Plasite® 3070

PRODUCT DATA SHEET

SELECTION & SPECIFICATION DATA

Generic Type	Baked Phenolic
Description	A bake coating using an unmodified phenolic resin with superior resistance to acids and solvents. Conforms to many of the current VOC regulations.
Features	• Superior resistance to acids and solvents • Conforms to many of the current VOC regulations • Meets the requirements of the U.S. Food and Drug Administration, 21 CFR 175.300 for use in direct food contact areas.
Typical Uses	• Tank lining for solvents, acids, hot water, food products • As a protective coating for machinery parts, filter press plates, fans, etc.
Color	Ivory (changing to Medium Tan after baking)
Finish	Satin
Dry Film Thickness	1.5 - 2 mils (38 - 51 microns) per coat 5 - 7 mils (127 - 178 microns) Recommended dry film thickness 2 or 3 coats will produce the recommended dry film thickness of 5 to 7 mil (125-175 microns)
Solids Content	By Volume 46% +/- 2%
Theoretical Coverage Rate	738 ft²/gal at 1.0 mils (18.1 m²/l at 25 microns) 492 ft²/gal at 1.5 mils (12.1 m²/l at 38 microns) 105 ft²/gal at 7.0 mils (2.6 m²/l at 175 microns) Allow for loss in mixing and application.
VOC Values	**As Supplied** : 2.88 lbs/gal (354 g/l) +/-2%. Plasite Thinner #68 : Thinned 15%: 3.47 lbs/gal (416 g/l) +/-2%

SUBSTRATES & SURFACE PREPARATION

General	Surfaces must be clean and dry. Employ adequate methods to remove dirt, dust, oil and all other contaminants that could interfere with adhesion of the coating.
Steel	Immersion: SSPC-SP5 Non-Immersion: SSPC-SP6 Surface Profile: 1.5-2.0 mils (38.1-50.8 microns)
Aluminum	Surface shall be clean and grease-free with a blast produced anchor pattern or “tooth” as described earlier under “Steel”. In addition, prior to blasting, the 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 747 LTS and Oakite Cryscoat Ultraseal produced by Oakite Products.

PERFORMANCE DATA

All test data was generated under laboratory conditions. Field testing results may vary.

Test Method	System	Results
Abrasion Resistance (ASTM D4060, Taber CS-17 Wheel, 1000 gram weight, 1000 cycles, 1000 gram weight)	5-7 mils Plasite 3070	47.8 milligrams average loss
Pigments	5-7 mils Plasite 3070	Titanium dioxide and inert pigments
Surface Hardness (ASTM Method D4366-84)	5-7 mils Plasite 3070	Konig Pendulum Hardness of 173 seconds Glass Standard = 250 seconds)
Thermal Shock	5-7 mils Plasite 3070	Unaffected after 5 cycles, minus 70 °F to plus 212 °F (-57 to plus 100 °C)

MIXING & THINNING

Thinning

Complying with local VOC regulations may require application without additional thinner. If addition of thinner is required, Plasite Thinner #68, Plasite Thinner #70, or Plasite Thinner #71 are recommended and compatible.

APPLICATION EQUIPMENT GUIDELINES

Listed below are general equipment guidelines for the application of this product. Job site conditions may require modifications to these guidelines to achieve the desired results.

Spray Application (General)

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.

Airless Spray

Output 1500 to 1800 psi
Tip size 0.015” to 0.019”
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.

APPLICATION PROCEDURES

Airless Spray

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).

APPLICATION CONDITIONS

Condition	Material	Surface	Ambient	Humidity
Minimum	50°F (10°C)	50°F (10°C)	50°F (10°C)	0%
Maximum	90°F (32°C)	100°F (38°C)	100°F (38°C)	80%

Substrate temperature should be 5 °F (3 °C) above the dew point.

CURING SCHEDULE

Curing Details

- 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.
- **Intermediate Coats:** 30 minutes at 225-250 °F (107-121 °C) (metal temperature).
- After final intermediate bake, check coating for DFT and holidays. Repair as needed.
- 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:**
  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 for 90 minutes or until proper color has been attained.
- 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.

Warning: Compared to the low solids baking phenolics, the high solids Plasite 3070 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.

CLEANUP & SAFETY

Cleanup	Carboline Thinner 2 or Acetone
Safety	Read and follow all caution statements on this product data sheet and on the SDS for this product. Employ normal workmanlike safety precautions. Use adequate ventilation. Keep container closed when not in use.

PACKAGING, HANDLING & STORAGE

Packaging	Available in 1 gallon and 5 gallon containers
Shelf Life	90 days at 70 °F (21 °C) Higher temperatures reduce shelf life.
Storage Temperature & Humidity	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.

WARRANTY

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 to verify correctness before specifying or ordering. No guarantee of accuracy is given or implied. Carboline warrants our products to be free of manufacturing defects in accord with applicable Carboline quality control procedures. THIS WARRANTY IS NOT VALID WHEN THE PRODUCT IS NOT: (1) APPLIED IN ACCORDANCE WITH CARBOLINE'S SPECIFICATIONS, AND/OR (2) PROPERLY STORED, CURED, AND USED UNDER NORMAL OPERATING CONDITIONS. Carboline assumes no responsibility for coverage, performance, injuries, or damages resulting from use of the product. If this product is found not to perform as specified upon inspection by a Carboline representative during the warranty period, Carboline's sole obligation, if any, is to replace the Carboline product(s) proven to be defective or refund the purchase price thereof, at Carboline's sole option. Carboline shall not be liable for any other losses or damages. This warranty excludes (1) labor and costs of labor for the application or removal of any product, and (2) any incidental or consequential damages, whether based on breach of express or implied warranty, negligence, strict liability or any other legal theory. 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. All of the trademarks referenced above are the property of Carboline International Corporation unless otherwise indicated. The whole text of this Product Data Sheet, as well as the documents derived from it, have been written in English, and for legal purposes the English version shall prevail.