# Carbomastic® 242

PRODUCT DATA SHEET

## SELECTION & SPECIFICATION DATA

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| **Generic Type** | Urethane Modified Epoxy |
| **Description** | Aluminum-pigmented, low temperature curing mastic designed for cold weather applications down to 0 °F (-18 °C). This unique coating provides excellent corrosion resistance over existing finishes and rusted or SSPC-SP2 or SP3- cleaned steel. |
| **Features** | • Single coat application characteristics<br>• Suitable as a topcoat for most tightly adhered existing coatings<br>• Dry to handle in 24 hours at 20 °F (-7 °C)<br>• Extended pot life at low temperatures<br>• VOC compliant to current AIM regulations |
| **Color** | Aluminum (C901) |
| **Finish** | Flat |
| **Primer** | Self-priming. May be applied over most tightly adhering coatings as well as inorganic zinc primers. A mist coat may be required to minimize bubbling over inorganic zinc primers. |
| **Dry Film Thickness** | 3 mils (76 microns) per coat over inorganic zinc primers<br>5 mils (127 microns) per coat over unprimed steel and existing coatings<br>10 mils (254 microns) applied in two coats for immersion service<br><br>Do not exceed 8.0 mils (200 microns) in a single coat. |
| **Solids Content** | By Volume 62% +/- 2% |
| **HAPs Values** | As supplied: 1.80 lbs/solid gal (216 g/solid l) |
| **Theoretical Coverage Rate** | 994 ft²/gal at 1.0 mils (24.4 m²/l at 25 microns)<br>331 ft²/gal at 3.0 mils (8.1 m²/l at 75 microns)<br>99 ft²/gal at 10.0 mils (2.4 m²/l at 250 microns)<br>Allow for loss in mixing and application. |
| **VOC Values** | Thinner 76 25 oz/gal: 3.39 lbs/gal (406 g/l)<br>Thinner 76 6 oz/gal: 2.92 lbs/gal (350 g/l)<br>As Supplied 2.73 lbs/gal (327 g/l)<br><br>These are nominal values. |
| **Dry Temp. Resistance** | Continuous: 180°F (82°C)<br>Non-Continuous: 250°F (121°C)<br><br>Discoloration is observed above 180 °F (82 °C) |
| **Limitations** | • Not recommended for hot weather applications above 80 °F (27 °C).<br>• Do not use over rusted steel in severe environments |
| **Topcoats** | May be coated with Acrylics, Epoxies, Alkyds, or Polyurethanes depending on exposure and need. |

## SUBSTRATES & SURFACE PREPARATION

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| **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. |

## SUBSTRATES & SURFACE PREPARATION

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| **Steel** | Immersion: SSPC-SP10 with a 2.0-3.0 mil (50- 75 micron) surface profile.<br>Non-Immersion: SSPC-SP6 with a 2.0-3.0 mil (50-75 micron) surface profile for maximum protection. SSPC-SP2, SP3, SP7, or SP12 are also acceptable methods. |
| **Galvanized Steel** | SSPC-SP1 (Aged)<br>SSPC-SP16 (New) |
| **Previously Painted Surfaces** | Lightly sand or abrade to roughen and de-gloss 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 B 117 Salt Spray | 2 cts over blasted steel | No blistering or rusting<br>No loss of adhesion<br>Rust in scribe<br>Less than 3/16 inch undercutting at scribe |
| ASTM D 3363 Pencil Hardness | 1 ct. applied at 6 mils DFT | >8H |
| ASTM D 4060 Abrasion | 1000 cycles<br>1000 gm. Load<br>CS-17 wheel<br>2 coats | 169 mg loss |
| ASTM D 4541 Adhesion (Elcometer) | A) Blasted Steel<br>B) Rusted Steel | A) 710 psi<br>B) 658 psi |
| ASTM D 4541 Adhesion (Pneumatic) | A) Blasted Steel<br>B) Rusted Steel | A) 1511 psi<br>B) 1213 psi |
| ASTM D 522 Elongation | Conical Mandrel - One coat cured at:<br>A) 73 °F (23 °C)<br>B) 40 °F (4 °C) | Distance from end of<br>Mandrel to end of first crack:<br>A) ½ inch avg. Actual elongation: 40% avg.<br>B) ¼ inch avg. Actual elongation: 74% avg. |

Additional data available upon written request

## MIXING & THINNING

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| **Mixing** | Power mix separately, then add Part B to Part A and power mix. DO NOT MIX PARTIAL KITS. |
| **Thinning** | May be thinned up to 25 oz/gal (20%) with Thinner 76 for spray, brush or roller applications.<br>For warmer temperatures, may be thinned up to 26 oz/gal (20%) with Thinner 72.<br><br>Use of thinners other than those supplied by Carboline may adversely affect product performance and void product warranty, whether expressed or implied. |
| **Ratio** | 4:1 Ratio (A to B) |
| **Pot Life** | 6 Hours at 35 °F (2 °C)<br>3 Hours at 75 °F (24 °C)<br>This material is moisture sensitive. Moisture contamination will shorten pot life and cause gelation.<br><br>Pot life ends when coating become 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)** | This is a high solids coating and may require slight adjustments in spray techniques. Wet film thickness is easily and quickly achieved. 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: 0.017-0.021"<br>Output PSI: 1900-2100<br>Filter Size: 60 mesh<br><br>*PTFE packings are recommended and available from the pump manufacturer. |
| **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. |
| **Brush** | Use a medium bristle brush. |
| **Roller** | Use a short-nap roller cover with a solvent resistant core. |

## APPLICATION CONDITIONS

| Condition | Material | Surface | Ambient | Humidity |
|---|---|---|---|---|
| Minimum | 35°F (2°C) | 0°F (-18°C) | 0°F (-18°C) | 0% |
| Maximum | 75°F (24°C) | 80°F (27°C) | 80°F (27°C) | 80% |

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. **Note:** In warm conditions, it is important to control film thickness, especially in overlap areas as excessive thickness may cause solvent entrapment.

## CURING SCHEDULE

| Surface Temp. | Dry to Handle | Dry to Recoat & Topcoat w/ other finishes |
|---|---|---|
| 0°F (-18°C) | 36 Hours | 36 Hours |
| 20°F (-7°C) | 24 Hours | 24 Hours |
| 50°F (10°C) | 12 Hours | 12 Hours |
| 75°F (24°C) | 4 Hours | 4 Hours |

These times are based on a 5.0 mil (125 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. **Maximum recoat/ topcoat times are 30 days for epoxies and 90 days for polyurethanes at 75 °F (24 °C).** Excessive humidity or condensation on the surface during curing can interfere with the cure. If the maximum recoat time is exceeded, the surface must be abraded prior to the application of additional coats. **Note:** This product contains conductive pigments and cannot be holiday tested.

**The curing schedule below references curing times for immersion service.**

## CURING SCHEDULE

| Surface Temp. | Final Cure Immersion |
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| 75°F (24°C) | 5 Days |

## 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. 24 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** | 35-110 °F (2-43 °C)<br>0-90% Relative Humidity |
| **Storage** | Store Indoors. |
| **Shipping Weight (Approximate)** | 1.25 Gallon Kit - 13 lbs (6 kg)<br>5 Gallon Kit - 53 lbs (24 kg) |
| **Flash Point (Setaflash)** | Part A: 60 °F (16 °C)<br>Part B: >212 °F (100 °C) |

## WARRANTY

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