Carbomastic® 15 FC

PRODUCT DATA SHEET

SELECTION & SPECIFICATION DATA

Generic Type	Epoxy mastic
Description	Aluminum-pigmented, low-stress, high-solids mastic with outstanding performance properties and proven field history. Carbomastic 15 was the pioneer mastic coating in a number of industrial markets and today still provides unmatched levels of barrier protection and corrosion resistance over existing finishes and rusted or SSPC-SP2 or SP3-cleaned steel.
Features	• Excellent performance over minimal surface preparation of steel substrates • Suitable as a topcoat for most tightly adhered existing coatings • Excellent choice for field touch-up of zinc-rich primers and galvanized steel • Unique formulation with aluminum flakes provides exceptional barrier protection • May be applied at 35°F (2°C) when CM 15 FC's part B is utilized • Suitable for use under insulation on hot surfaces operating up to 300°F(150°C) • VOC compliant to current AIM regulations
Color	Aluminum (C901) Red (M500) Color variations within a batch and from batch to batch may occur due to the metallic pigments and variations in application techniques and conditions. Neither product is color matched, nor will they match each other. (15 FC may have a greenish appearance.) *Red (M500) is available for use as a contrasting primer in multiple coat applications, but should always be topcoated.
Primer	Self-priming. May be applied over most tightly adhering coatings as well as inorganic zinc primers.
Dry Film Thickness	3 - 5 mils (76 - 127 microns) per coat over existing coatings 5 - 7 mils (127 - 178 microns) per coat direct to substrate for most exposures 7 - 10 mils (178 - 254 microns) direct to substrate in one or two coats in severe exposures **Do not exceed 10.0 mils (250 microns) in a single coat.**
Solids Content	By Volume 90% +/- 2%
HAPs Values	As supplied: 0.80 lbs/solid gal
Theoretical Coverage Rate	1444 ft²/gal at 1.0 mils (35.4 m²/l at 25 microns) 481 ft²/gal at 3.0 mils (11.8 m²/l at 75 microns) 144 ft²/gal at 10.0 mils (3.5 m²/l at 250 microns) Allow for loss in mixing and application.
Severe Exposures	Temperature resistance under insulation: Up to 300°F(150°C) Discoloration is observed above 180°F(82°C) but does not affect performance.
VOC Values	Thinner 10 32 oz/gal: 2.09 lbs/gal (251 g/l) Thinner 236 E 32 oz/gal: 0.8 lbs/gal (97 g/l) Thinner 72 32 oz/gal: 2.12 lbs/gal (254 g/l) Thinner 76 32 oz/gal: 1.99 lbs/gal (238 g/l) As Supplied 0.8 lbs/gal (97 g/l) These are nominal values.
Topcoats	May be coated with Acrylics, Epoxies, Alkyds, or Polyurethanes depending on exposure and need.

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-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.
Galvanized Steel	For optimum performance sweep blast cleaning is recommended. Consult your Carboline Sales Representative for specific recommendations.
Previously Painted Surfaces	Lightly sand or abrade to roughen and degloss the surface. Existing paint must attain a minimum 3A rating in accordance with ASTM D3359 “X-Scribe” adhesion test.

PERFORMANCE DATA

Test Method	System	Results
ASTM 4060 Taber Abrasion	1 ct. CM15	130 mg loss with 1000 cycles using CS 17 wheel and 1000 gm load,
ASTM B117 Salt Spray	Rusted Steel 1 ct. CM 15	No blistering, rusting, or softening No rust creep from scribe
ASTM D1735 Water Fog	Rusted Steel 1ct CM 15	No blistering or softening, No creep from scribe
ASTM D522 Flexibility	Blasted steel 1 ct. CM15	A) Conical - crack 0.38", actual elongation 48.57% B) Cylindrical- no cracking observed
ASTM G 14 Impact Resistance	A) Blasted Steel 1 ct. CM 15, B) Rusted Steel 1 ct. CM 15	Area Damaged A) 1/4 inch (0.25") B) 1/4 - 9/16 inch (0.44")

Test reports and additional data available upon written request.

MIXING & THINNING

Mixing	Power mix separately, then combine and power mix. DO NOT MIX PARTIAL KITS.
Thinning	May be thinned up to 32 oz/gal (25%) with Thinner 10 for normal conditions. Thinner 72 may be used for hot or windy conditions. Use Thinner 76 for non-photochemically reactive thinner or Thinner 236E for exempt thinner. Use of thinners other than those supplied by Carboline may adversely affect product performance and void product warranty, whether expressed or implied.
Ratio	1:1 Ratio (A to B)
Pot Life	Approximately 30 minutes at 75°F (24°) unthinned. When thinned 12%, pot life will be 45 minutes at 75°F. 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.

Spray Application (General)	The following spray equipment has been found suitable and is available from manufacturers such as Binks, DeVilbiss and Graco.

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Conventional Spray	Pressure pot equipped with dual regulators, 3/8" I.D. minimum material hose, .086" I.D. fluid tip and appropriate air cap.
Airless Spray	Pump Ratio: 30:1 (min.)* GPM Output: 3.0 (min.) Material Hose: 3/8" I.D. (min.) Tip Size: .019-.025" Output PSI: 1900-2100 Filter Size: 60 mesh *Teflon packings are recommended and available from the pump manufacturer.
Plural Component	May be applied by plural component spray equipment. Contact Carboline Technical Service for specific recommendations.
Brush & Roller (General)	Multiple coats may be required to obtain desired appearance, recommended dry film thickness and adequate hiding. Avoid excessive re-brushing or rerolling. Use clean natural bristle brush or medium nap phenolic core roller. Work coating into all irregularities.

APPLICATION CONDITIONS

Condition	Material	Surface	Ambient	Humidity
Minimum	50°F (10°C)	35°F (2°C)	35°F (2°C)	0%
Maximum	75°F (24°C)	130°F (54°C)	100°F (38°C)	95%

This product simply requires the substrate temperature to be above the dew point. Condensation due to substrate temperatures below the dew point can cause flash rusting on prepared steel and interfere with proper adhesion to the substrate. Special application techniques may be required above or below normal application conditions.

CURING SCHEDULE

Surface Temp.	Dry to Recoat or Topcoat	Immersion Service
35°F (2°C)	32 Hours	15 Days
50°F (10°C)	25 Hours	8 Days
60°F (16°C)	18 Hours	6 Days
75°F (24°C)	5 Hours	4 Days

Dry to Touch is 3.5 hours at 75°F (24°C). Maximum re-coat/topcoat times are 30 days for epoxies and 90 days for polyurethanes at 75°F (24°C).
These times are based on a 5.0-7.0 mil (125-175 micron) dry film thickness. 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 time is exceeded, the surface must be abraded by sweep blasting prior to the application of additional coats. **Note:** This product contains conductive pigments and cannot be holiday tested.

CLEANUP & SAFETY

Cleanup	Use Thinner #2 or Acetone. In case of spillage, absorb and dispose of in accordance with local applicable regulations.

CLEANUP & SAFETY

Safety	Read and follow all caution statements on this product data sheet and on the MSDS for this product. Employ normal workmanlike safety precautions. Hypersensitive persons should wear protective clothing, gloves and use protective cream on face, hands and all exposed areas.
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. In addition to ensuring proper ventilation, appropriate respirators must be used by all application personnel.

PACKAGING, HANDLING & STORAGE

Shelf Life	Part A & B: Min. 36 months at 75°F (24°C) *Shelf Life : (actual stated shelf life) when kept at recommended storage conditions and in original unopened containers.
Storage Temperature & Humidity	45° - 110°F (7-43°C) 0-90% Relative Humidity
Storage	Store Indoors.
Shipping Weight (Approximate)	2 Gallon Kit - 25 lbs (11 kg) 10 Gallon Kit - 124 lbs (56 kg)
Flash Point (Setaflash)	Part A: >200°F (93°C) Part B: 45°F (7°C)

WARRANTY

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