

## SELECTION & SPECIFICATION DATA

<b>Generic Type</b>	Two component solvent-free epoxy
<b>Description</b>	Epoxy patching and surfacing compound that exhibits excellent bond strength and chemical resistance to a variety of acids, alkalis, salt solutions and oils. It is used to fill voids and bugholes in precast or poured-in-place concrete and other masonry surfaces. Repairs damaged concrete, fills narrow cracks, and can be used as a coving material for floor-wall transitions or lap joint areas. May also be used to repair weld seams and pits in metal for potable water service with a compatible ANSI/NSF 61 approved lining.
<b>Features</b>	<ul style="list-style-type: none"> <li>• Solvent free</li> <li>• Excellent film strength, abrasion, and impact resistance</li> <li>• Rapid hardening for quick service</li> <li>• Easy to mix ratios</li> <li>• Excellent film build and working properties</li> </ul>
<b>Color</b>	Light Grey
<b>Primer</b>	Normally self-priming to steel, concrete or masonry surfaces. May be applied over other epoxies.
<b>Dry Film Thickness</b>	125 mils (3175 microns) per coat  As required to fill the void or resurface the substrate. May be applied up to 1/8 inch (125 mils) per application on a vertical surface. Thicknesses greater or less than this will alter the coverage rate. Please consult Technical service for additional information.
<b>Solids Content</b>	By Volume 100% +/- 2%
<b>Theoretical Coverage Rate</b>	1604 ft <sup>2</sup> /gal at 1.0 mils (39.4 m <sup>2</sup> /l at 25 microns) 13 ft <sup>2</sup> /gal at 125.0 mils (0.3 m <sup>2</sup> /l at 3125 microns) Allow for loss in mixing and application.
<b>VOC Values</b>	<b>As Supplied</b> : 0 lbs/gal (0 g/l)  (Calculated)
<b>Dry Temp. Resistance</b>	Continuous: 250°F (121°C) Non-Continuous: 300°F (149°C)  Discoloration may be observed above 200 °F (93 °C).
<b>Limitations</b>	Epoxies lose gloss, discolor and eventually chalk in sunlight exposure.
<b>Topcoats</b>	May be coated with Epoxies or Polyurethanes depending on exposure and need.

## SUBSTRATES & SURFACE PREPARATION

<b>General</b>	All surfaces must be clean, dry and free of oil, grease, loose mill scale, dirt, dust or other materials which would impair the bond of the coating to be applied to the substrate in accordance with SSPC-SP 1. Surface preparation must meet the requirements of the coating being used.
<b>Steel</b>	Cleanliness: SSPC-SP10 Surface Profile: 1.5-3.0 mils (38-75 microns)

## SUBSTRATES & SURFACE PREPARATION

<b>Galvanized Steel</b>	Clean to remove all contaminants and prepare in accordance with SSPC-SP 16 (1.5 to 3 mils/38-75 microns).
<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. <u>Mortar joints</u> should be thoroughly cured for a minimum of 15 days at 75 °F (24 °C) and 50% relative humidity or equivalent.

## PERFORMANCE DATA

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

Test Method	System	Results
Bond Strength Elcometer (ASTM D4541)	Carboguard 501 over concrete	>400 psi concrete failure
Compressive Strength (ASTM C579)	Carboguard 501	5000 psi
Flexural Strength (ASTM C580)	Carboguard 501	2200 psi
Hardness Shore D Durometer (ASTM D2240)	Carboguard 501	60
Tensile Strength (ASTM C307)	Carboguard 501	1300 psi

Test reports and additional data available upon written request.

## MIXING & THINNING

<b>Mixing</b>	Power mix separately and then combine and power mix for at least two minutes or until a uniform gray color is achieved. Recommend using a heavy-duty, slow speed drill and a jiffy mixer. When mixing partial kits it is critical to apportion equal volumes of the two components to ensure proper cure and film properties. Any unused material must be resealed immediately.
<b>Ratio</b>	1:1 Ratio (A to B)
<b>Pot Life</b>	15-30 min at 75 °F (24 °C) depending on volume mixed. Pot life ends when coating becomes too viscous to use. Pot life times will be less at higher temperatures or larger mixed masses.

## 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>Hand Tools</b>	This is a high solids thixotropic coating that is applied through the use of one or more of the following: steel finishing trowel, taping knife, spatula, or rigid squeegee. Use the surrounding area as a leveling guide for finishing.
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## APPLICATION CONDITIONS

Condition	Material	Surface	Ambient	Humidity
Minimum	55°F (13°C)	55°F (13°C)	55°F (13°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. It may be sanded 8 to 16 hours after application, depending on ambient conditions.

## CURING SCHEDULE

Surface Temp.	Set Time to Topcoat with Other Finishes	Ultimate Physical Characteristics
75°F (24°C)	8 Hours	7 Days

Higher film thickness, insufficient ventilation or cooler temperatures will require longer cure times. 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. Elastomeric topcoats (ie: Reactamine 760) require abrasively blasted 501 prior to topcoat.

## CLEANUP & SAFETY

<b>Cleanup</b>	Use scouring pads and water or Thinner 2. In case of spillage, absorb and dispose of in accordance with local applicable regulations.
<b>Safety</b>	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.
<b>Caution</b>	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.

## PACKAGING, HANDLING & STORAGE

<b>Shelf Life</b>	Min. 36 months *Shelf Life: (actual stated shelf life) when kept at recommended storage conditions and in original unopened containers
<b>Storage Temperature &amp; Humidity</b>	60-85 °F (16-30 °C) Do not freeze.
<b>Storage</b>	Store indoors
<b>Shipping Weight (Approximate)</b>	<b>3.6 Gal. Kit</b> 50 lbs (23 kg)
<b>Flash Point (Setaflash)</b>	Part A >267 °F (131 °C) Part B >485 °F (251 °C)

# Carboguard® 501

## PRODUCT DATA SHEET

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### WARRANTY

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