Carbomastic® 615 MC

PRODUCT DATA SHEET

SELECTION & SPECIFICATION DATA

Generic Type	Aluminum-Filled Phenalkamine Epoxy Mastic
Description	High performance aluminum filled epoxy with inert flake reinforcement, micaceous iron oxide (MIO), to further enhance the film strength and performance. This low VOC, low HAPS coating provides excellent corrosion protection for substrates subjected to immersion service in fresh and salt water as well as typical industrial and marine environments. It has outstanding tolerance for marginal surface preparation. This coating cures very fast for quick return to service and also cures at low temperatures.
Features	• Low VOC < 100 g/l, high solids • Low HAPS 0.02 lbs./solid gallon • Excellent corrosion protection • Aluminum flakes and MIO provides exceptional barrier protection • Excellent wetting properties and adhesion • Outstanding tolerance to marginal surface preparation • Fast cure response for quick return to service • Cures for immersion service in fresh and salt water after 60 minutes @ 75°F • Low temperature cure • High dry film thickness (DFT)
Color	Aluminum (C901)
Finish	Satin
Primer	Self-Priming
Dry Film Thickness	5 - 10 mils (127 - 254 microns) per coat Consult with Carboline for specific recommendations.
Solids Content	By Volume 74% +/- 2%
Theoretical Coverage Rate	1187 ft²/gal at 1.0 mils (29.1 m²/l at 25 microns) 237 ft²/gal at 5.0 mils (5.8 m²/l at 125 microns) 119 ft²/gal at 10.0 mils (2.9 m²/l at 250 microns) Allow for loss in mixing and application.
HAPs Values	As supplied: 0.02 lbs/solid gallon.
VOC Value(s)	Per EPA Method 24: 96 g/l (0.8 lbs/gal) These are nominal values and may vary slightly with color. This product contains US EPA VOC-exempt solvent(s).
Dry Temp. Resistance	Continuous: 250 °F (121 °C). Non-continuous: 300 °F (149 °C).
Limitations	Epoxies lose gloss, discolor and eventually chalk in sunlight exposure.
Topcoats	May be coated with Acrylics, Alkyds, Epoxies, and Polyurethanes.
Wet Temp. Resistance	Immersion temperature resistance depends upon exposure. Consult with Carboline for specific information.

SUBSTRATES & SURFACE PREPARATION

General	Surfaces must be clean. Employ adequate methods to remove dirt, dust, oil and other contaminants that could interfere with adhesion of the coating in accordance with SSPC-SP 1 and follow the guidelines below.
Steel	Immersion: Minimum Near White Metal Blast per NACE No. 2/SSPC-SP 10 with 1.5 to 3 mils (37 to 75 microns) anchor profile. Non-Immersion: New Steel: it is recommended that the steel be abraded, preferably to a minimum of Commercial Blast with 1.5 to 3 mils (37 to 75 microns) anchor profile in accordance with NACE No. 3/SSPC-SP 6. Alternate methods may include SSPC-SP 2, SSPC-SP 3, NACE No. 4/SSPC-SP 7, or NACE/SSPC WJ-1 to WJ-4. For alternate methods contact Carboline Technical Service.
Concrete or CMU	Concrete shall be designed, placed, cured, and prepared in accordance with NACE No. 6/ SSPC-SP 13. Abrade to remove all laitance, loose concrete, etc. and to create surface profile in accordance with ICRI CSP standard for the coating system.
Non-Ferrous Metals	Surface profile should be a dense angular 1.5 - 3 mils and is best achieved through abrasive blasting in accordance with SSPC-SP16 for atmospheric exposure, or SSPC-SP17 for immersion environments.

MIXING & THINNING

Mixing	Power mix separately, then combine and power mix thoroughly in the following proportions: **1 Gal. Kit** Part A: .8 gallon Part B: .2 gallon **5 Gal. Kit** Part A: 4 gallons Part B: 1 gallon
Thinning	**Preferred Thinner Uses and Application:** Thinner not normally required. May thin up to 8% by volume with Carboline Thinner #236E or Thinner 243E, which are VOC exempt. Thinner 243E may create a finish that is not uniform in appearance. Thinner #2 may be used at the same rate, however, this solvent contains VOC. **Alternate Compatible Thinners for Atmospheric Service:** Carboline Thinner 2, 10, 15, 76, 225E, 229, 236E, 243E, 248 and Plasite Thinner #19 or #20 Use of thinners other than those supplied or recommended by Carboline may adversely affect product performance and void product warranty, whether expressed or implied.
Ratio	4:1 (Part A to Part B)
Pot Life	1½ hours at 75°F (24°C) and less at higher temperatures. Pot life ends when coating becomes too viscous to use.

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.

Conventional Spray	Pressure pot equipped with dual regulators, 3/8” I.D. minimum material hose, .070” fluid tip and appropriate air cap.

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.

Airless Spray	Pump Ratio: 30:1 (min.)* Volume Output: 9.5 l/min min. (2.5gpm min.) Material Hose: 9.5mm min. (3/8" I.D. min.) Tip Size: 0.43-0.53mm (0.017-0.021") Output Pressure: 140-175kg/cm² (2000-2500 psi) Use a 1/2" minimum I.D. material hose *PTFE packings are recommended and available from pump manufacturers.
Brush & Roller (General)	Application by brush and roller is not recommended for immersion service, however, brush application is acceptable for stripe coating welds, etc. Multiple coats may be required to obtain desired appearance and recommended dry film thickness. Avoid excessive brushing or rolling. For best results, tie-in within 10 minutes at 75°F (24°C). May thin up to 11% by volume per gallon with Carboline Thinners listed above. Use a short-nap synthetic roller cover with phenolic core and high quality bristle brush.

APPLICATION CONDITIONS

Condition	Material	Surface	Ambient	Humidity
Minimum	45°F (7°C)	20°F (-7°C)	20°F (-7°C)	0%
Maximum	90°F (32°C)	120°F (49°C)	100°F (38°C)	95%

Industry standards are for substrate temperatures to be above the dew point. For immersion conditions it is recommended to follow this procedure. Special thinning and application techniques may be required above or below normal conditions. Do not apply to substrates with ice on them.

CURING SCHEDULE

Surface Temp.	Dry to Topcoat	Maximum Recoat Time	Final Cure Immersion
20°F (-7°C)	72 Hours	45 Days	7 Days
35°F (2°C)	17 Hours	30 Days	2 Days
60°F (16°C)	8 Hours	15 Days	3 Hours
75°F (24°C)	2 Hours	7 Days	1 Hour
90°F (32°C)	1.5 Hours	3 Days	1 Hour

These times are based on 5-10 mils (125-250 microns) dry film thickness, DFT per coat and immersion service in fresh and/or salt water. Higher DFT, cooler temperatures and insufficient ventilation will required longer cure times and could result in solvent entrapment and premature failure. Excessive humidity or condensation on the surface during curing can interfere with the cure, can cause discoloration and may result in a surface haze or blush. Prior to top coating haze or blush must be removed by solvent cleaning with clean potable water or a solution of water and mild detergent per SSPC-SP 1. If the maximum recoat times have been exceeded the surface must be cleaned and abraded by mechanical methods to create mechanical anchor profile in the coating prior to applying top coats. Consult with Carboline for force curing requirements.

CLEANUP & SAFETY

Cleanup	Use Thinner #2, Thinner #236E, or Acetone. In case of spillage, absorb and dispose of in accordance with local applicable regulations.
Safety	Read and follow all caution statements on this product data sheet and on the SDS for this product. Employ normal workmanlike safety precautions.

CLEANUP & SAFETY

Ventilation	When used as a tank lining or in enclosed areas, thorough air circulation must be used during and after application until the coating is cured. The ventilation system should be capable of preventing the solvent vapor concentration from reaching the lower explosion limit for the solvents used. User should test and monitor exposure levels to insure all are within guidelines. If not sure or if not able to monitor levels, use MSHA/NIOSH approved supplied air respirator.

PACKAGING, HANDLING & STORAGE

Shelf Life	Part A: 12 months at 76°F (24°C) Part B: 12 months at 76°F (24°C) Actual stated shelf life when kept at recommended storage conditions and in original unopened containers.
Storage Temperature & Humidity	40 -100°F (4°C-38°C) 0-95% Relative Humidity
Shipping Weight (Approximate)	1 Gal. Kit - 16 lbs. 5 Gal. Kit - 80 lbs.
Flash Point (Setaflash)	Part A: 135°F (57°C) Part B: 73°F (23°C)

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 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, injuries or damages resulting from use. Carbolines sole obligation, if any, is to replace or refund the purchase price of the Carboline product(s) proven to be defective, at Carbolines option. Carboline shall not be liable for any loss or damage. 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.