Carbozinc 879

PRODUCT DATA SHEET

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. Carbozinc 879 can be applied by conventional, airless or plural component spray. Recommended where a high performance, high 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	• Excellent application properties • Tough abrasion resistant film • Excellent adhesion & undercutting resistance • Superior corrosion resistance • Fast drying for recoat • Meets SSPC Paint System Level 2 (2002) • Excellent film-forming properties eliminate topcoat blistering • Excellent resistance to salting on weathering exposure
Color	Green
Gloss	Matte
Dry Film Thickness	50 to 75 microns per coat. For more severe environments, Carbozinc 879 may be applied at 100 microns dry film thickness. Typical priming thickness = 60 microns
Solid(s) Content	By Volume: 64%
Theoretical Coverage Rates	12.6m²/litre at 50 microns 10.6m²/litre at 60 microns (optimum system DFT) 8.4m²/litre at 75 microns Mixing and application losses will vary and must be taken into consideration when estimating job requirements.
VOC Value(s)	As supplied: 320 g/litre Thinned 20% with Thinner # 2: 420 g/litre These are nominal values
Dry Temp. Resistance	Continuous: 200°C (392°F) Non-Continuous: 215°C (419°F) Discolouration is observed above 150°C
Topcoats	Epoxies, polyurethanes and others as recommended

SUBSTRATES & SURFACE PREPARATION

General	Surfaces must be clean and dry. Employ adequate methods to remove dirt, dust, oil and all other contaminants, as this could interfere with adhesion of the coating.
Steel	ISO 8501 Sa2 with a 40 to 80 micron surface profile. ISO 8501 St2 or St3 with a roughened surface for touch-up.

PERFORMANCE DATA (TYPICAL VALUES)

Test Method	System	Results
Adhesion (ASTM D4541)	CZ879 65 to 75µm CG 920-S 125 to 150µm	8 MPa
Q-Fog (ASTM B117) 3000 Hours	CZ879 65 to 75µm	Some rust at scribe, 1.5mm scribe zone pinhead blistering. No corrosion or blistering in the field. Trace of surface salting.
Q-Fog (ASTM B117) 3000 Hours	CZ879 65 to 75µm CG 920-S 125 to 150µm	Slight rust stain at scribe, no corrosion or undercoat, no blistering
Q-Fog (ASTM B117) 3000 Hours	CZ879 65 to 75µm PUR Gloss	Very slight rust at scribe, no undercut, no blisters
Salt Water Immersion 3000 Hours	CZ879 65 to 75µm CG920-S 125 to 150µm	Slight rust and rust stain at scribe, pinhead blistering in 3mm scribe zone, no field blistering

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.

Thinning | For normal batch mix applications, it should be thinned 20 to 25% with Thinner # 2. For hotter than normal application conditions it may be thinned 20 to 25% with Thinner # 33. Thinning not normally required for plural heated application. Use of thinners other than those supplied or recommended by StonCor Africa may adversely affect product performance and void product warranty, whether expressed or implied.

Ratio | 4:1 By volume (Part A : Part B)

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.

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, 9mm I.D. minimum material hose, 1.8mm I.D. fluid tip and appropriate air cap.

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.

Airless Spray	**Non-Plural:** **Pump Ratio:** 30:1 (Min) **Output:** 12lt/min **Material Hose:** 9mm I.D. Min **Tip Size:** .015 to .019” **Output PSI:** 2100 to 2300 **Filter Size:** 30 to 60 mesh **Heated Plural Component:** **Pump Ratio:** Graco 35:1 (min) **GPM Output:** 12lt/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 to .019” **Output psi:** 2400-2800 **Filter Size:** 30 to 60 mesh (in-line) **Solvent Flush Pump Ratio:** 10:1 **Teflon packagings are recommended and available from pump manufacturer.**
Touch Up	Respray or brush. Brushing recommended only for touch-up of small areas. Use medium, natural bristle brush applying with full strokes. Avoid excessive rebrushing.

APPLICATION CONDITIONS

Condition	Material	Surface	Ambient	Humidity
Minimum	4°C (39°F)	2°C (36°F)	2°C (36°F)	0%
Maximum	32°C (90°F)	49°C (120°F)	43°C (109°F)	95%
Optimum	23°C (73°F)	24°C (75°F)	24°C (75°F)	45%

CURING SCHEDULE

Surface Temp.	Dry to Handle	Dry to Touch	Dry to Topcoat
10°C (50°F)	12 Hours	9 Hours	5 Hours
24°C (75°F)	4 Hours	3 Hours	1.5 Hours
32°C (90°F)	1 Hour	1.5 Hours	1 Hour

* Consult StonCor Africa Technical Service for specific wet-on-wet recoat recommendations. Some topcoats are suitable for immediate (1 hour or less) recoating of Carbozinc 879. These times are based on a 50 to 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.
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.

Curing Details	**Relative Humidity: 50%**

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 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.
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.

PACKAGING, HANDLING & STORAGE

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.**
Storage Temperature & Humidity	4 to 35°C 0 to 90% Store indoors
Flash Point (Pensky Martens Closed Cup)	Part A: 18°C Part B: 20°C
Packaging	**5 Litre Kit** Part A: 12.1kg Part B: 1.0kg

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.