

## SELECTION & SPECIFICATION DATA

<b>Generic Type</b>	Cycloaliphatic Amine Epoxy with Glass Reinforcement
<b>Description</b>	A two-component, glass reinforced epoxy coating. 890 GF2 is chemical resistant and has a wide range of uses in industrial environments. Its glass reinforcement allows for excellent internal film strength, hardness, impact, and abrasion resistance. Most commonly, it is used in severe service (above or below the water line) in marine applications where these resistance qualities are desired.
<b>Features</b>	<ul style="list-style-type: none"> <li>• Convenient two-component mix</li> <li>• Excellent chemical resistance</li> <li>• Surface tolerant characteristics for less severe applications</li> <li>• Self-priming and primer/finish capabilities</li> <li>• Excellent abrasion resistance &amp; hardness</li> <li>• VOC compliant to current AIM regulations</li> </ul>
<b>Color</b>	C900 (Black), S800 (White), C703 (Grey), C705 (Light Grey), 0500 (Tile Red), 5555 (Safety Red), 0200 (Tan), 6666 (Safety Yellow), 1675 (Ignition Yellow) Other colors may be available on request. Contact your Carboline Representative for availability.
<b>Finish</b>	Flat
<b>Primer</b>	Normally self-priming. May be applied over other epoxy primers.
<b>Dry Film Thickness</b>	8 - 20 mils (203 - 508 microns) per coat
<b>Solids Content</b>	By Volume 75% +/- 2%
<b>Theoretical Coverage Rate</b>	1203 ft <sup>2</sup> /gal at 1.0 mils (29.5 m <sup>2</sup> /l at 25 microns) 150 ft <sup>2</sup> /gal at 8.0 mils (3.7 m <sup>2</sup> /l at 200 microns) 60 ft <sup>2</sup> /gal at 20.0 mils (1.5 m <sup>2</sup> /l at 500 microns) Allow for loss in mixing and application.
<b>VOC Values</b>	<p><b>As Supplied</b> : 1.7 lbs/gal (204 g/l)            Thinner 2 : 13 oz/gal: 2.2 lbs/gal (264 g/l)            Thinner 33 : 16 oz/gal: 2.3 lbs/gal (276 g/l)</p> <p>*Use Thinner 76 up to 8 oz/gal for 890 GF2 where non-photochemically reactive solvents are required.</p>
<b>Dry Temp. Resistance</b>	Continuous: 250°F (121°C) Non-Continuous: 300°F (149°C)  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. Epoxies may lose gloss, discolor and chalk when exposed to sunlight.
<b>Topcoats</b>	May be coated with Acrylics, Epoxies, or Polyurethanes depending on exposure and need.

## 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.
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### SUBSTRATES & SURFACE PREPARATION

<b>Steel</b>	Immersion: SSPC-SP10 Profile: 3.0-4.0 mils (75-100 microns) Non-Immersion: SSPC-SP6 Profile: 2.0-3.0 mils (50-75 microns) SSPC-SP2 or SP3 are suitable cleaning methods for mild (non-immersion) environments.
<b>Galvanized Steel</b>	Abrasive blast to achieve a minimum 2-3 mils (50-75 microns) profile.
<b>Concrete or CMU</b>	Concrete shall be designed, placed, cured, and prepared per NACE No. 6/SSPC-SP 13, latest edition. Abrade to remove all laitance, loose concrete, etc. and to create surface profile in accordance with the appropriate ICRI CSP 2-5.

### MIXING & THINNING

<b>Mixing</b>	Power mix Carboguard 890 Part A & Carboguard 890 GF2 Part B separately, then combine and power mix. DO NOT MIX PARTIAL KITS.
<b>Thinning</b>	Spray: Up to 13 oz/gal (10%) with Thinner 2 Brush: Up to 16 oz/gal (12%) with Thinner 33 Roller: Up to 16 oz/gal (12%) with Thinner 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.
<b>Ratio</b>	1:1 Ratio (A to B)
<b>Pot Life</b>	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.

<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.
<b>Conventional Spray</b>	Pressure pot equipped with dual regulators, 3/8" I.D. minimum material hose, 0.110" I.D. fluid tip and appropriate air cap.
<b>Airless Spray</b>	Pump Ratio: 30:1 (min.)* GPM Output: 3.0 (min.) Material Hose: 3/8" I.D. (min.) Tip Size: 0.035"-0.041" Output PSI: 2200-2500 *PTFE packings are recommended and available from the pump manufacturer.
<b>Brush &amp; Roller (General)</b>	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).

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**Brush** | Use a medium bristle brush.

**Roller** | Use a short-nap synthetic roller cover with solvent resistant core.

## 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)	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

Surface Temp.	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.

## 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 SDS for this product. Employ normal workmanlike safety precautions. 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. 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, workers should be required to use non-ferrous tools and wear conductive and non-sparking shoes.

# Carboguard<sup>®</sup> 890 GF2

## PRODUCT DATA SHEET



### PACKAGING, HANDLING & STORAGE

<b>Shelf Life</b>	Part A: 36 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.
<b>Storage Temperature &amp; Humidity</b>	40-110 °F (4-43 °C) 0-100% Relative Humidity
<b>Storage</b>	Store Indoors.
<b>Shipping Weight (Approximate)</b>	2 Gallon Kit - 30 lbs (15 kg) 10 Gallon Kit - 150 lbs (68 kg)
<b>Flash Point (Setaflash)</b>	Part A: 89 °F (32 °C) Part B: 73 °F (23 °C) Mixed: 78 °F (26 °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, 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.