy cured with an amine adduct curing agent. Designed specifically as a high chemical-resistant, non-toxic odorless coating.

INTENDED USE

Primarily as a tank lining and equipment coating material for the food and beverage industries. When properly applied and force cured, Plasite 9062 will not impart taste or odor. FOR INDUSTRIAL USE ONLY!

GOVERNMENT AGENCY ACCEPTANCE

Meets the requirements of the US Food & Drug Administration, 21 CFR 175.300. Plasite 9062 has been accepted by the US Environmental Protection Agency for surfaces which contact potable water.

CHEMICAL RESISTANCE

Excellent resistance to various fermentation processes, beer and high alcohol content wine storage.

TEMPERATURE RESISTANCE

Dry film basis is 400° F for short periods; 250° F continuous. Immersion temperatures depend on particular reagent.

SURFACE PREPARATION

Prepare steel surface by blasting as required by ZONE OF USAGE section.

APPLICATION

Plasite 9062 is formulated for standard heavy duty spray equipment.

COLORS: White and Lt. Gray

FILM THICKNESS PER COAT

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

COVERAGE

1251 mil ft²/gallon \pm 4% (theoretical). For estimating purposes, 77 ft²/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.

CURING TIME

7 days at 70°F to 90°F. Refer to CURING information for force curing. Force curing is required to prevent possible taste and odor pickup by sensitive food products.

VOC CONTENT

	Coating as Supplied (ASTM Method D2369)		Thinned 10% by Volume with PLASITE Thinner #71		
Color	Lbs./Gal.	g/L	*Lbs./Gal.	*g/L	
White	1.19 ± 4%	143 ± 4%	1.69 ± 4%	202 ± 4%	
Lt. Gray	1.20 ± 4%	144 ± 4%	1.71 ± 4%	204 ± 4%	
*Determined theoretically by using ASTM Method test results.					

ZONE OF USAGE

A ZONE: Includes immersion service for process, transportation and storage vessels, as well as exteriors of high temperature equipment, sumps, sewers, exhaust ducts, concrete bases and floors, or other surfaces subject to combinations of high temperature and heavy spills of corrosive chemicals. SSPC-SP5 blast and a film thickness of 12 to 15 mils required.

B ZONE: Interior process areas where structural steel, floors, equipment, ducts and surfaces are subject to attack by strong fumes, occasional spills and splashes at intermediate temperatures. SSPC-SP5 or SSPC-SP10 required. With surface preparation as indicated,

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PHYSICAL SPECIFICATIONS

Pigments:......Titanium dioxide, inert fillers and tinting colors

Solids:......88% ± 4% by weight; 78% ± 4% by volume

Pot Life:.....Approximately 1 hour at 70°F. Pot life may be shorter at higher temperatures.

Shelf Life:.....12 months minimum at 70°F

Shipping Weight:.....Approx. 13 lbs/gallon

Curing Agent Ratio: 1 part of curing agent to 4 parts of coating material. Coating is supplied in short filled containers with proper amount of curing agent supplied in separate containers.

*Abrasion Resistance: 104 milligrams average loss per 1000 cycles, Taber CS-17 Wheel, 1000 gram weight.

*Surface Hardness: Konig Pendulum Hardness of 112 seconds (Glass Standard = 250 seconds); ASTM Method D4366-84.

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

*Note:.....Above tests were conducted on film cured at 150°F.

the finish coating is considered self-priming, although if desired a heavy duty primer may be incorporated as part of the system.

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 for the noted time with little or no effect to the coating:

Reagent	Temp.
Carbon tetrachloride	75°F
Chlorobenzene	75°F
Ethanol	150°F
Ethyl acetate	100°F
Ethylene dichloride	100°F
Ethylene glycol	100°F
Gasoline unleaded 90%; Methanol 10%	100°F
Gasoline unleaded 90%; Ethanol 10%	100°F
Isophorone	100°F
Maleic anhydride	150°F
Methanol	100°F
Methyl tertbutyl ether	100°F
Oil, crude	200°F
Oleic acid	100°F
Sodium hydroxide 50%	100°F
Styrene	75°F
Tall Oil	100°F
Tributyl Phosphate	100°F
1,1,1-trichloroethane	100°F
Vodka, 190 proof	100°F
Wine (fortified) 20% alcohol by volume	100°F

Note: Although the chemical tests indicated may show that Plasite 9062 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.

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THINNERS

Plasite Thinner #71 is a medium fast thinner and is to used under most conditions. The amounts required will vary depending upon air and surface temperatures and application equipment. Normal application temperatures and conditions will require the addition of approximately 5 to 10% thinner by volume with approximately 5% additional thinner added for each 5° of increased temperature. It is recommended that the actual amount of thinner included on each order amount to approximately 20% of the coating order.

CURING

Normally polymerization and curing will take place in 5 to 7 days at 70° F. This coating should not be applied when air temperature or temperature of surface to be coated is below 50° F. Within 24 hours after coating is applied, a minimum substrate temperature of 70° F is required for proper polymerization.

Force curing at elevated temperature is desirable for certain exposures. Where coating is to be subject to immersion in high temperature solutions, wine and beer, and other severe exposures, it is recommended that the curing temperature be at 170°F to 200°F. In order to ensure the complete removal of solvents and odor, force curing is generally recommended when coating is to be used in potable water and food material service.

Listed below are a few curing schedules that may be used for time and work planning. Prior to raising the metal to the force curing temperature, it is necessary that an air dry time of 2 to 5 hours at temperatures from 70° F to 100° F be allowed. After the air dry period has elapsed, the temperature should be raised approximately 30° F each 30 minutes until the desired force curing temperatures are reached

Metal Temperature	Curing Time	Metal Temperature	Curing Time
150°F	12 hours	200°F	6 hours
175°F	10 hours	225°F	4 hours

Final cure may be checked by exposing coated surface to MIBK for 10 minutes. If no dissolving and only minor softening of film occurs, the curing can be considered complete. The film should reharden after exposure if cured.

SURFACE PREPARATION

Steel

A and B Zones (as described under ZONE OF USAGE). High temperature and 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 used tanks is required. 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 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 hardcutting 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° above the dew p9oint to prevent oxidation of the surface. The coating shall be applied within the same day that the surface has been prepared.

Concrete

All concrete surfaces require whip blasting for immersion service. Fully cured concrete must be blasted to provide a hard, firm, clean and neutral

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surface for coating. All concrete surfaces must be filled and sealed with Plasite 9028 M1 or Plasite 9028 M2, applied in accordance with Plasite Technical Bulletin 9028. All surface imperfections, "bug holes," etc. must be completely repaired before application of Plasite 9062. Plasite 9028 M1 and 9028 M2 are NOT recommended for food service. When coating system requires FDA compliance, refer to Plasite Technical Bulletin 9029 Filler.

EQUIPMENT

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-503	E	797
Binks #18	66-SS	63-PB
Graco P-800	04	02

When airless spray equipment is used, the recommended liquid pressure is 1500-1800 psi, with tip size from .017 to .025". Thinning requirements are more than for conventional spray.

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 agent slowly and mix completely with the coating. Plasite Thinner #71 may be added before curing agent to extend pot life.

APPLICATION PROCEDURE

1. Air supply shall be uncontaminated. Adjust air pressure to approximately 50 lbs. at the gun and provide 5 to 10 lbs. of pot pressure. Adjust spray gun by first opening liquid valve and then adjusting air valve to give an 8 to 12" wide spray pattern with best possible atomization.

2. Apply a "mist" bonding pass.

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

4. 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 approximately 6 to 7 mils (approximately 7 to 9 wet mils).

5. Overcoat time will vary both with temperature and ventilation and will normally require 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.

By repeating Step 4, a homogeneous film of 12 to 15 mils is obtained.
Equipment must be thoroughly cleaned immediately after use with Plasite thinner to prevent the hardening of the primer in the equipment.

Note: All welds, pits and rough metal areas should be coated by brush prior to spray application.

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 <u>R E A D T H I S N O T I C E</u> 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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