

SELECTION & SPECIFICATION DATA

Generic Type	Epoxy Polyamide
Description	Versatile corrosion resistant coating with zinc phosphate corrosion inhibitor. Contains additional filler reinforcement (micaceous iron oxide) for enhanced barrier resistant properties. Used either as a primer or intermediate coat over steel, other epoxies or inorganic zinc primers. May be topcoated with a broad variety of high performance finish coats. Has surface tolerant properties. Has optional (LT) cure for 35°F cure capability.
Features	• Ready to apply after mixing; no sweat-in time or thinning required. • Economical fit for use epoxy • Used as a primer or intermediate coat • Can be applied over power tool cleaned surfaces • Micaceous iron oxide (MiO Filler) for additional barrier properties and corrosion resistance: MiO is purchased separately • Optional low temperature (LT) cure Part B • VOC compliant to current AIM regulations
Color	Standard colors include: 0700 (Gray) and 0800 (White) Other colors may be available on request. Contact your Carboline Representative for availability
Finish	Eggshell
Primer	Self-priming. May be applied over organic and inorganic zinc rich primers. A mist coat may be required to minimize bubbling over zinc rich primers.
Dry Film Thickness	3 - 5 mils (76 - 127 microns) per coat Two coats at 3-5 mils (75-125 microns) per coat may be used direct-to-metal. Do not exceed 10 mils (250 microns) in a single coat. Excessive film thickness over inorganic zincs may increase damage during shipping or erection.
Solids Content	By Volume 64% +/- 2%
Theoretical Coverage Rate	1027 ft²/gal at 1.0 mils (25.2 m²/l at 25 microns) 342 ft²/gal at 3.0 mils (8.4 m²/l at 75 microns) 205 ft²/gal at 5.0 mils (5.0 m²/l at 125 microns) Allow for loss in mixing and application.
VOC Values	Thinner 10 : 15 oz./gal 3.26 lbs./gal 391 g/l Thinner 236 E : 16 oz/gal 2.80 lbs./gal 336 g/l Thinner 33 : 16 oz/gal 3.31 lbs./gal 397g/l As Supplied : 2.80 lbs./gal 336 g/l These are nominal values and may vary slightly with color.
Dry Temp. Resistance	Continuous: 300°F (149°C) Discoloration and loss of gloss occurs above 212 F (100 C) but does not affect performance.
Limitations	• Epoxies may lose gloss, discolor and chalk when exposed to sunlight. • Not recommended for immersion service.
Topcoats	May be coated with Acrylics, Epoxies, Alkyds, or 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	For most applications: SSPC-SP6 to obtain a blast profile of 1.0-2.0 mils (25-50 microns). May also be applied over SSPC-SP 3 for certain applications.
Concrete or CMU	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.

PERFORMANCE DATA

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

Test Method	System	Results
ASTM D4541 Adhesion	Blasted Steel 1ct. 893 SG	1600 psi (Pneumatic)
ASTM D522 Flexibility	Blasted Steel 1 ct. 893 SG	90° bend produced no cracking, 3/4" Cylindrical Mandrel Bend

Test reports and additional data available upon written request.

MIXING & THINNING

Mixing	Power mix separately, then combine and power mix. DO NOT MIX PARTIAL KITS.
Thinning	Normally not required but may thin as follows: Spray: Up to 15 oz/gal (12%) with Thinner #10. Brush & Roller: Up to 16 oz/gal (12%) with Thinner #33. Thinner 236E may be used as an exempt thinner in lieu of those listed above. Use of thinners other than those supplied or recommended by Carboline may adversely affect product performance and void product warranty, whether expressed or implied.
Ratio	893 SG MiO: 1:1 Ratio (A to B) and MiO Filler at 2 lbs/gal
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	Pressure pot equipped with dual regulators, 3/8" I.D. minimum material hose, .070" I.D. fluid tip and appropriate air cap.

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Airless Spray	Pump Ratio: 30:1 (min.)* GPM Output: 2.5 (min.) Material Hose: 3/8" I.D. (min.) Tip Size: .017"-.021" Output PSI: 2100-2300 Filter Size: 60 mesh *PTFE packings are recommended and available from the pump manufacturer.
Brush & Roller (General)	Not recommended for tank lining applications except when striping welds. Multiple coats may be required to obtain desired appearance, recommended dry film thickness and adequate hiding. Avoid excessive rebrushing or re-rolling. For best results, tie-in within 10 minutes at 75°F (24°C).
Brush	Use a medium bristle brush.
Roller	Use 3/8" nap phenolic core roller.

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	Maximum Recoat Time
50°F (10°C)	24 Hours	365 Days
60°F (16°C)	10 Hours	365 Days
75°F (24°C)	7 Hours	365 Days
90°F (32°C)	4 Hours	365 Days

These times are based on a 4.0-6.0 mil (100-150 micron) dry film thickness for non-immersion. 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 SDS 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 are

Carboguard[®] 893 SG MIO

PRODUCT DATA SHEET



CLEANUP & SAFETY

Ventilation	When used 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 respirator.
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PACKAGING, HANDLING & STORAGE

Shelf Life	Part A & B: Min. 36 months at 75°F (24°C) MiO Filler: Min 60 months at 75°F *Shelf Life: (actual stated shelf life) when kept at recommended storage conditions and in original unopened containers.
Storage Temperature & Humidity	40° - 110°F (4° - 43°C) 0-100% Relative Humidity
Storage	Store Indoors.
Shipping Weight (Approximate)	2 Gallon Kit - 26 lbs. (12 kg) 10 Gallon Kit - 127 lbs. (58 kg)
Flash Point (Setaflash)	Part A: 75°F (24°C) Part B: 75°F (24°C)
MIO	4 lbs (in a pint container) 20 lbs (in a gal container)

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.