

SELECTION & SPECIFICATION DATA

Generic Type	Epoxy Polyamide Primer
Description	Versatile corrosion resistant coating with zinc phosphate and MIO additives. Used as a primer or intermediate coat.
Features	<ul style="list-style-type: none"> • Versatile corrosion resistant paint • Used as a primer or intermediate coat. • Surface tolerant • MIO and Zinc phosphate additives
Color	Grey
Finish	Matte
Primer	Self-priming. May be applied over zinc rich primers. A mist coat may be required to minimize bubbling over inorganic zinc rich primers.
Dry Film Thickness	<p>102 - 229 microns (4 - 9 mils) per coat</p> <p>Don't exceed 10 mils (250 microns) in a single coat. Excessive film thickness over inorganic zincs may increase damage during shipping or erection.</p>
Solids Content	By Volume 87% +/- 2%
Theoretical Coverage Rate	<p>34.2 m²/l at 25 microns (1395 ft²/gal at 1.0 mils)</p> <p>8.6 m²/l at 100 microns (349 ft²/gal at 4.0 mils)</p> <p>3.8 m²/l at 225 microns (155 ft²/gal at 9.0 mils)</p> <p>Allow for loss in mixing and application.</p>
VOC Values	As Supplied : 133 g/l
Limitations	Epoxies lose gloss, discolor and eventually chalk in sunlight exposure. Not recommended for immersion service. The product may turn slightly reddish. This will not affect the performance of the coating but rather a cosmetic issue.
Topcoats	May be coated with Acrylics, Epoxies, Polyurethanes depending on exposure and need.

SUBSTRATES & SURFACE PREPARATION

General	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.
Steel	SSPC-SP6 1.5-3.0 mils (38-75 microns) SSPC-SP2 or SP3 are suitable cleaning methods for mild environments.
Galvanized Steel	Galvanizing requires a roughened surface for optimum adhesion/performance of high build epoxies. Remove any contaminants per SSPC-SP1. Ensure there are no chemical treatments that may interfere with adhesion. Abrade the surface to establish a suitable roughness, typically 1 mil. SSPCSP7 or SP11 are acceptable methods.
Non-Ferrous Metals	Surface profile should be a dense angular 1.5 - 3 mils and is best achieved through abrasive blasting in accordance with SSPC-SP16 for atmospheric exposure, or SSPC-SP17 for immersion environments

Carboguard 616 FS

PRODUCT DATA SHEET



PERFORMANCE DATA

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

Test Method	System	Results
Adhesion (ASTM D4541) DEFELSKO Positest Pull-off Adhesion Tester	Sa 2½ grade and 40-75 micron surface profile 6 mm cold rolled steel panel 150 µm DFT Carboguard 616 FS	17.26 MPa
Salt Spray Corrosion Test (ASTM B117) C&W Salt Spray Cabinet	Sa 2½ grade and 40-75 micron surface profile 6mm cold rolled steel panel 100 µm DFT Carboguard 616 FS	No paint defects or corrosion/ rust formation after 400 hours
Salt Spray Corrosion Test (ASTM B117) C&W Salt Spray Cabinet	Sa 2½ grade and 40-75 micron surface profile 6mm cold rolled steel panel 130 µm DFT Carboguard 616 FS	No paint defects or corrosion/ rust formation after 1300 hours

MIXING & THINNING

Mixing	Power mix separately, then combine and power mix. DO NOT MIX PARTIAL KITS.
Thinning	Spray: Up to 12% by volume with Thinner #10
Ratio	8:1 ratio by volume (A to B)
Pot Life	4 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)	The following spray equipment has been found suitable and is available from manufacturers such as Binks, DeVilbiss and Graco.
Conventional Spray	It can be applied with an air spray gun with a nozzle diameter of 1.8 - 2.0 from the bottom / top of the chamber.
Airless Spray	Pump Ratio: 30:1 (min.)* GPM Output: 2.5 (min.) Material Hose: 3/8" I.D. (min.) Tip Size: .015"-.021" Output PSI: 2100-2300 Filter Size: 60 mesh
Brush & Roller (General)	Recommended for touch up of small area. Avoid excessive brushing or rolling.
Brush	Use a medium bristle brush.
Roller	Use a short-nap synthetic roller cover with phenolic core.

APPLICATION CONDITIONS

Condition	Material	Surface	Ambient	Humidity
Minimum	10°C (50°F)	5°C (41°F)	5°C (41°F)	0%
Maximum	32°C (90°F)	52°C (126°F)	43°C (109°F)	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.

CURING SCHEDULE

Surface Temp.	Dry to Touch	Minimum Recoat Time	Maximum Recoat Time
15°C (59°F)	12 Hours	8 Hours	3 Months
20°C (68°F)	10 Hours	6 Hours	3 Months
25°C (77°F)	8 Hours	4 Hours	3 Months
30°C (86°F)	6 Hours	2.5 Hours	3 Months

These times are based on 50% relative humidity and 4.0-6.0 mil (100-150 micron) dry film thickness for atmospheric exposures. 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. 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. For force curing, contact Carboline Technical service for specific requirements.

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.

PACKAGING, HANDLING & STORAGE

Shelf Life	Part A: Min. 12 months at 75°F (24°C) Part B: Min. 12 months at 75°F (24°C) When stored under recommended storage conditions and in its original unopened package.
Shipping Weight (Approximate)	1 kit: Net 18 lt (Gross weight: 38.5 kg) Comp. A: Net 16 lt (Gross weight: 36 kg) Comp. B: Net 2 lt (Gross weight: 2.5 kg)
Storage Temperature & Humidity	4°-43°C ambient temperature and % 0-95 relative humidity

Carboguard 616 FS

PRODUCT DATA SHEET



PACKAGING, HANDLING & STORAGE

Flash Point (Setaflash)	27°C for Part A 27°C for Part B
--------------------------------	------------------------------------

Storage	Store Indoors
----------------	---------------

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 to verify correctness before specifying or ordering. No guarantee of accuracy is given or implied. Carboline warrants our products to be free of manufacturing defects in accord with applicable Carboline quality control procedures. THIS WARRANTY IS NOT VALID WHEN THE PRODUCT IS NOT: (1) APPLIED IN ACCORDANCE WITH CARBOLINE'S SPECIFICATIONS, AND/OR (2) PROPERLY STORED, CURED, AND USED UNDER NORMAL OPERATING CONDITIONS. Carboline assumes no responsibility for coverage, performance, injuries, or damages resulting from use of the product. If this product is found not to perform as specified upon inspection by a Carboline representative during the warranty period, Carboline's sole obligation, if any, is to replace the Carboline product(s) proven to be defective or refund the purchase price thereof, at Carboline's sole option. Carboline shall not be liable for any other losses or damages. This warranty excludes (1) labor and costs of labor for the application or removal of any product, and (2) any incidental or consequential damages, whether based on breach of express or implied warranty, negligence, strict liability or any other legal theory. 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. The whole text of this Product Data Sheet, as well as the documents derived from it, have been written in English, and for legal purposes the English version shall prevail.