Carboguard 893 ESD

PRODUCT DATA SHEET

SELECTION & SPECIFICATION DATA

Generic Type	Epoxy polyamide with corrosion inhibitor.
Description	Versatile corrosion resistant coating with electrostatic dissipative properties. Used as a primer and intermediate coat. May be topcoated with a high performance finish coat: Carbocrylic 1290 ATEX.
Features	• Ready to apply after mixing; no sweat-in time. • Used as a primer or as intermediate. • Power tool cleaned surfaces acceptable. • Complies to EN 80079-36 paragraph 6.7.5 point a) and EN 60079-0 – Can be used as part of paint systems designed for Atex Zones – Group GAZ IIA, IIB, IIC.
Color	Grey
Finish	Eggshell
Primer	May be applied over zinc rich primers. A mist coat may be required to minimize bubbling over inorganic zinc rich primers.
Dry Film Thickness	51 - 127 microns (2 - 5 mils) per coat Do not exceed 250 microns (10 mil) 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	24.8 m²/l at 25 microns (1011 ft²/gal at 1.0 mils) 12.4 m²/l at 50 microns (505 ft²/gal at 2.0 mils) 5.0 m²/l at 125 microns (202 ft²/gal at 5.0 mils) Allow for loss in mixing and application.
VOC Values	**As Supplied** : 324 g/l (2.70 lbs/gal) Thinner 10 : 12%vol (15 oz./gal)=354 g/l (2.95 lbs/gal) Thinner 33 : 12%vol(16 oz./gal)=357 g/l (2.98 lbs/gal) Calculated. These are nominal values.
Limitations	Epoxies may lose gloss, discolor and chalk when exposed to sunlight. Not recommended for immersion service.
Topcoats	May be coated with Acrylics, Epoxies, or Polyurethanes

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/ISO 8501-1 SA 2. **Blast profile:** 25-50 µm (1,0-2,0 mils). May also be applied over SSPC-SP3 (ISO 8501-1 ST3) for certain applications.

SUBSTRATES & SURFACE PREPARATION

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) in accordance with standard SSPC-SP16.

MIXING & THINNING

Mixing	Power mix separately, then combine and power mix. DO NOT MIX PARTIAL KITS.
Thinning	**Spray:** Up to 12% (15 oz/gal) with Carboline Thinner 10. **Brush & Roller:** Up to 12% (16 oz/gal) with Carboline Thinner 33. 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	By Volume: Carboguard 893 ESD part A: 1 Carboguard 893 ESD part B: 1
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	The following spray equipment has been found suitable and is available from equipment manufacturers.
Conventional Spray	Pressure pot equipped with dual regulators, 9.53 mm (3/8”) I.D. minimum material hose, 1.8 mm (0.070”) I.D. fluid tip and appropriate air cap.
Airless Spray	Pump Ratio: 30:1 (min.) * Output flow: 9.5 LPM (2.5 GPM) (min.) Material Hose: 9.53 mm (3/8”) I.D. (min.) Tip Size: 0.43-0.53 mm (0.017”-0.021”) Output pressure: 145-159 bar (2100-2300 psi) Filter Size: 250 microns (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 24 °C.
Brush	Use a medium bristle brush.
Roller	Use 9.53 mm (3/8”) nap solvent resistant core roller.

APPLICATION CONDITIONS

Condition	Material	Surface	Ambient	Humidity
Minimum	10°C (50°F)	10°C (50°F)	10°C (50°F)	0%
Maximum	32°C (90°F)	60°C (140°F)	43°C (109°F)	95%

This product requires the substrate temperature to be 3°C 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	Dry to Handle	Dry to Recoat or Topcoat	Maximum Recoat Time
10°C (50°F)	2 Hours	12 Hours	24 Hours	1 Year
16°C (61°F)	1.5 Hours	8 Hours	10 Hours	1 Year
24°C (75°F)	1 Hour	4 Hours	7 Hours	1 Year
32°C (90°F)	30 Minutes	2 Hours	4 Hours	1 Year

These times are based on a 2-5 mil (50-125 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.
For force curing, contact Carboline Technical Service for specific requirements.

CLEANUP & SAFETY

Cleanup	Use Carboline Thinner 2. 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. 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 & Part B: 12 months at 24ºC* *Shelf Life: (actual stated shelf life) when kept at recommended storage conditions and in original unopened containers.
Storage Temperature & Humidity	4°-43°C (40° -110°F) HR 0-100%
Flash Point (Setaflash)	Part A: 24°C (75°F) Part B: 24°C (75°F)

PACKAGING, HANDLING & STORAGE

Storage	Store indoors. Always inspect the product prior to use to make sure it is smooth and homogeneous when properly mixed.
Packaging	CARBOGUARD 893 ESD Part A 10 liter CARBOGUARD 893 ESD Part B 10 liter

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.