

TYPE

A bake coating using a phenolic resin (baked, unmodified) with superior resistance to sulfuric acid and solvents. Conforms to most VOC regulations.

INTENDED USE

Tank lining for solvent, concentrated sulfuric acid, hot water, food products and as a protective coating for machinery parts, filter press plates, fans, etc. PLASITE 3070L meets the FDA requirements for 21 CFR, 175.300. FOR INDUSTRIAL USE ONLY!

Note: Prior to lining a used sulfuric acid tank or tank car, please refer to Surface Preparation - Steel section.

COLOR

Buff (changing to Medium Tan after baking).

PACKAGING

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

FILM THICKNESS PER COAT

2 to 3 coats will produce the recommended dry film thickness of 5 to 7 mils/125-175 microns.

COVERAGE

658 mil ft²/gallon or 59.2 sq.m. per 25 microns/gal. (theoretical). For estimating purposes, 99 ft²/gallon or 8.9 sq.m. per gal. will produce a 6 mil/150 micron film (10% loss included).

THINNERS

Complying with local VOC regulations may require application without additional thinner. If addition of thinner is required, PLASITE Thinner #68 is recommended.

Cleanup Thinner: Thinner #71

BAKING SCHEDULE

Intermediate Coats: 30 to 60 minutes at 225 to 250°F/107°C to 121°C (metal temperature).

Final Bake: 1 1/2 hours at a minimum of 375 to 400°F/191°C to 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.

VOC CONTENT

PLASITE 3070L, (as supplied), complies with the Texas Air Quality Regulation V in terms of 6.08 pounds of VOC per gallon of solids.

Coating as Supplied		
Color	Lbs./Gal.	g/L
Buff	2.53 ± 2%	304 ± 2%

PHYSICAL SPECIFICATIONS

Pigments: Titanium dioxide and inert pigments.

Solids: 59.9% ± 2% by weight; 41.6% ± 2% by volume.

Shelf Life: Estimated at 3 months at 70°F.

Note: Warmer storage temperatures will reduce shelf life.

Abrasion Resistance: 47.8 milligrams average loss per 1000 cycles, Taber CS-17 Wheel, 1000 gram weight.

Surface Hardness: Konig Pendulum Hardness of 169 seconds (Glass Standard = 250 seconds); ASTM Method D4366-84.

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

Gloss: 30 at 60°.

CHEMICAL RESISTANCE

PLASITE 3070L 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 rate to mild steel and other substrates.

This coating is not recommended for caustic or strong oxidizing service. Contact Carboline Technical Service Department for further information.

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 old tanks is required. Additional decontamination may also be necessary.

Note: When PLASITE 3070L is to be applied to a used sulfuric acid vessel, it is suggested that the surface be flushed with PLASKLEEN-A. Please refer to PLASKLEEN-A data sheet or contact Carboline Technical Service Department.

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.

PLASITE® 3070 L

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 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.

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 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

All spray equipment shall be thoroughly cleaned and the hose, in particular, shall be free of old paint film and other contaminants.

Use airless spray equipment. The required liquid pressure is 1500 to 1800 psi/103 to 124 bars with a tip size from .015" to .019".

Experienced applicators may elect to apply the PLASITE 3070L to the recommended 5 to 7 mil/125 to 175 microns DFT in two multi-pass spray coats. The following application procedure describes the application of PLASITE 3070L in three multi-pass spray coats.

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 to 4 wet mils/75 to 100 microns). This will dry to approximately 1.5 to 2 dry mils/38 to 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 for each separate coat and intermediate bake.

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

Final bake at 375°F/191°C (400°F/204°C for concentrated sulfuric acid service) for 90 minutes or until proper color has been attained

Warning: Compared to the low solids baking phenolics, the high solids PLASITE 3070L will produce high film build per coat. Care should be taken not to exceed the recommended final DFT of 5 to 7 mils applied in a minimum of two separate coats (approximately 3 mils per coat) with a 225 to 250°F/110°C to 121°C intermediate bake for 30 minutes for each separate coat. Final bake requires 375°F/191°C (400°F/204°C for concentrated sulfuric acid service) for 90 minutes or until proper color change has occurred.

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 L material.
- Before handling and application of this material consult the MSDS sheets. As with any product, those handling PLASITE 3070 L materials should employ proper safety practice. Hypersensitive persons should wear protective clothing, gloves, and use protective cream on any exposed areas.
- When PLASITE 3070 L 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 L are available upon request.
- Specific information regarding the chemical resistance of PLASITE 3070 L 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.



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