

## Selection & Specification Data

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|--|---|
| <b>Generic Type</b>                        | Cycloaliphatic Amine Epoxy  |
| <b>Description</b>                         | 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 to rust. Carboguard 890 VOC serves as stand-alone system for a variety of chemical environments.  |
| <b>Features</b>                            | <ul style="list-style-type: none"> <li>▪ Excellent chemical resistance</li> <li>▪ Surface tolerant characteristics</li> <li>▪ Conventional and low-temperature versions</li> <li>▪ Self-priming and primer/finish capabilities</li> <li>▪ Very good abrasion resistance</li> <li>▪ VOC compliant to current AIM regulations</li> <li>▪ Suitable for use in USDA inspected facilities</li> </ul> |
| <b>Color</b>                               | 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. (Epoxies lose gloss, discolor and chalk in sunlight exposure.)   |
| <b>Finish</b>                              | Semi-Gloss  |
| <b>Primers</b>                             | Self-priming. May be applied over inorganic zinc primers and other tightly adhering coatings. A mist coat may be required to minimize bubbling over inorganic zinc primers.   |
| <b>Topcoats</b>                            | Acrylics, Epoxies, Polyurethanes  |
| <b>Dry Film Thickness</b>                  | 4.0-6.0 mils (100-150 microns) per coat<br>6.0-8.0 mils (150-200 microns) over light rust and for uniform gloss over inorganic zincs.<br>Don't exceed 10 mils (250 microns) in a single coat. Excessive film thickness over inorganic zincs may increase damage during shipping or erection.  |
| <b>Solids Content</b>                      | By Volume (890 VOC): 75% ± 2%   |
| <b>Theoretical Coverage Rate</b>           | 890 VOC: 1203 mil ft <sup>2</sup> (30.0 m <sup>2</sup> /l at 25 microns)<br>241 ft <sup>2</sup> at 5 mils (6.0 m <sup>2</sup> /l at 125 microns)<br><br>Allow for loss in mixing and application  |
| <b>VOC Values Calculated EPA Method 24</b> | As supplied 0.8lbs/gal (100 g/l)<br>Thinned w/#236E 0.8lbs/gal (100 g/l)  |
| <b>Dry Temp. Resistance</b>                | Continuous: 250°F (121°C)<br>Non-Continuous: 300°F (149°C)<br>Discoloration and loss of gloss is observed above 200°F (93°C).   |
| <b>Limitations</b>                         | Do not apply over latex coatings. Discoloration may be objectionable if used as a topcoat. For immersion projects use only factory made material in special colors. Consult Technical Service for specifics.  |

## Substrates & Surface Preparation

|                                    |   |
|------------------------------------|---|
| <b>General</b>                     | 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.   |
| <b>Steel</b>                       | Non-immersion: SSPC-SP6<br>1.5-3.0 mils (38-75 microns)<br>Immersion: SSPC-SP10 1.5-3.0 mils (38-75 microns)<br>SSPC-SP2 or SP3 are suitable cleaning methods for mild environments.  |
| <b>Galvanized Steel</b>            | Prime with specific Carboline primers as recommended by your Carboline Sales Representative. Refer to the specific primer's Product Data Sheet for substrate preparation requirements.  |
| <b>Concrete or CMU</b>             | Concrete must be cured 28 days at 75°F (24°C) and 50% relative humidity or equivalent. Prepare surfaces in accordance with ASTM D4258 Surface Cleaning of Concrete and ASTM D4259 Abrading Concrete. Voids in concrete may require surfacing. Mortar joints should be cured a min of 15 days. Prime with itself, Carboguard® 1340, or suitable filler/sealer. |
| <b>Drywall &amp; Plaster</b>       | Joint compound and plaster should be fully cured prior to coating application. Prime with Carbocrylic® 120 or Carboguard 1340.  |
| <b>Previously Painted Surfaces</b> | Lightly sand or abrade to roughen surface and degloss the surface. Existing paint must attain a minimum 3B rating in accordance with ASTM D3359 "X-Scribe" adhesion test.   |

# Carboguard® 890 VOC

## Application Equipment

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. **General Guidelines:**

**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" I.D. minimum material hose, .070" 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: .017"-.021"  
Output PSI: 2100-2300  
Filter Size: 60 mesh  
\*Teflon 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 re-rolling. For best results, tie-in within 10 minutes at 75°F (24°C).

**Brush** Use a medium bristle brush.

**Roller** Use a short-nap synthetic roller cover with phenolic core.

## Mixing & Thinning

**Mixing** Power mix separately, then combine and power mix. DO NOT MIX PARTIAL KITS.

**Ratio** 890 VOC 1:1 Ratio (A to B)

**Thinning\*** Spray: Up to 13 oz/gal (10%) w/ #236E  
Brush: Up to 16 oz/gal (12%) w/ #236E  
Roller: Up to 16 oz/gal (12%) w/ #236E  
Use of thinners other than those supplied or recommended by Carboline may adversely affect product performance and void product warranty, whether expressed or implied.

**Pot Life** 890 VOC 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.

## 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. 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. 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. All electrical equipment and installations should be made and grounded in accordance with the National Electric Code. In areas where explosion hazards exist, workmen should be required to use non-ferrous tools and wear conductive and non-sparking shoes.

## Application Conditions

890 VOC

| Condition | Material               | Surface                | Ambient                | Humidity |
|-----------|------------------------|------------------------|------------------------|----------|
| Normal    | 60°-85°F<br>(16°-29°C) | 60°-85°F<br>(16°-29°C) | 60°-90°F<br>(16°-32°C) | 0-80%    |
| Minimum   | 50°F<br>(10°C)         | 50°F<br>(10°C)         | 50°F<br>(10°C)         | 0%       |
| Maximum   | 90°F<br>(32°C)         | 125°F<br>(52°C)        | 110°F<br>(43°C)        | 80%      |

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

Based on 4-8 mils, 100-200 microns dry film thickness.)

| Surface Temp. & 50% Relative Humidity | Dry to Recoat | Dry to Topcoat w/ Other Finishes | Final Cure |
|---------------------------------------|---------------|----------------------------------|------------|
| 50°F (10°C)                           | 12 Hours      | 24 Hours                         | 3 Days     |
| 60°F (16°C)                           | 8 Hours       | 16 Hours                         | 2 Days     |
| 75°F (24°C)                           | 4 Hours       | 8 Hours                          | 1 Day      |
| 90°F (32°C)                           | 2 Hours       | 4 Hours                          | 16 Hours   |

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. **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.

## Packaging, Handling & Storage

**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

**Storage Temperature & Humidity** 40° -110°F (4°-43°C) Store indoors.  
0-100% Relative Humidity

**Shelf Life:** Part A: 24 months at 75°F (24°C)  
Part B: 15 months at 75°F (24°C)

**\*Shelf Life: (actual stated shelf life) when kept at recommended storage conditions and in original unopened containers.**



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