

Selection & Specification Data

Generic Type	Two component zinc-rich epoxy primer
Description	A two-component, high solids, zinc rich epoxy primer formulated for the protection of properly prepared steel substrates. 859 EZ2 can be applied by conventional, airless, or plural component spray. Recommended where a high performance, highly corrosion resistant zinc primer is desired. Typical applications include structural steel, tanks, piping, equipment and other miscellaneous parts in industrial, offshore or architectural projects.
Features	<ul style="list-style-type: none"> • Excellent application properties • Tough abrasion resistant film • Excellent adhesion & undercutting resistance • Superior corrosion resistance • Meets VOC regulations, <335 gms/litre • Fast drying for recoat • Meets or exceeds SSPC Paint System 20 Level 3 (2002) • Meets the performance requirements of AS/NZS 3750.9 Type 2 (organic zinc rich)
Gloss	Matte
Colour	Green (0300)
Topcoats	Epoxies, polyurethanes and others as recommended by Carboline.
Dry Film Thickness	50-75 microns per coat. For more severe environments 859 EZ2 may be applied at 100 microns dry film thickness. Typical priming thickness = 60 microns
Solids Content	By Volume: 64% ± 2%
Theoretical Coverage Rate	12.8 m ² /l at 50 microns; 10.6 m ² at 60 microns; 8.5 m ² /l at 75 microns. Mixing and application losses will vary and must be taken into consideration when estimating job requirements.
Mix Ratio	4:1 by volume (Part A : Part B)
VOC Values	As supplied: 334 g/l Thinned 5% with #2: 359 g/l These are nominal values.
Dry Temp. Resistance	Continuous: 82°C Non-Continuous: 110°C Discoloration is observed above 82°C
Pot Life	3 Hours at 24°C unthinned. Pot life decreases at higher temperatures. Pot life ends when coating becomes too viscous to use. This product is moisture sensitive. Avoid moisture contamination.

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. Use Thinner #2 or Altex 10/90 Preparation Solvent according to SSPC-SP1.
Steel	Abrasive blast to a commercial finish in accordance with AS 1627.4 Class 2 (SSPC-SP6) and obtain a 38-50 micron blast profile.
Galvanized Steel	Touch up welds etc – Abrade adjacent sound galvanizing and hand tool clean exposed weld to AS 1627.7 (SSPC-SP2)
Phosphatized Steel	Apply 859 EZ2 directly to dry, properly phosphatized substrate. Perform adhesion tests to insure proper, uniform and acceptable adhesion direct to phosphatized metal substrate.

Curing Schedule

Surface Temp. & 50% Relative Humidity	Dry to Touch	Dry to Handle or Assemble	Dry to Topcoat
2°C	3 hours	8 hours	6 hours*
10°C	1 hour	5 hours	2 hours*
24°C	30 min	2 hours	1.5 hours*
32°C	15 min	1 hour	1 hour*
54°C	10 min	30 min	30 min*

*Consult Carboline Technical Service for specific wet-on-wet recoat recommendations. Some topcoats are suitable for immediate (30 min or less) recoating of 859 EZ2. These times are based on a 50-75 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.
Note: Product may be force cured – see table below.

FORCE CURE INFORMATION

Flash Off	Bake Time	Cool Down	Total
Convection Oven			
10 min	30 min - 65°C	20 min	60 min
Infra-Red Oven			
5 min	15 min – 65°C	15 min	35 min

Times and substrate temperatures shown are based on in-house testing and will vary depending on oven type, as well as substrate size and type.

Carbozinc® 859 EZ2

Application Equipment

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. **General Guidelines:**

Spray Application (General) The following spray equipment has been found suitable and is available from manufacturers such as DeVilbiss and Graco.

Conventional Spray Pressure pot equipped with dual regulators, 9mm (3/8") I.D. minimum material hose, 1.8mm (.070") I.D. fluid tip and appropriate air cap.

Airless Spray Non-plural Pump Ratio: 30:1 (min.)
Output: 12 lt/min
Material Hose: 9mm (3/8") I.D. min.
Tip Size: .015-.019"
Output PSI: 2100-2300
Filter Size: 30-60 mesh
Teflon packings are recommended and available from the pump manufacturer.

Airless Spray Heated Plural Component Pump Ratio: Graco 35:1 (min)
GPM Output: 12 lt/min. (min)
Lower Units: Two (2) #0
One (1) #5
Heaters: One (1) Graco Viscon (A side)
Material Hose: 15 metre x 9mm I.D.
Mixer: 250mm static
Gun: Graco Silver 205-591
Tip Size: .015-.019"
Output psi: 2400-2800
Filter Size: 30-60 mesh (in-line)
Solvent Flush Pump Ratio: 10:1

Touch-up Respray or brush. Brushing recommended only for touchup of small areas. Use medium, natural bristle brush applying with full strokes. Avoid excessive rebrushing.

Mixing & Thinning

Mixing For plural component application equipment follow the equipment manufacturer's instructions. Power mix each component separately prior to using plural component spray equipment or batch mixing. THIS PRODUCT IS MOISTURE SENSITIVE. AVOID MOISTURE CONTAMINATION. DO NOT MIX PARTIAL KITS.

Ratio 4:1 by volume (Part A : Part B)

Thinning Normally not required for plural heated application. For batch mix applications, it may be thinned up to 5% with Thinner #2. For hotter than normal application conditions it may be thinned 3% with 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.

Pot Life 3 hours at 24°C unthinned. Pot life decreases at higher temperatures. Pot life ends when coating becomes too viscous to use. This product is moisture sensitive. Avoid moisture contamination.

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 MSDS 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 areas.

Cleanup & Safety continued

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 grounded in accordance with the National Electric Code. In areas where explosion hazards exist, workmen should be required to use non-ferrous tools and wear conductive and non-sparking shoes.

Application Conditions

Condition	Material	Surface	Ambient	Humidity
Normal	16° - 29°C	16° - 32°C	16° - 32°C	0 - 90%
Minimum	4°C	2°C	2°C	0%
Maximum	32°C	49°C	43°C	95%

Packaging, Handling & Storage

Pack Sizes AU/ NZ: 5 litre kit 10 litre kit
Part A: 4 litre 8 litre
Part B: 1 litre 2 litre

Flash Point (Setaflash) Part A 18°C
Part B 20°C

Storage Temperature & Humidity Store under cover
4° to 35°C
0 to 90% RH

Shelf Life Part A 12 months at 24°C
Part B 12 months minimum at 24°C

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

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An  Company

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