

PRODUCT DESCRIPTION

A bake coating using an unmodified phenolic resin with superior resistance to acids and solvents. Conforms to many of the current VOC regulations.

USES/APPLICATIONS

- Tank lining for solvents, acids, hot water, food products
- As a protective coating for machinery parts, filter press plates, fans, etc.

APPROVALS/CERTIFICATIONS

- PLASITE 3070 meets the requirements of the U.S. Food and Drug Administration, 21 CFR 175.300; and 3070 has been accepted by the U.S. Department of Agriculture for use in direct food contact areas.

CHEMICAL RESISTANCE

PLASITE 3070 is chemically resistant to a wide range of solvents, acids and alkalies.

COLOR

PLASITE 3070 is offered in ivory (changing to Medium Tan after baking).

PACKAGING

PLASITE 3070 is a single component product and is available in one and five gallon containers.

FILM THICKNESS

3 coats will produce the recommended dry film thickness of 5 to 7 mil/125-175 microns (approximately 1.5-2 mil/37-50 microns DFT applied per coat).

COVERAGE

The theoretical coverage of PLASITE 3070 is approximately 722 mil ft²/gal./65 sq.m. per 25 microns/gal. For estimating purposes, 108 sq. ft./gal. or 9.7 sq.m./gal. will produce a 6 mil/150 microns film (10% loss included).

THINNERS

Complying with local VOC regulations may require application without additional thinner. If addition of thinner is required, PLASITE Thinner #70 is recommended.

Cleanup Thinner: Thinner #71

VOC CONTENT

Color	Coating as Supplied		Thinned 15% by Volume with PLASITE Thinner #70	
	Lbs./Gal.	g/L	Lbs./Gal.	g/L
Ivory	2.88 +/- 2%	345 +/- 2%	3.39 +/- 2%	405 +/- 2%

Note: PLASITE 3070 applied as received complies with the Texas Air Quality Regulation V in terms of 6.26 pounds of VOC per gallon of solids.

STORAGE CONDITIONS

Store all components between 50-75°F/10-24°C in a dry area. Keep out of direct sunlight. Avoid excessive heat and do not freeze. The shelf life is 3 months in the original, unopened container.

PHYSICAL SPECIFICATIONS

Pigments: Titanium dioxide and inert pigments.

Solids: 67% ± 2% by weight; 46% ± 2% by volume.

Shelf Life: Estimated at 3 months at 70°F/21°C. Higher temperatures reduce shelf life.

Abrasion Resistance: 47.76 milligrams average loss per 1000 cycles, Taber CS-17 Wheel, 1000 gram weight.

Surface Hardness: Konig Pendulum Hardness of 173 seconds (Glass Standard = 250 seconds); ASTM Method D4366-84.

Thermal Shock: Unaffected 5 cycles, minus 70°F/-56°C to plus 200°F/93°C.

Gloss: 27 @ 60°.

SURFACE PREPARATION**Steel — 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.

Note: When PLASITE 3070 is to be applied to a used sulfuric acid vessel, it is recommended that the surface be flushed with PLASKLEEN-A. Please contact Carboline Technical Service Department for specific details and a product data sheet.

The surface shall be blasted to a SSPC SP-5/NACE NO.1 white metal blast grade using a Venturi blast nozzle at 80 to 100 psi/5.5 to 7 bars. Reference Joint Surface Preparation Std. SSPC SP-5/NACE 1, White Metal Blast Cleaning. A blast profile depth or "tooth" in the metal shall correspond to approximately 20 to 25% of the total film thickness of the coating system.

The blast 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 the best quality. The blast media shall be of proper size to obtain the specified blast profile depth and shall be free of all 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°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.

PLASITE® 3070

Meets FDA Requirements

Aluminum

Surface shall be clean and grease free with a blast produced blast profile depth 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 selection of the coating for the service and the type of surface preparation performed.

APPLICATION

Spray

PLASITE 3070 is formulated for standard production spray equipment. All spray equipment shall be thoroughly cleaned and the hose, in particular, shall 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 spray equipment is used, the recommended liquid pressure is 1500-1800 psi/103-124 bars with tip size from .015-.019 inches.

Air supply shall be uncontaminated. Adjust air pressure to approximately 50 lbs. at the gun and provide 10-15 lbs./0.7-1 bar pot pressure. Adjust spray gun by first opening liquid valve and then adjusting air valve to give approximately an 8-12 in./20-30 cm. fan holding perpendicular to the surface at a distance of 12 in./30 cm. Apply a "mist" bonding pass.

Allow to flash off for several minutes but not long enough to allow film to completely dry.

Apply 2 to 3 crisscross multi-passes, maintaining a wet appearing film (approximately 3-4 wet mil/75-100 microns). This will dry to approximately 1.5-2 dry mil/37-50 microns.

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

After the air-dry time has elapsed, the substrate temperature should be increased at a time/temperature rate not to exceed 30°F/17°C every 30 minutes until the intermediate baking temperature has been reached. Hold for 30 minutes.

After the substrate has cooled down to good application temperatures, prepare lining for succeeding coats.

Repeat the above steps for each separate coat and intermediate bake. Three coats are recommended to attain a 5-7 mil/125-175 microns DFT.

After final intermediate bake, check coating for DFT and holidays. Repair as needed.

Final bake at 375-400°F/190-204°C (400°F for sulfuric acid service) for 90 minutes or until proper color has been attained.

BAKING SCHEDULE

Intermediate Coats

30 minutes at 225-250°F/107-121°C (metal temperature).

Final Bake

1 1/2 hours at a minimum of 375-400°F/190-204°C (metal temperature).

For concentrated sulfuric acid service, a final bake at a minimum of 400°F/204°C is required.

Degree of final cure may be determined by comparing cured coating to predetermined color sample panels. A panel depicting final cure is available on request.

CAUTION! Overbaking between coats will result in loss of adhesion.

December 2008 replaces August 2003

To the best of our knowledge the technical data contained herein is true and accurate on the date of publication and is subject to change without prior notice. User must contact Carboline Company to verify correctness before specifying or ordering. No guarantee of accuracy is given or implied. We guarantee our products to conform to Carboline quality control. We assume no responsibility for coverage, performance or injuries resulting from use. Liability, if any, is limited to replacement of products. NO OTHER WARRANTY OR GUARANTEE OF ANY KIND IS MADE BY CARBOLINE, EXPRESS OR IMPLIED, STATUTORY, BY OPERATION OF LAW, OR OTHERWISE, INCLUDING MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. Carboline® and Plasite® are registered trademarks of Carboline Company.

WARNING! Compared to the low solids baking phenolics, the high solids 3070 will produce high film build per coat. Care should be taken not to exceed the recommended final DFT of 5-7 mil/125-175 microns applied in a minimum of three separate coats (approximately 2 mil/50 microns per coat) with a 225-250°F/107-121°C intermediate bake for 30-60 minutes for each separate coat.

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 non-destructive magnetic gauge properly calibrated. Refer to PLASITE Bulletin PA-3, Section 3, for inspection requirements.

RECOMMENDATIONS

- Apply only on a clean, sound, properly prepared substrate.
- Minimum ambient, material and surface temperatures are 50°F/10°C at the time of application.
- Maximum ambient, material and surface temperatures are 100°F/38°C, 90°F/32°C and 100°F/38°C respectively at the time of application.
- Relative humidity should be between 0 – 80%.
- Substrate temperature should be 5°F/3°C above the dew point.

PRECAUTIONS

- PLASITE Thinner #2 or acetone is recommended for clean up of the PLASITE 3070 material.
- Before handling and application of this material consult the MSDS sheets. As with any product, those handling PLASITE 3070 materials should employ proper safety practice. Hypersensitive persons should wear protective clothing, gloves, and use protective cream on any exposed areas.
- When PLASITE 3070 is used as a tank lining or in an enclosed area circulation should be used during and after the installation. Circulation can be discontinued once the material has cured. The ventilation equipment should be capable of preventing the solvent concentration from reaching the lower explosion level for the solvents used. The applicator should monitor the exposure levels or use MSHA/NIOSH approved air respirators.

NOTES

- Material Safety Data Sheets on PLASITE 3070 are available upon request.
- Specific information regarding the chemical resistance of PLASITE 3070 can be found by contacting Carboline's Technical Service Department.
- A staff of technical service engineers is available to assist with product application, or answer questions related to Carboline products.
- Requests for technical literature or service can be made through local sales representatives and offices worldwide.

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.

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



350 Hanley Industrial Court, St. Louis, MO 63144-1599
314/644-1000 314/644-4617 (fax) www.carboline.com

An **RPM** Company