

## Selection & Specification Data

<b>Generic Type</b>	Cross-linked epoxy
<b>Description</b>	A high solids, semi-gloss, high build, self-priming epoxy that can be applied by spray, brush, or roller. The cured film provides a tough, cleanable and aesthetically pleasing surface. Recommended uses for Carboguard 892 include railcar hopper interiors carrying dry food-grade cargoes. Other applications include food, meat, poultry, beverage, and pharmaceutical plants.
<b>Features</b>	<ul style="list-style-type: none"> <li>Compatible over tightly adhered rust and old coatings in mild environments.</li> <li>Very good abrasion resistance.</li> <li>Excellent performance in wet exposures.</li> <li>Meets FDA 21 CFR 175.300 criteria for direct food contact.</li> <li>Acceptable for incidental food contact surfaces in federally inspected meat and poultry facilities.</li> <li>VOC compliant to current AIM regulations.</li> </ul>
<b>Color</b>	Off White (1898), Blue (4169) and others colors available upon request.
<b>Finish</b>	Semi-Gloss
<b>Primers</b>	Self-priming. May be applied over inorganic zincs. Weathered galvanizing, epoxies, phenolics or other coatings as recommended. A test patch is recommended before use over existing coatings. A mist coat is required when applied over inorganic zinc to minimize bubbling. Not recommended over chlorinated rubber or latex coatings.
<b>Topcoats</b>	Not normally topcoated. May be topcoated with polyurethanes or acrylics to upgrade weathering resistance.
<b>Dry Film Thickness</b>	<p>4.0-6.0 mils (100-150 microns) per coat for use in mild environments.</p> <p>5.0-7.0 mils (125-175 microns) for more severe environments. Dry film thickness in excess of 10 mils (250 microns) per coat is not recommended. Minimum of 2 coats at 4-6 mils (150-200 microns) each is recommended over marginally prepared steel.</p>
<b>Solids Content</b>	By Volume: 75% ± 2%
<b>Theoretical Coverage Rate</b>	<p>1203 mil ft<sup>2</sup> (30.0 m<sup>2</sup>/l at 25 microns)</p> <p>241 ft<sup>2</sup> at 5 mils (6.0 m<sup>2</sup>/l at 125 microns)</p> <p>Allow for loss in mixing and application.</p>
<b>VOC Values</b>	<p>As supplied: 1.7 lbs./gal (214 g/l)</p> <p>Thinned:</p> <p>8 oz/gal w/ #2: 2.0 lbs./gal (242 g/l)</p> <p>16 oz/gal w/ #33: 2.3 lbs./gal (280 g/l)</p> <p>These are nominal values and may vary slightly with color.</p>
<b>Dry Temp. Resistance</b>	<p>Continuous: 200°F (93°C)</p> <p>Non-Continuous: 250°F (121°C)</p> <p>Discoloration and loss of gloss is observed above 200°F (93°C).</p>
<b>Limitations</b>	Epoxies lose gloss, discolor and eventually chalk in sunlight exposure.

## 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 with Thinner 2 or Surface Cleaner 3 (Refer to Surface Cleaner 3 Product Data Sheet) in accordance with SSPC-SP 1.
<b>Steel</b>	<p>For mild environments, Hand Tool or Power Tool Clean in accordance with SSPC-SP2, SP3 or SP11 to produce a rust-scale free surface.</p> <p>For more severe environments, abrasive blast to a Commercial Finish in accordance with SSPC-SP6 and obtain a 2 – 3 mil (50-75 microns) blast profile.</p> <p>For dry cargo service, abrasive blast to a Near White Metal Finish in accordance with SSPC-SP10 and obtain a 2 - 3 mil (50-75 microns) blast profile.</p>
<b>Concrete</b>	Concrete must be cured 28 days at 70°F (21°C) and 50% relative humidity or equivalent. Prepare surfaces in accordance with ASTM D4258 Surface Cleaning of Concrete and ASTM D4259 Abrading Concrete. Remove fins and other protrusions by stoning, sanding or grinding. Abrasive blast to open all surface voids and remove all form oils, incompatible curing agents, hardeners, laitance and other foreign matter to produce a surface texture similar to that of a medium grit sandpaper. Voids in concrete may require surfacing. Blow or vacuum off sand and dust.
<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.

## 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 Guideline:

<b>Spray Application (General)</b>	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.
<b>Conventional Spray</b>	Pressure pot equipped with dual regulators, 3/8" I.D. minimum material hose, .070" I.D. fluid tip and appropriate air cap.
<b>Airless Spray</b>	<p>Pump Ratio: 30:1 (min.)*</p> <p>GPM Output: 3.0 (min.)</p> <p>Material Hose: 3/8" I.D. (min.)</p> <p>Tip Size: .017-.021"</p> <p>Output PSI: 2100-2300</p> <p>Filter Size: 60 mesh</p> <p>*Teflon packings are recommended and available from the pump manufacturer.</p>
<b>Brush &amp; Roller</b>	Use a medium bristle brush or a good quality short nap roller. Avoid excessive rebrushing and rerolling. Two coats may be required to obtain desired appearance, hiding and recommended dry film thickness. For best results, tie-in within 10 minutes at 75°F (24°C).

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## Mixing & Thinning

Mixing	Power mix separately, then combine and power mix. DO NOT MIX PARTIAL KITS.
Ratio	1:1 Ratio (A to B)
Thinning	Spray: Up to 8 oz/gal (6%) w/ Thinner #2 May thin using Thinner #33 up to 16 oz/gal (13%) for brush & roll applications and 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.
Pot Life	2 Hours at 75°F (24°C) and less at higher temperatures. Pot life ends when material loses film build.

## Cleanup & Safety

Cleanup	Use Thinner #2. 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 in enclosed areas and product is thinned, 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 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

Condition	Material	Surface	Ambient	Humidity
Normal	60°-85°F (16°-29°C)	60°-80°F (16°-27°C)	60°-90°F (16°-32°C)	0-80%
Minimum	50°F (10°C)	50°F (10°C)	50°F (10°C)	0%
Maximum*	90°F (32°C)	90°F (32°C)	110°F (43°C)	85%

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. \*Insure proper ventilation is used.

## Curing Schedule

Surface Temp. & 50% Relative Humidity	Dry to Recoat W/ Itself	Dry to Topcoat w/ Other Finishes	Final Cure	Dry Cargo Immersion
50°F (10°C)	12 Hours	24 Hours	3 Days	--
60°F (16°C)	8 Hours	16 Hours	2 Days	10 DAYS
75°F (24°C)	4 Hours	8 Hours	1 Days	5 Days
90°F (32°C)	2 Hours	4 Hours	16 Hours	3 Days

75°F (24°C)	Dry to Touch 2.5 Hours	Dry to Handle 6.5 Hours
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These times are based on a 4.0-7.0 mils (100-125 microns) 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. During high humidity conditions, it is recommended that the application be done while temperatures are increasing. **Maximum Recoat at 75°F (24°C) for epoxies is 30 days and for polyurethanes 90 days.** If the maximum recoat times have been exceeded, the surface must be abraded by sweep blasting prior to the application of additional coats.

For **force curing information**, contact Carboline Technical Service for specific requirements.

Force curing is recommended to assure odor free condition for storage of food grade products. Final cure requirement varies depending upon the service contact.

The following schedule may be used to force cure the coating system after the final coat is applied. Elevate temperature no more than 30°F (16°C) every 30 minutes. **\*Note:** Final cure temperatures below 60°F (16°C) are not recommended for tank linings.

Surface Temperature	Final Cure for Odor Free Condition
75°F (24°C)	4 Hours followed by
150 °F (66°C)	8 Hours

## Packaging, Handling & Storage

Shipping Weight (Approximate)	<u>2 Gallon Kit</u> 29 lbs. (13 kg)	<u>10 Gallon Kit</u> 145 lbs. (66 kg)
Flash Point (Setaflash)	Part A: 75°F (24°C) Part B: 71°F (22°C)	
Storage (General)	Store Indoors.	
Storage Temperature & Humidity	40° -110°F (4°-43°C) 0-100% Relative Humidity	
Shelf Life	Part A: Min. 36 months at 75°F (24°C) Part B: Min. 15 months at 75°F (24°C)	

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



350 Hanley Industrial Court, St. Louis, MO 63144-1599  
314/644-1000 314/644-4617 (fax) www.carboline.com

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