# Carbomastic® 15

PRODUCT DATA SHEET

## SELECTION & SPECIFICATION DATA

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| **Generic Type** | Epoxy mastic |
| **Description** | Aluminum-pigmented, low-stress, high-solids mastic with a 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<br>• Suitable as a topcoat for most tightly adhered existing coatings<br>• Excellent choice for field touch-up of zinc-rich primers and galvanized steel<br>• Unique formulation with aluminum flakes provides exceptional barrier protection<br>• Available in a low temperature cure version (Carbomastic 15 FC)<br>• Suitable for use under insulation on hot surfaces operating up to 300 °F (150 °C)<br>• VOC compliant to current AIM regulations |
| **Color** | Aluminum (C901); Red (M500)<br><br>Color variations within a batch and from batch to batch may occur due to the metallic pigments and variations in application techniques and conditions. *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) over existing coatings<br>7 - 10 mils (178 - 254 microns) in one or two coats in severe exposures<br><br>**Do not exceed 10.0 mils (250 microns) in a single coat.** |
| **Solids Content** | By Volume 90% +/- 2% |
| **HAPs Values** | As supplied: 0.70 lbs/solid gal |
| **Theoretical Coverage Rate** | 1444 ft²/gal at 1.0 mils (35.4 m²/l at 25 microns)<br>481 ft²/gal at 3.0 mils (11.8 m²/l at 75 microns)<br>144 ft²/gal at 10.0 mils (3.5 m²/l at 250 microns)<br>Allow for loss in mixing and application. |
| **Severe Exposures** | Temperature resistance under insulation: Up to 300°F(150°C)<br><br>Discoloration is observed above 180°F(82°C) but does not affect performance. |
| **VOC Values** | Thinner 10 32 oz/gal: 2.0 lbs/gal (242 g/l)<br>Thinner 236 E 32 oz/gal: 0.7 lbs/gal (88 g/l)<br>Thinner 72 32 oz/gal: 2.07 lbs/gal (248 g/l)<br>Thinner 76 32 oz/gal: 1.9 lbs/gal (231 g/l)<br>As Supplied 0.7 lbs/gal (88 g/l)<br><br>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 |
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| ASTM 4060 Taber Abrasion | 1 ct. CM15 | 130 mg loss; 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<br>No rust creep from scribe |
| ASTM D1735 Water Fog | Rusted Steel 1ct CM 15 | No blistering or softening,<br>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,<br>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 nonphotochemically 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** | 2 hours @ 75 °F (24 °C) unthinned.
1 hour @ 90 °F (32 °C) unthinned

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)** | The following spray equipment has been found suitable and is available from manufacturers such as Binks, DeVilbiss and Graco. |
| **Conventional Spray** | Pressure pot equipped with dual regulators, 3/8" I.D. minimum material hose, 0.086" I.D. fluid tip and appropriate air cap. |
| **Airless Spray** | Pump Ratio: 30:1 (min.)*<br>GPM Output: 3.0 (min.)<br>Material Hose: 3/8" I.D. (min.)<br>Tip Size: 0.019-0.025"<br>Output PSI: 1900-2100<br>Filter Size: 60 mesh<br>*PTFE 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 |
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| Minimum | 50°F (10°C) | 50°F (10°C) | 50°F (10°C) | 0% |
| Maximum | 90°F (32°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. | Final Cure Immersion | Dry to Recoat or Topcoat |
|---|---|---|
| 50°F (10°C) | 15 Days | 5 Days |
| 60°F (16°C) | 10 Days | 3 Days |
| 75°F (24°C) | 5 Days | 24 Hours |
| 90°F (32°C) | 3 Days | 18 Hours |

**For CM 15 Dry to Touch is 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

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| **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. Use adequate ventilation. Keep container closed when not in use. |
| **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

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| **Shelf Life** | Part A & B: Min. 36 months at 75°F (24°C)<br><br>*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)<br>0-90% Relative Humidity |
| **Storage** | Store Indoors.<br><br>This product is solvent based and not affected by excursions below these published storage temperatures, down to 10°F, for a duration of no more than 14 days. Always inspect the product prior to use to make sure it is smooth and homogeneous when properly mixed. |
| **Shipping Weight (Approximate)** | 2 Gallon Kit - 25 lbs (11 kg)<br>10 Gallon Kit - 124 lbs (56 kg) |
| **Flash Point (Setaflash)** | Part A: >200°F (93°C)<br>Part B: 76°F (24°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 or injuries resulting from use. Liability, if any, is limited to replacement of products. 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.