Carbozinc® 858 (3K)

PRODUCT DATA SHEET

SELECTION & SPECIFICATION DATA

Generic Type	Solvent Based Organic Zinc-Rich Epoxy
Description	A high-solids, zinc-filled epoxy primer for corrosion protection of structural steel in highly corrosive environments including offshore, marine and industrial. This low VOC, HAPs compliant primer has quick cure-to-topcoat characteristics for in-shop applications and quick turnaround capabilities for the field. It has excellent adhesion and undercutting resistance and is outstanding for use as a corrosion resistant primer for a variety of applications.
Features	• Protects steel galvanically • Outstanding application properties • Cures at low temperatures down to 35°F(2ºC) • Tough and abrasion resistant film • Wide use in severe industrial or marine environments
Color	0300 (Green)
Finish	Matte
Primer	Self Priming
Dry Film Thickness	2 - 6 mils (51 - 152 microns) per coat Dry film thickness in excess of 8.0 mils (200 microns) per coat is not recommended.
Total Zinc Dust in Dry Film	By Weight: 84%
Solids Content	By Volume 64% +/- 2%
Theoretical Coverage Rate	1027 ft²/gal at 1.0 mils (25.2 m²/l at 25 microns) 513 ft²/gal at 2.0 mils (12.6 m²/l at 50 microns) 171 ft²/gal at 6.0 mils (4.2 m²/l at 150 microns) Allow for loss in mixing and application.
VOC Values	**As Supplied** : 2.65 lbs/gal (318 g/l) Thinner 2 : 12.8 oz/gal: 3.05 lbs./gal (366 g/l) Thinner 33 : 12.8 oz/gal: 3.08 lbs./gal (370 g/l) These are nominal values. *Use Thinner #76 for projects requiring non-photochemically reactive solvents.
Dry Temp. Resistance	Continuous: 350°F (177°C) Non-Continuous: 400°F (204°C)
Topcoats	Can be top coated with epoxies, polyurethantes, acrylics and others as recommended by your Carbline sales representative.

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 with a 1.0-3.0 mil (25-75 micron) surface profile. SSPC-SP2 or SP3 for touch-up.

MIXING & THINNING

Mixing	Power mix Part A completely. Then slowly sift in the zinc filler under agitation. Power mix Part B separately and add slowly to the mixture. Pour mixture through a 30 mesh screen. DO NOT MIX PARTIAL KITS. **Tip**: Sifting zinc through a window screen will aid in the mixing process by breaking up or catching dry zinc lumps.
Thinning	Normally not required but may be thinned up to 12.8 oz/gal (10%) with Thinner #2 or Thinner #76. In hot or windy conditions, may be thinned up to 12.8 oz/gal with Thinner #33. Use of thinners other than those supplied by Carboline may adversely affect product performance and void product warranty, whether expressed or implied.
Ratio	.80 Gal. Kit Part A: .354 gallons Part B: .20 gallons Zinc Filler: 14.6 lbs 4.00 Gal Kit Part A: 1.77 gallons Part B: 1.0 gallon Zinc Filler: 73 lbs.
Pot Life	4 Hours at 75°F (24°C) and less at higher temperatures. Pot life ends when coating loses body and begins to sag.

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. Keep material under mild agitation during application.
Conventional Spray	Agitated 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: 0.017-0.023” Output PSI: 2000-2200 Filter Size: 60 mesh *PTFE packings are recommended and available from the pump manufacturer.
Brush	For small areas and touch-up only. Use medium bristle brush and avoid rebrushing.
Roller	Not recommended.

APPLICATION CONDITIONS

Condition	Material	Surface	Ambient	Humidity
Minimum	40°F (4°C)	35°F (2°C)	35°F (2°C)	0%
Maximum	90°F (32°C)	120°F (49°C)	110°F (43°C)	95%

Industry standards are for the substrate temperatures to be 5°F (3°C) above the dew point. 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 Topcoat	Final Cure
35°F (2°C)	8 Hours	10 Hours
50°F (10°C)	5 Hours	6 Hours
75°F (24°C)	2 Hours	3 Hours
90°F (32°C)	1 Hour	1 Hour

These times are based on a 50% relative humidity and 3.0 mil (75 micron) 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.
Dry to touch at 75°F (24°C) is 30 minutes.
Specific topcoat products can be used in a much shorter re-coat interval. Consult Carboline for recommendations and test results.
Maximum Recoat: Unlimited. Must have a clean, dry surface for topcoating. “Loose” chalk or salts must be removed in accordance with good painting practice. Consult Carboline Technical Service for specific information.

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.

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. In addition to ensuring proper ventilation, appropriate respirators must be used by all application personnel.

Caution This product contains flammable solvents. Keep away from sparks and open flames. all electrical equipment and installations should be made and rounded in accordance with the National Electric Code. In areas where explosion hazards exist workers should be required to use non-ferrous tools and wear conductive and non-sparking shoes.

PACKAGING, HANDLING & STORAGE

Shelf Life

Part A: Min. 12 months at 75°F (24°C)
Part B: Min. 24 months at 75°F (24°C)
Zinc Filler: 24 months at 75°F (24°C)

*Shelf Life: (actual stated shelf life) when kept at recommended storage conditions and in original unopened containers.

PACKAGING, HANDLING & STORAGE

Storage Temperature & Humidity	40° – 110°F (4° - 43°C). 0-95% Relative Humidity
Storage	Store Indoors.
Shipping Weight (Approximate)	0.80 Gallon Kit - 22 lbs (10 kg) 4.00 Gallon Kit - 105 lbs (48 kg)
Flash Point (Setaflash)	Part A: 58°F (14°C) Part B: 67°F (19°C) Zinc Filler: NA

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, injuries or damages resulting from use. Carbolines sole obligation, if any, is to replace or refund the purchase price of the Carboline product(s) proven to be defective, at Carbolines option. Carboline shall not be liable for any loss or damage. 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.