

TYPE

A low VOC cross linked epoxy-phenolic cured with an alkaline curing agent, formulated with an excellent abrasion resistance while retaining the temperature and chemical resistance properties of PLASITE 7122L.

INTENDED USE

As a tank lining and for industrial maintenance. May be applied to metal or concrete. (Refer to ZONE OF USAGE on Page 2.) FOR INDUSTRIAL USE ONLY!

GOVERNMENT AGENCY ACCEPTANCE

Meets the requirements of the U.S. Food and Drug Administration, 21 CFR 175.300. (NOTE: The color "Green" is not suitable for food service. Special colors may not meet FDA requirements; consult Carboline Technical Service Department).

CHEMICAL RESISTANCE

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

TEMPERATURE RESISTANCE

Dry film basis is 400°F/204°C for short periods. Continuous immersion temperatures depend on particular reagent.

SURFACE PREPARATION

Steel surfaces shall be prepared by blasting as required by ZONE OF USAGE.

APPLICATION

PLASITE 7122LAR is formulated for standard production spray equipment. Refer to Page 4 for details in APPLICATION PROCEDURE section.

COLORS

Green; Light Gray; Medium Gray; White. Special colors are available, but may not be suitable for food service. Consult Carboline Technical Service Department.

FILM THICKNESS PER COAT

A 6 to 7 mil/150 to 175 microns film is produced in one multi-pass spray coat.

PHYSICAL SPECIFICATIONS

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

SOLIDS: 75.3% ± 2% by weight; 59.8% by volume, depending on color and pigmentation.

POT LIFE: Approximately 24 hours at 70°F.

SHELF LIFE: 24 months at 70°F. Material in stock should be turned upside down every 3 months.

SHIPPING WEIGHT: Approximately 13.2 lbs/5.94 kg. per gallon.

***ABRASION RESISTANCE:** 13.3 milligrams average loss per 1000 cycles, Taber CS-17 Wheel, 1000 gram wt., White color.

***SURFACE HARDNESS:** König Pendulum Hardness of 83 seconds; (Glass Standard = 250 seconds): ASTM Method D4366-84.

THERMAL SHOCK: Unaffected 5 cycles minus 70°F to plus 200°F.

Gloss: 70 at 60°

***Note:** Above tests were conducted on film cured at 150°F/65.5°C.

COVERAGE

1026 mil ft² or 312.8 m² @ 25 microns per gallon ± 2% theoretical. For estimating purposes, 61 ft²/gallon will produce a 12 to 15 mil/300 to 375 microns DFT film (20% loss included). Two multi-pass spray coats will produce the 12 to 15 mil/300 to 375 microns DFT film recommended for immersion service.

DRYING TIME

Surface will normally be tack free in 3 to 4 hours at 70°F/21°C.

CURING TIME

5 days at 90°F/32.2°C or 7 days at 70°F/21°C. Refer to Page 2 for force curing.

VOLATILE ORGANIC COMPOUNDS CONTENT

Color	Coating as Supplied (Determined Theoretically)		Thinned 10% by Volume (ASTM METHOD D2369) with PLASITE Thinner #71 (Determined Theoretically)	
	Lbs./Gal.	g/L	Lbs./Gal.	g/L
White	2.7 ± 2%	324 ± 2%	3.11 ± 2%	373 ± 2%

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

*Determined theoretically by using ASTM Method test results.

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PLASITE® 7122LAR

High Solids Epoxy Phenolic

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/300 to 325 microns required.

B ZONE

Interior and exterior areas where structural steel, floors, equipment, ducts and other surfaces are subject to attack by strong fumes, occasional spills and splashes at intermediate temperatures, SSPC-SP5/NACE No. 1 or SSPC-SP10/NACE No. 10 Joint Surface Preparation Standard blast grade and a film thickness of 12 to 15 mils/300 to 375 microns required. With surface preparation as indicated, the finish coating is considered self-priming although, if desired, a heavy-duty primer may be incorporated as part of the system.

C ZONE

Interior and exterior area surfaces subject to fumes of fairly high concentration at ambient temperatures. Heavy or medium duty primer over SSPC-SP6/NACE No. 3 or SSPC-SP7/NACE No. 4 Joint Surface Preparation Standard blast grades and a total film thickness, primer and topcoat, of 7 to 10 mils/175 to 200 microns required.

D ZONE

Process plant exterior subject to chemical atmosphere and weathering. Medium duty primer over SSPC-SP7/NACE No. 4 or SSPC-SP3/NACE No. 3 Joint Surface Preparation Standard blast grades and a total film thickness, primer and topcoat, of 6 to 8 mils/150 to 200 microns required.

THINNERS

PLASITE THINNER #71 — a medium fast thinner to be used for internal tank lining.

PLASITE THINNER #19 — a slower thinner to be used for hopper car interiors.

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 approximate:

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

CLEANUP THINNER: Thinner #71

CURING

1. Normally polymerization and curing will take place in 5 days at 90°F/32.2°C or 7 days at 70°F/21°C. This coating should not be applied when air temperature or temperature of surface to be coated is below 50°F/10°C. Within 24 hours after coating is applied, a minimum substrate temperature of 70°F/21°C is required for proper polymerization. PLASITE 7122LAR should be force cured for all taste sensitive immersion service.
2. Force curing at elevated temperature does increase resistance to certain exposures; therefore, when exposure is severe, force curing is recommended to obtain maximum resistance.
3. 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/21°C to 100°F/37.8°C be allowed. After the air dry period has elapsed, the temperature should be raised by approximately 30°F each 30 minutes until the desired force curing temperatures are reached.
4. 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

High Temperature & Immersion Service (A & B Zones are described under ZONE OF USAGE)

1. 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.
2. 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.
3. The surface shall be blasted to an SSPC-SP5/NACE No. 1 Joint Surface Preparation Standard blast grade using a Venturi blast nozzle supplied with 80 to 100 psi/5.5 to 6.9 bars. An anchor pattern or "tooth" in the metal shall correspond to approximately 20 to 25% of the total film thickness of the coating.

METAL TEMPERATURE	CURING TIME	METAL TEMPERATURE	CURING TIME
130°F/54.4°F	18 Hrs	170°F/76.6°F	3 ½ Hrs
140°F/60°F	10 Hrs	180°F/82.2°F	2 ½ Hrs
150°F/65.5°F	6 Hrs	190°F/87.8°F	2 Hrs
160°F/71°F	4 Hrs	200°F/93.3°F	1 ¾ Hrs

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4. Contaminated grit shall not be used for the finish work.
5. 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.
6. The anchor pattern shall be sharp and no evidence of a polished surface is allowed.
7. 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.
8. 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.

Service in Corrosive Atmosphere (B, C and D Zones as described under ZONE OF USAGE)

1. Degrease surface as described in Item 2 under A & B Zones.
2. Remove all loose mill scale, rust scale and old paint scale by one of the following methods:
 - a. Near white metal blast cleaning - (B Zone) SSPC-SP10/NACE No. 2 Joint Surface Preparation Standard.
 - b. Commercial blast cleaning - (B Zone) SSPC-SP6/NACE No. 3 Joint Surface Preparation Standard.
 - c. Brush-off blast cleaning (C & D Zones) SSPC-SP7/NACE No. 4 Joint Surface Preparation Standard.
 - d. Power tool cleaning - (D Zone) SSPC-SP3.

When utilized, inhibitive primer should be applied as soon as possible after surface preparation.

D Zone application surface preparation, as in above Paragraph 2(d), 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, the heavy film system is not recommended.

Note: The above specification numbers are from Steel Structures Painting Council Surface Preparation Specifications, 4516 Henry Street, Suite 301, Pittsburgh, PA 15213-3728, and National Association of Corrosion Engineers, P O Box 218340, Houston, TX 77218.

CONCRETE A ZONE

All concrete surfaces require whip blasting for immersion service. Fully cured concrete must be blasted to provide a hard, firm, clean and minimum 28-day-cured surface for coating. All concrete surfaces must be filled

and sealed with PLASITE 9029 or PLASITE 6028, applied in accordance with the appropriate Carboline Technical Bulletin. All surface imperfections, "bug holes," etc. must be completely repaired before application of PLASITE 7122LAR.

B ZONE

Severity of expected service will dictate minimum concrete surface preparation. Severe service (strong fumes, spillage, etc.) will probably require A Zone surface preparation and PLASITE 9029 or PLASITE 6028 filling and sealing before application of PLASITE 7122LAR.

GALVANIZED SURFACE

The surface shall be clean and grease free and properly etched with a standard solution such as GALVAPREP 5 (as produced by Parker Amchem, Madison Heights, Michigan, telephone 800-521-1355) or a phosphating solution. After the surface is properly etched, it should be thoroughly rinsed with water and thoroughly dried prior to the coating application. No inhibitive primer is required providing the galvanized surface is continuous.

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
Parker Amchem
32100 Stephenson Highway
Madison Heights, MI 48071
(800) 521-1355

IRIDITE 14-2 produced by
MacDermid Incorporated
245 Freight Street
Waterbury, CT 06702
(203) 575-5700

OAKITE CRYSCOAT 747LTS plus
OAKITE CRYSCOAT ULTRASEAL
Produced by Oakite Products
50 Valley Road
Berkeley Heights, NJ 07922
(908) 464-6900
Canada: (416) 791-1628

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

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PLASITE® 7122LAR

High Solids Epoxy Phenolic

EQUIPMENT

SPRAY APPLICATION

1. All spray equipment should be thoroughly cleaned and the hose, in particular, should be free of old paint film and other contaminants.
2. Airless spray equipment: Set liquid pressure at 1500 to 1800 psi/103 to 124 bars with tip size from .015" to .021". Continuous mixing during application is required. Due to abrasion resistant pigmentation within the coating, expect higher wear rates to spray equipment, such as spray tips and lower unit packing.

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

3. Use standard production-type spray guns:

MIXING

PLASITE 7122LAR is supplied as a three part system. Part I is a liquid coating; Part II is a pigment; and Part III is a small portion of curing agent. Mix Part II into Part I using a mechanical agitator. Mix well until obtaining a smooth liquid free of any unmixed particles of pigment. Add Part III and mix well. The coating should stand approximately 30 minutes after the curing agent has been thoroughly mixed. NOTE: Continuous mixing during use is required.

APPLICATION PROCEDURE

SPRAY GUN

1. Adjust liquid pressures to achieve good atomization (no fingering), usually 1500 to 1800 psi/103 to 124 bars.
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. Observe the coating surface, and when it appears to be flowing together you will have an average 5 to 7 mils/125 to 175 microns wet film. By allowing the solvents to flash-off for a few minutes, several more fast multi-passes may be applied until you have a film thickness of approximately 5 to 7 mils/125 to 175 microns (approximately 8 to 10 wet mils/200 to 250 microns).
5. OVERCOAT TIME will vary both with temperature and ventilation and will normally require 8 to 12 hours at 70°F/21°C for enclosed spaces. Less time is required for exteriors. Remove all overspray by dry brushing or scraping if required.
6. By repeating Step No. 4, a homogeneous film of 12 to 15 mils/300 to 375 microns is obtained.
7. Equipment must be thoroughly cleaned immediately after use with PLASITE thinner to prevent the setting of the coating.

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

BRUSH APPLICATION

(Recommended for small areas and repairs, only)

1. Apply a very light crisscross brush coat.
2. Allow to dry for approximately 5 minutes.
3. Apply a heavy coat using crisscross brush pattern. "Flow" the coating on rather than try to "brush out."
4. Allow to dry tack free.
5. Repeat Steps 3 and 4 until sufficient film thickness is obtained. Normally a film thickness of 2 to 3 mils/50 to 75 microns can be obtained per coat by this method.

INSPECTION

Refer to PLASITE Bulletin PA-3, Section 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 technical bulletin, material safety data sheet and container label for this product.

This bulletin provides standard information on the coating and application procedure. Since varying conditions may not be covered, consult your local sales representative or Carboline Technical Service Department for further information.



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