

SELECTION & SPECIFICATION DATA

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| Generic Type | Cycloaliphatic Amine Epoxy |
| Description | Highly chemical resistant epoxy mastic coating with exceptionally versatile uses in all industrial markets. Self-priming and suitable for application over most existing coatings, and tightly adherent rust. Serves as stand-alone system for a variety of chemical environments and is also designed for various immersion conditions. An optional micaceous iron oxide additive (MIO Filler) can be purchased separately and may be used per the Product Data Sheet to enhance corrosion protection and film strength for more aggressive service such as severe marine or heavy industrial uses. |
| Features | <ul style="list-style-type: none"> • Excellent chemical resistance • Surface tolerant characteristics • Conventional and low-temperature versions • Self-priming and primer/finish capabilities • Very good abrasion resistance • VOC compliant to current AIM regulations • Suitable for use in USDA inspected facilities • Intermediate coat for AWWA D102 Outside System #6 and #7 <p>For specific performance data, please contact your Carboline sales representative.</p> |
| Color | Refer to Carboline Color Guide. Certain colors may require multiple coats for hiding. Note: The low temperature formulation will cause most colors to yellow or discolor more than normal in a short period of time. |
| Finish | Gloss |
| Primer | Self-priming. |
| Dry Film Thickness | 4 - 6 mils (102 - 152 microns) per coat 6.0-8.0 mils (150-200 microns) over light rust and for uniform gloss over inorganic zincs. Don't exceed 10 mils (250 microns) in a single coat. Excessive film thickness over inorganic zincs may increase damage during shipping or erection. |
| Solids Content | By Volume 75% +/- 2% |
| Theoretical Coverage Rate | 1203 ft ² /gal at 1.0 mils (29.5 m ² /l at 25 microns) 301 ft ² /gal at 4.0 mils (7.4 m ² /l at 100 microns) 200 ft ² /gal at 6.0 mils (4.9 m ² /l at 150 microns) Allow for loss in mixing and application. |
| VOC Values | <p>As Supplied : 1.81 lbs/gal (217 g/l) Thinner 2 : 13 oz/gal (106.8 mg/ml) = 2.30 lbs/gal (276 g/l) Thinner 2 : 7 oz/gal (57.5 mg/ml) = 2.08 lbs/gal (250 g/l) Thinner 33 : 16 oz/gal (131.5 mg/ml) = 2.43 lbs/gal (291 g/l) Thinner 33 : 7 oz/gal (57.5 mg/ml) = 2.08 lbs/gal (250 g/l)</p> <p>Use Thinner 76 up to 8 oz/gal for 890 and 16 oz/gal for 890 LT where non-photochemically reactive solvents are required. These are nominal values and may vary with color.</p> |

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| Dry Temp. Resistance | Continuous: 300°F (149°C) Non-Continuous: 350°F (177°C) Discoloration and loss of gloss occurs above 200°F (93°C) but does not affect performance. |
| Under Insulation Resistance | Continuous: 300°F (149°C) Discoloration and loss of gloss occurs above 200 F (93 °C) but does not affect performance. |
| Limitations | Do not apply over latex coatings. For immersion projects use only factory made material in special colors. Consult Technical Service for specifics. |
| Topcoats | <ul style="list-style-type: none">• Acrylics• Epoxies• Polyurethanes |

SUBSTRATES & SURFACE PREPARATION

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| General | Surfaces must be clean and dry. Remove all dirt, dust, oil and all other contaminant. |
| Steel | Immersion: SSPC-SP10 Non-immersion: SSPC-SP6 1.5-3.0 mils (38-75 microns) <i>SSPC-SP2 or SP3 are suitable cleaning methods for mild environments.</i> When using under fireproofing products, defer to the primer surface preparation requirements in the product data sheet of the fireproofing product. |
| Galvanized Steel | SSPC-SP 16: for immersion service create 1.5 to 3 mils, (37.5-75 microns), anchor profile. When using under fireproofing products, defer to the primer surface preparation requirements in the product data sheet of the fireproofing product. |
| Concrete or CMU | Concrete shall be designed, placed, cured, and prepared per NACE No. 6/SSPC-SP 13, latest edition. This includes abrading to remove all laitance, loose concrete, etc. and to create the surface profile required for the coating system to be used. The concrete shall be considered cured sufficiently for coating when it passes the moisture tests. |
| Drywall & Plaster | Joint compound and plaster should be fully cured prior to coating application. |
| Previously Painted Surfaces | Lightly sand or abrade to roughen surface and degloss the surface. Existing paint must attain a minimum 3A rating in accordance with ASTM D3359 "X-Cut" adhesion test. |
| Stainless Steel | SSPC-SP 16: for immersion service create 1.5 to 3 mils, (37.5 to 75) microns, anchor profile. |

PERFORMANCE DATA

All test data was generated under laboratory conditions. Field testing results may vary.

| Test Method | System | Results |
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| ASTM B 117 Salt Fog | Blasted Steel 2 cts. 890 | No effect on plane, rust in scribe. 1/16" (0.16 cm) undercutting at scribe after 2000 hours |
| ASTM B117 Salt Fog | Blasted Steel 1 ct. IOZ 1 ct 890 | No effect on plane, no rust in scribe and no undercutting after 4000 hours |
| ASTM D 4060 Abrasion | Blasted Steel 1 ct Epoxy Pr. 1 ct 890 | 85 mg. loss after 1000 cycles, CS17 wheel 1000 gm. load |
| ASTM D1735 Water Fog | Blasted Steel 1 ct. Epoxy Pr. 1 ct. 890 | No blistering, rusting or delamination after 2800 hours |
| ASTM D2486 Scrub Resistance | Blasted Steel 1 ct. 890 | 93% gloss retained after 10,000 cycles w/liquid scrub medium |
| ASTM D3359 Adhesion | Blasted Steel 1 ct 890 | 5A |
| ASTM D3363 Pencil Hardness | Blasted Steel 2 cts 890 | Greater than 8H |
| ASTM E84 Flame and Smoke | 2 ct 890 | 5 Flame 5 Smoke Class A |

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 | Spray: Up to 13 oz/gal (10%) w/ #2
Brush: Up to 16 oz/gal (12%) w/ #33
Roller: Up to 16 oz/gal (12%) w/ #33
Thinner #33 can be used for spray in hot/windy conditions. Use of thinners other than those supplied or recommended by Carboline may adversely affect product performance and void product warranty, whether expressed or implied.
*See VOC values for thinning limits.

Ratio | 1:1 Ratio (A to B)

Pot Life | 3 Hours at 75°F (24°C)
Pot life ends when coating loses body and begins to sag. Pot life times will be less at higher temperatures.

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) | This is a high solids coating and may require 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" (0.95 cm) I.D. minimum material hose, 0.070" (0.18 cm) I.D. fluid tip and appropriate air cap.

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| Airless Spray | Pump Ratio: 30:1 (min.)* GPM Output: 3.0 (min.) Material Hose: 3/8" I.D. (0.95 cm)(min.) Tip Size: 0.017-0.021" (0.04-0.05 cm) Output PSI: 2100-2300 Filter Size: 60 mesh *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. For best results, tie-in within 10 minutes at 75°F (24°C). |
| Brush | Use a medium bristle brush. |
| Roller | Use a short-nap solvent resistant roller cover. |

APPLICATION CONDITIONS

| Condition | Material | Surface | Ambient | Humidity |
|-----------|-------------|--------------|--------------|----------|
| Minimum | 50°F (10°C) | 50°F (10°C) | 50°F (10°C) | 0% |
| Maximum | 90°F (32°C) | 125°F (52°C) | 110°F (43°C) | 90% |

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 | Dry to Topcoat w/ Other Finishes | Final Cure General | Final Cure Immersion |
|---------------|---------------|----------------------------------|--------------------|----------------------|
| 50°F (10°C) | 12 Hours | 24 Hours | 3 Days | NR |
| 60°F (16°C) | 8 Hours | 16 Hours | 2 Days | 10 Days |
| 75°F (24°C) | 4 Hours | 8 Hours | 1 Day | 5 Days |
| 90°F (32°C) | 2 Hours | 4 Hours | 16 Hours | 3 Days |

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. During high humidity conditions, it is recommended that the application be done while temperatures are increasing. Recoat intervals may vary from those listed above when using under intumescent fireproofing products. Consult Carboline Technical Service for recommended cure times before applying Carboline intumescent products. **Maximum recoat/topcoat times are 30 days for epoxies and 90 days for polyurethanes at 75°F (24°C).** 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.

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. Employ normal workmanlike safety precautions. Keep container closed when not in use. |

CLEANUP & SAFETY

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| 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. User should test and monitor exposure levels to insure all personnel are below guidelines. |
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PACKAGING, HANDLING & STORAGE

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| Shelf Life | Part A: 36 months at 75°F (24°C) Part B: 15 months at 75°F (24°C) *When kept at recommended storage conditions and in original unopened containers. |
| Storage Temperature & Humidity | 40-120 °F (4-49 °C) Store indoors Can be stored down to 20 °F (-7 °C) for no longer than 30 days 0-100% Relative Humidity |
| Storage | Store Indoors |
| Shipping Weight (Approximate) | 2 Gallon Kit - 29 lbs (13 kg) 10 Gallon Kit - 145 lbs (66 kg) |
| Flash Point (Setaflash) | 89 °F (32 °C) for Part A 73 °F (23 °C) for Part B |

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. Carbolines sole obligation, if any, is to replace or refund the purchase price of the Carboline product(s) proven to be defective, at Carbolines 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.