

SELECTION & SPECIFICATION DATA

Generic Type | Aluminum-Filled Phenalkamine Epoxy Mastic

Description | High performance, aluminum-filled epoxy that has excellent resistance to fresh and salt water exposures. This coating exhibits outstanding surface tolerance, low temperature cure capability, and very fast cure response for quick return to service. This lamellar aluminum-pigmented epoxy also contains inert flake reinforcement (micaceous iron oxide) to enhance film strength, barrier properties and overall performance.

Features

- Incorporates lamellar aluminum flakes to provide exceptional barrier protection
- High solids, low VOC
- Low temperature cure
- Excellent wetting properties
- Excellent surface tolerance
- Excellent moisture tolerance after application
- Fast cure response
- Excellent choice for field touch-up of zinc-rich primers and galvanized steel
- Suitable for immersion service in fresh or salt water after 2 hour cure @ 75°F

Color | Aluminum (C901)

Gloss | Semi-Gloss

Primer | Self-priming

Dry Film Thickness | 5 - 10 mils (127 - 254 microns) per coat

Solids Content | By Volume 80% +/- 2%

Theoretical Coverage Rate | 1283 ft²/gal at 1.0 mils (31.5 m²/l at 25 microns)
257 ft²/gal at 5.0 mils (6.3 m²/l at 125 microns)
128 ft²/gal at 10.0 mils (3.1 m²/l at 250 microns)
Allow for loss in mixing and application.

VOC Values | Thinner 2 : 16 oz/gal: 2.07 lbs/gal (248 g/l)
As Supplied : 172 g/l

HAPs Values | As supplied: 1.63 lbs/solid gal

Dry Temp. Resistance | Continuous: 200°F (93°C)
Non-Continuous: 250°F (121°C)

Limitations | Epoxies lose gloss, discolor and eventually chalk in sunlight exposure.

Topcoats | Acrylics, Alkyds, Epoxies, Polyurethanes

Wet Temp. Resistance | Immersion temperature resistance depends upon exposure. Consult Carboline Technical Service for specific information.

SUBSTRATES & SURFACE PREPARATION

General | All surfaces to be coated must be clean. Employ adequate methods to remove dirt, dust, oil and all other contaminants that could interfere with adhesion of the coating in accordance with SSPC-SP 1 and follow the guidelines below.

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SUBSTRATES & SURFACE PREPARATION

Steel	Immersion: NACE No. 2/SSPC-SP 10 with 2.0-3.0 mil (50-75 microns) surface profile Non-Immersion: NACE No. 3/SSPC-SP 6 with 2.0-3.0 mil (50-75 micron) surface profile for maximum protection. SSPC-SP 2, SSPC-SP 3, NACE No. 4/SSPC-SP 7, or NACE/SSPC WJ-1 to WJ-4 may also be acceptable methods. For alternate methods contact Carboline Technical Service.
Concrete	Concrete shall be designed, placed, cured, and prepared in accordance with NACE No. 6/SSPC-SP 13, latest edition. Abrade to remove all laitance, loose concrete, etc. and to create surface profile in accordance with the 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	Mix separately, then combine and mix in the following proportions: 1 Gallon Kit = Part A: 0.8 Gallon; Part B: 0.2 Gallons 5 Gallon Kit = Part A: 4 Gallons; Part B: 1 Gallon
Thinning	Preferred Thinner Uses and Application: Thin up to 12% by volume with Carboline Thinner #2. 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.

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Spray Application (General)	Hold gun 12-14 inches from the surface and at a right angle to the surface.
Conventional Spray	Pressure pot equipped with dual regulators, 3/8" I.D. minimum material hose, 0.070" I.D. fluid tip and appropriate air cap.
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 manufacturer.

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**Brush & Roller
(General)**

Not recommended for tank lining applications except when striping welds. Multiple coats may be required to obtain desired appearance, recommended dry film thickness and adequate hiding. Avoid excessive brushing or rolling. For best results, tie-in within 10 minutes at 75°F (24°C). Thin up to 11% by volume per gallon with Carboline Thinner #2. Use a short-nap synthetic roller cover with solvent resistant core.

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 or ice crystal formation. Dehumidify or raise the temperature to eliminate ice on the substrate.

CURING SCHEDULE

Surface Temp.	Dry to Topcoat Minimum	Maximum Recoat Time	Minimum cure for immersion service
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)	90 Minutes	3 Days	1 Hour

These times above are based on a 5.0-10.0 mil (125-250 micron) dry film thickness per coat. Higher film thickness, insufficient ventilation or cooler temperatures will require 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. Any haze or blush must be removed by water washing before recoating. If the maximum recoat times have been exceeded, the surface must be abraded by sweep blasting or sanding prior to the application of additional coats. For force curing, contact Carboline Technical Service for specific requirements.

CLEANUP & SAFETY

Cleanup	Use Thinner #2 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.
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 personnel are below guidelines. If not sure of if not able to monitor levels, use MSHA/NIOSH approved supplied air respirator.
Caution	This product contains flammable solvents. Keep away from sparks and open flames.

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PACKAGING, HANDLING & STORAGE

Shelf Life	Part A: 12 months at 76°F (24°C) Part B: 24 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
Storage	Store Indoors. KEEP DRY
Shipping Weight (Approximate)	1 Gallon Kit: 15.8 lbs (7.2 kg) 5 Gallon Kit: 79 lbs (35.8 kg)
Flash Point (Setaflash)	Part A: 110°F (43°C) Part B: 90°F (32°C) Mixed: 103°F (39°C) Thinner #2: 23°F (-5°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. Carboline's sole obligation, if any, is to replace or refund the purchase price of the Carboline product(s) proven to be defective, at Carboline's 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.