Carboguard® 893 SG

PRODUCT DATA SHEET

SELECTION & SPECIFICATION DATA

Generic Type	Epoxy polyamide with corrosion inhibitor (zinc phosphate)
Description	Versatile corrosion resistant coating. Used either as a primer, intermediate coat, or self-priming finish over steel and zinc primers. May be topcoated with itself, or a broad variety of high performance finish coats. Product also has surface tolerant properties. 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 • Available in a variety of rapid tint colors • Attractive low sheen for tank exteriors • Used as a primer, intermediate, or finish coat • Power tool cleaned surfaces acceptable • Optional low temperature (LT) cure Part B • VOC compliant to current AIM regulations
Color	Primer color (0700) gray. Variety of other finish coat colors in Rapid Tint Service. Use Bright White (T800) for tank exterior finish.
Finish	Eggshell
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	3 - 6 mils (76 - 152 microns) per coat 3-5 mils (75-125 microns) can be used as a primer or intermediate coat. Two coats may be used direct-to-metal. 4-6 mils (100-150 microns) can be used as a finish coat over a primer. 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 63% +/- 2%
Theoretical Coverage Rate	1011 ft²/gal at 1.0 mils (24.8 m²/l at 25 microns) 337 ft²/gal at 3.0 mils (8.3 m²/l at 75 microns) 168 ft²/gal at 6.0 mils (4.1 m²/l at 150 microns) Allow for loss in mixing and application.
VOC Values	Thinner 10 15 oz./gal: 2.95 lbs/gal (354 g/l) Thinner 229 16 oz/gal: 2.97 lbs/gal (356 g/l) Thinner 236 E 16 oz/gal: 2.70 lbs./gal (324 g/l) Thinner 243 E 16 oz/gal: 2.70 lbs./gal (324 g/l) Thinner 33 16 oz/gal: 2.98 lbs./gal (357 g/l) As Supplied 2.70 lbs./gal (324 g/l) Calculated. These are nominal values and may vary slightly with color.
Dry Temp. Resistance	Continuous: 300°F (149°C) Prolonged exposure above 200 °F (93 °C) may cause discoloration (darkening), but will not affect performance.

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Limitations	Epoxies lose gloss, discolor and eventually chalk in sunlight exposure. LT Cure will cause additional discoloration as it weathers and/or ages.
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.
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; and abrade the surface to establish a suitable roughness (typically 1 mil). SSPC-SP7 or SP11 are acceptable methods.
Concrete or CMU	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 ICRI CSP 2-5.

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 or 243E may be used as an exempt thinner in lieu of those listed above. Thinner 229 is used when very hot surfaces up to 140°F are encountered. 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	1:1 Ratio (A to B)
Pot Life	4 Hours at 75 °F (24 °C) Pot life ends when coating thickens and loses application properties. 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 equipment manufacturers.

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.

Conventional Spray	Pressure pot equipped with dual regulators, 3/8" I.D. minimum material hose, 0.070" I.D. fluid tip and appropriate air cap.
Airless Spray	Pump Ratio: 30:1 (min.)* GPM Output: 2.5 (min.) Material Hose: 3/8" I.D. (min.) Tip Size: 0.017"-0.021" Output PSI: 2100-2300 Filter Size: 60 mesh *PTFE packings are recommended and available from the pump manufacturer.
Brush & Roller (General)	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 solvent resistant 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)	140°F (60°C)	110°F (43°C)	95%

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. Surface and ambient temperatures may be reduced to 35 °F (2 °C) when using the (LT) cure.

CURING SCHEDULE

Surface Temp.	Dry to Recoat or Topcoat	Maximum Recoat Time
50°F (10°C)	24 Hours	1 Year
60°F (16°C)	10 Hours	1 Year
75°F (24°C)	7 Hours	1 Year
90°F (32°C)	4 Hours	1 Year

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.

CLEANUP & SAFETY

Safety	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.
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.

PACKAGING, HANDLING & STORAGE

Shelf Life	Part A & B: Min. 36 months at 75 °F (24 °C) *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. This product is solvent based and not affected by excursions below these published storage temperatures, down to 10 °F (-12 °C), for a duration of no more than 14 days. Always inspect the product prior to use to make sure it is smooth and homogeneous when properly mixed.
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)

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 or injuries resulting from use. Liability, if any, is limited to replacement of products. 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.