



SELECTION & SPECIFICATION DATA

Generic Type	Self-curing, inorganic, zinc silicate.
Description	Carbozinc 8703 may be used as a pre-construction primer, holding primer, or as a weldable steel primer for immersion service applications requiring ANSI/NSF 61 approval.
Features	<ul style="list-style-type: none"> • Welds made over Carbozinc 8703 coated steel are equal in every respect to welds made to uncoated steel. • Designed to protect steel during construction phase of projects under normal conditions. • Can be topcoated for additional long term protection for atmospheric exposures. • Weld spatter does not adhere to or damage the coating. • Can be welded as quickly and easily as bare steel at production line speeds without loss in strength or consistency of the weld. • Dries to touch and to handle in 3 to 5 minutes. • Utilizes Type III ultra pure, low-lead, zinc filler • Certified for potable water use under ANSI/NSF Standard 61 by Underwriters Laboratories (grey 0700 only) • Certified by UL to meet the drinking water criteria of NSF/ANSI/CAN 600
Color	Standard: 0700 (Grey)* Special Order: 0500 (Red), 0300 (Green) *ANSI/NSF Standard 61 approved color 0700 (Grey) only
Finish	Flat
Dry Film Thickness	0.6 - 0.8 mils (15 - 20 microns) . Thicknesses up to 2.0 mils (50 microns) are not to be exceed for ANSI NSF 61.
Total Zinc Dust in Dry Film	By Weight: 85%
Solids Content	By Volume 29% +/- 2% Measured in accordance with ASTM D 2697
HAPs Values	0.52 lbs. gal (63 g/l)
Theoretical Coverage Rate	767 ft ² /gal at 0.6 mils (18.8 m ² /l at 15 microns) 575 ft ² /gal at 0.8 mils (14.1 m ² /l at 20 microns) 460 ft ² /gal at 1.0 mils (11.3 m ² /l at 25 microns) Allow for loss in mixing and application.
VOC Values	Thinner 21 : 25.6 oz/gal: 5.99 lbs./gal (718 g/l) Thinner 33 : 25.6 oz/gal: 6.09 lbs./gal (730 g/l) As Supplied : 5.81 lbs./gal (696 g/l) These are nominal values.
Dry Temp. Resistance	Continuous: 750°F (399°C) Non-Continuous: 800°F (427°C)

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Limitations	For shop use only. Do not exceed 1.5 mils when weldable property is required. Only color Grey (0700) is approved for use in NSF Standard 61 potable water applications.
Topcoats	Can be topcoated with Epoxies, Polyurethanes, Acrylics and others as recommended by your Carboline sales representative. Recommended linings for immersion service will vary based on exposure.

SUBSTRATES & SURFACE PREPARATION

General	Remove all contaminants from the surface to be coated with Thinner 2 or Surface Cleaner 3 (refer to Surface Cleaner 3 Instructions) in accordance with SSPC-SP1.
Steel	Abrasive blast and clean to achieve a dense angular profile of 1.0-1.5 mils for most applications. Where high build topcoats are used; 1.5-2.5 mil blast profile is recommended. Service: Immersion (see Limitations): NACE 2/SSPC-SP10 Non-Immersion: NACE 3/SSPC-SP6
Welding Data	Carbozinc 8703 when applied at recommended thickness may be welded at speeds up to 48" per minute. This is dependent upon plate thickness and bead size. This includes the following processes: 1) Submerged arc 2) Flux core 3) Short arc and 4) Metal Inert Gas (MIG).

MIXING & THINNING

Mixing	Power mix base, then combine parts, sifting zinc filler slowly into base and mixing with continuous agitation. Mix until free of lumps. Pour mixture through 30 mesh screen. DO NOT MIX PARTIAL KITS. Keep under mild agitation during application.
Thinning	Normally not required, but may be thinned up to 25 ounces per gallon with Thinner 21 in cool weather (below 40°F, 4°C). For hot or windy conditions, use Thinner 254 up to 8 ounces per gallon. Use of thinners other than those supplied or recommended by Carboline may adversely affect product performance and void product warranty, whether express or implied.
Ratio	3 Gal Kit Part A (Base): One 5-gal can (partially filled) Part B (Zinc Filler Type III): 14.6 lb unit (6.6 kg) 15 Gal Kit Part A (Base): Three 5-gal cans (partially filled) Part B (Zinc Filler Type III): 73 lb. unit (33.1 kg)
Pot Life	48 Hours at 75°F (24°C) and less at higher temperatures. Pot life ends when coating becomes too viscous to use.

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 manufacturers such as Binks, DeVilbiss and Graco. Agitate the mixed material continuously during the spraying operation. If spraying stops for more than 15 minutes, recirculate the material remaining in the spray line.
Conventional Spray	Pressure pot with dual regulators, agitator, 3/8" I.D. minimum hose, 50' maximum material hose length .070" I.D. fluid tip and appropriate air cap. Keep pot at same level as application.
Airless Spray	Pump Ratio: 30:1 (minimum)* GPM Output: 3.0 (minimum) Material Hose: 3/8" I.D. (minimum) Tip Size: .019-.023" Output PSI: 1500-2000 Filter Size: 60 mesh *Teflon packings are recommended and available from the pump manufacturer.
Brush	For touchup of areas less than one square foot only. Use medium bristle brush and avoid over brushing.

APPLICATION CONDITIONS

Condition	Material	Surface	Ambient	Humidity
Minimum	0°F (-18°C)	0°F (-18°C)	0°F (-18°C)	30%
Maximum	130°F (54°C)	200°F (93°C)	130°F (54°C)	95%

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 Handle	Final Cure
0°F (-18°C)	2 Hours	5 Days
40°F (4°C)	40 Minutes	12 Hours
60°F (16°C)	15 Minutes	6 Hours
80°F (27°C)	5 Minutes	4 Hours
100°F (38°C)	3 Minutes	2 Hours

*Drying times are based on a 0.75-1.5 mil (20-40 micron) dry film thickness. Low relative humidity, higher film thickness, insufficient ventilation or cooler temperatures will require longer cure times. Topcoating prior to sufficient cure could result in solvent entrapment and/or premature failure. For shop applications or if the relative humidity is below 40%, the curing time can be reduced by raising the relative humidity by steam or water spray on the coated surface after an initial dry time of 1 hour at 75°F (24°C).

*The coating may be verified acceptable for topcoat by testing to ASTM D4752 MEK solvent rub test and achieving a grade greater than or equal to 4 or a minimum pencil hardness of 2H in accordance with ASTM D3363.

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TESTING / CERTIFICATION / LISTING

Potable Water Certifications	Potable Water Use Limitations @ 75°F (24°C):
	Max DFT: 2 mils (50.8 microns) # Coats: 1 Tank Rating: >20,000 gal (75708.236 Liters) Pipe Rating: 118" (299.72 cm) or larger Valve Rating: Not Rated Thinning: Thinner 33 or 21 at 20% by volume of either 14 Day Cure Required before service

CLEANUP & SAFETY

Cleanup	Use Thinner #21 or Isopropanol. 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. Hypersensitive persons should wear protective clothing, gloves and use protective cream on face, hands and all exposed areas.
Ventilation	When used as a tank lining or 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.
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: 18 months at 75°F (24°C) Part B: 24 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) 0-90% Relative Humidity
Storage	Store Indoors.
Shipping Weight (Approximate)	3 Gallon Kit - 38 lbs. (17.3 kg) 15 Gallon Kit - 184 lbs. (83.6 kg)
Flash Point (Setaflash)	52°F (11°C) for Base

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.