product data carboline®

Carbomastic® 615

Selection & Specification Data

Generic Type
Phenalkamine epoxy

Description
High performance epoxy that has excellent resistance to fresh and salt water exposures. This coating exhibits outstanding moisture and surface tolerance during application, low temperature cure capability, and very fast cure response for quick return to service. It contains an inert flake reinforcement (micaceous iron oxide) to enhance film strength and performance. This product is ideal for industrial or heavy duty marine environments for the protection of steel against salt laden environments.

Features
- High solids, low VOC
- Low temperature cure
- Excellent wetting properties
- Excellent surface tolerance
- Excellent moisture tolerance (application)
- Fast cure response
- Suitable for immersion service in fresh or salt water after 60 minute cure @75°F

Color
Standard: Tan (0200) and Grey (0700). Red (0500) and Black (C900) are special order.

Gloss
Semi-gloss

Primer
Self-priming

Topcoat
Acrylics, Alkyds, Epoxies, Polyurethanes

Dry Film Thickness
5.0 - 10.0 mils (127 - 254 microns) per coat

Solids Content
By Volume 80% +/- 2%

HAPs Values
As supplied: 1.63 lbs/solid gal

Theoretical Coverage Rate
1283 ft^2 at 1 mil (31 m^2/l at 25 microns)
257 ft^2 at 5 mils (6 m^2/l at 125 microns)
128 ft^2 at 10 mils (3 m^2/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 1.44 lbs/gal (172 g/l)

These are nominal values and may vary with color.

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

Wet Temp. Resistance
Immersion temperature resistance depends upon the exposure. Contact Carboline for specific information.

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

Substrates & Surface Preparation

General
Remove any oil or grease from surface to be coated with clean rags soaked in Carboline Thinner #2, or toluol.

Steel
Immersion: SSPC-SP10 with a 2.0-3.0 mil (50-75 micron) surface profile.
Non-Immersion: SSPC-SP6 with a 2.0-3.0 mil (50-75 micron) surface profile for maximum protection. SSPC-SP2, SP3, SP7, SP12,or SP14 are also acceptable methods.

Concrete
Do not apply coating unless concrete has cured at least 28 days @ 70°F (21°C) and 50% RH or equivalent. Normally clean and dry. Remove all loose, unsound concrete. This product can tolerate damp concrete (green appearance but not visibly wet). Not recommended for applications when hydrostatic pressure may occur.
Consult Carboline Technical Service for more specific recommendations

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
Thin up to 12% by volume with Carboline Thinner #2.

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, .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. For non-immersion applications over damp surfaces, brush and roller is the preferred method. Multiple coats may be required to obtain desired appearance, recommended dry film thickness and adequate hiding. Avoid excessive re-brushing or re-rolling. For best results, tie-in within 10 minutes at 75°F (24°C). Thin up to 11% by volume per gallon with Carboline #2. Use a short-nap synthetic roller cover with phenolic 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. For non-immersion conditions Carbomastic 615 can tolerate damp substrates. See Brush or Roller above. 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. & 50% Relative Humidity	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)	2 Days	30 Days	5 Days
60 °F (16 °C)	8 Hours	15 Days	3 Hours
75 °F (24 °C)	2 Hours	7 Days	1.0 Hour
90 °F (32 °C)	90.0 Minutes	3 Days	1.0 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 MSDS 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 or 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.

Packaging, Handling & Storage

Shelf Life Part A: 24 months @75°F(23°C)
Part B: 24 months @75°F(23°C)
Actual stated shelf life when kept at recommended storage conditions and in original unopened containers

Shipping Weight (Approximate) 1 Gallon Kit: 15.8 lbs (7.2 kg)
5 Gallon Kit: 79 lbs (35.8 kg)

Storage Temperature & Humidity 40-100°F(4°C-38°C)
0-95% Relative Humidity

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)

Storage Store Indoors. KEEP DRY

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