Carboguard® 892

PRODUCT DATA SHEET

SELECTION & SPECIFICATION DATA

Generic Type	Cross-linked epoxy
Description	A high solids, semi-gloss, high build, self-priming epoxy that can be applied by spray, brush, or roller. The cured film provides a tough, cleanable and aesthetically pleasing surface. Recommended uses for Carboguard 892 include railcar hopper interiors carrying dry food-grade cargoes. Other applications include food, meat, poultry, beverage, and pharmaceutical plants.
Features	• Compatible over tightly adhered rust and old coatings in mild environments. • Very good abrasion resistance. • Excellent performance in wet exposures. • Meets FDA 21 CFR 175.300 criteria for direct food contact. • Acceptable for incidental food contact surfaces in federally inspected meat and poultry facilities. • VOC compliant to current AIM regulations.
Color	Off White (1898), Blue (4169), Gray (6758)
Finish	Semi-Gloss
Primer	Self-priming. May be applied over inorganic zincs, weathered galvanizing, epoxies, phenolics or other coatings as recommended. A test patch is recommended before use over existing coatings. A mist coat is required when applied over inorganic zinc to minimize bubbling. Not recommended over chlorinated rubber or latex coatings.
Dry Film Thickness	4 - 6 mils (102 - 152 microns) per coat for use in mild environments 5 - 7 mils (127 - 178 microns) for more severe environments Dry film thickness in excess of 10 mils (250 microns) per coat is not recommended. Minimum of 2 coats at 4-6 mils (150-200 microns) each is recommended over marginally prepared steel.
Solids Content	By Volume 75% +/- 2%
Theoretical Coverage Rate	1203 ft²/gal at 1.0 mils (29.5 m²/l at 25 microns) 301 ft²/gal at 4.0 mils (7.4 m²/l at 100 microns) 172 ft²/gal at 7.0 mils (4.2 m²/l at 175 microns) Allow for loss in mixing and application.
VOC Values	**As Supplied** : 1.7 lbs./gal (214 g/l) Thinner 33 : 16 oz/ga:l 2.3 lbs./gal (280 g/l) Thinner 2 : 8 oz/gal: 2.0 lbs./gal (242 g/l)
Dry Temp. Resistance	Continuous: 200°F (93°C) Non-Continuous: 250°F (121°C) Discoloration and loss of gloss is observed above 200 °F (93 °C).
Limitations	Epoxies may lose gloss, discolor and chalk when exposed to sunlight.
Topcoats	May be coated with Acrylics or Polyurethanes depending on exposure and need. Not normally topcoated.

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 with Thinner 2 or Surface Cleaner 3 (Refer to Surface Cleaner 3 Product Data Sheet) in accordance with SSPC-SP 1.
Steel	**For mild environments** - Hand Tool or Power Tool Clean in accordance with SSPC-SP2,SP3 or SP11 to produce a rust-scale free surface. **For more severe environments** - abrasive blast to a Commercial Blast in accordance with SSPC-SP6 and obtain a 2 – 3 mil (50-75 microns) blast profile. **For dry cargo service** - abrasive blast to a Near White Metal Finish in accordance with SSPC-SP10 and obtain a 2 - 3 mil (50-75 microns) blast profile.
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 the appropriate ICRI CSP standard for the coating system.
Previously Painted Surfaces	Lightly sand or abrade to roughen surface and degloss the surface. Existing paint must attain a minimum 3B rating in accordance with ASTM D3359 “X-Scribe” adhesion test.

MIXING & THINNING

Mixing	Power mix separately, then combine and power mix. DO NOT MIX PARTIAL KITS.
Thinning	Spray: Up to 8 oz/gal (6%) w/ Thinner 2 May thin using Thinner 33 up to 16 oz/gal (13%) for brush & roll applications and hot/windy conditions. 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	2 Hours at 75 °F (24 °C) and less at higher temperatures. Pot life ends when material loses film build.

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)	This is a high solids coating and may require adjustments in spray techniques. Wet film thickness is easily and quickly achieved. 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, 0.070” I.D. fluid tip and appropriate air cap.
Airless Spray	• Pump Ratio: 30:1 (min.)* • GPM Output: 3.0 (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.

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Brush & Roller (General)	Use a medium bristle brush or a good quality short nap roller with solvent resistant core. Avoid excessive rebrushing and rerolling. Two coats may be required to obtain desired appearance, hiding and recommended dry film thickness. For best results, tie-in within 10 minutes at 75 °F (24 °C).

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)	90°F (32°C)	110°F (43°C)	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. *Insure proper ventilation is used.

CURING SCHEDULE

Surface Temp.	Dry to Touch	Dry to Handle	Dry to Topcoat Minimum	Dry to Recoat & Topcoat w/ other finishes	Final Cure
50°F (10°C)	NR	NR	12 Hours	24 Hours	3 Days
60°F (16°C)	NR	NR	8 Hours	16 Hours	2 Days
75°F (24°C)	3 Hours	7 Hours	4 Hours	8 Hours	1 Day
90°F (32°C)	NR	NR	2 Hours	4 Hours	16 Hours

These times are based on a 4.0-7.0 mils (100-125 microns) dry film thickness. 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. During high humidity conditions, it is recommended that the application be done while temperatures are increasing. **Maximum Recoat at 75 °F (24 °C) for epoxies is 30 days and for polyurethanes 90 days.** If the maximum recoat times have been exceeded, the surface must be abraded by sweep blasting prior to the application of additional coats.
For **force curing information**m contact Carboline Technical Service for specific requirements.
Force curing is recommended to assure odor free condition for storage of food grade products. Final cure requirement varies depending upon the service contact.
The following schedule may be used to force cure the coating system after the final coat is applied. Elevate temperature no more than 30 °F (16 °C) every 30 minutes. ***Note:** Final cure temperatures below 60 °F (16 °C) are not recommended for tank linings.
Surface Temperature for Final Cure for Odor Free Condition:
75 °F (24 °C) for 4 Hours followed by
150 °F (66 °C) for 8 Hours

The curing schedule below references curing times for Dry Cargo Immersion Service.

Surface Temp.	Cure for Service
60°F (16°C)	10 Days
75°F (24°C)	5 Days
90°F (32°C)	3 Days

CLEANUP & SAFETY

Cleanup	Use 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 and product is thinned, 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: Min. 36 months at 75 °F (24 °C) Part B: Min. 15 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
Shipping Weight (Approximate)	2 Gallon Kit - 29 lbs. (13 kg) 10 Gallon Kit - 145 lbs. (66 kg)
Flash Point (Setaflash)	Part A: 75 °F (24 °C) Part B: 71 °F (22 °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 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.