Carbozinc 77

PRODUCT DATA SHEET

SELECTION & SPECIFICATION DATA

Generic Type	Solvent based inorganic zinc
Description	A self-curing inorganic zinc coating for protection of steel surfaces against rust and corrosion. It protects galvanically and prevents undercutting corrosion.
Features	• Excellent corrosion protection • Outstanding application properties • Accepts a variety of topcoats • Dense, hard film • Very good resistance to salting • Zinc supplied meets ASTM D520 (Type II) • May be applied by standard airless or conventional spray equipment
Color	Grey (0700)
Finish	Flat
Primer	Self-priming
Dry Film Thickness	51 - 76 microns (2 - 3 mils) per coat Dry film thickness in excess of 4.0 mils (100 microns) per coat is not recommended.
Solids Content	By Volume 61% +/- 2% Measured in accordance with ASTM D 2697
Theoretical Coverage Rate	24.0 m²/l at 25 microns (978 ft²/gal at 1.0 mils) 12.0 m²/l at 50 microns (489 ft²/gal at 2.0 mils) 8.0 m²/l at 75 microns (326 ft²/gal at 3.0 mils) Allow for loss in mixing and application.
Zinc Content by Weight	77% in dry film
VOC Value(s)	As supplied: 501 g/l
Dry Temp. Resistance	Continuous: 400°C (752°F) Non-Continuous: 427°C (801°F)
Topcoats	Not required for certain exposures. Can be topcoated with epoxies, polyurethanes, acrylics, high-heat silicones and others as recommended by your StonCor ME Sales Representative. Under certain conditions, a mist coat is required to minimize topcoat bubbling.

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.

SUBSTRATES & SURFACE PREPARATION

Steel	**Immersion:** SSPC-SP10 For steel tank lining, welds must be continuous. Remove weld spatter slag and oxides caused from welding prior to blasting. Note: Immersion applications for this product are limited to certain solvents and petroleum-based products. Contact StonCor ME Technical Service for specific recommendations. **Non-Immersion:** SSPC-SP6 Surface Profile: 2.0-3.0 mils (50-75 microns)

MIXING & THINNING

Mixing	Power mix base, then combine and power mix as follows. Pour zinc filler very slowly into premixed base with continuous agitation. Mix until free of lumps. Pour mixture through a 30 mesh screen.
Thinning	May be thinned up to 5 oz/gal (4%) with Thinner #26 or #33 for warm and windy conditions. In cool weather (below 60°F (16°C)), thin up to 7 oz/gal (6%) with Thinner# 21. Use of thinner other than those supplied or approved by Carboline may adversely affect product performance and void product warranty, whether express or implied. Thinner 216M may be used under low humid condition up to max of 5%, but its use may shorten pot life.
Ratio	3.8-Liter Kit: Part A: 3.02 Liter Zinc Filler: 5.46 Kg 19-Liter Kit: Part A: 15.1 Liter Zinc Filler: 27.3 Kg
Pot Life	8 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	The following spray equipment has been found suitable and is available from manufacturers such as Binks, DeVilbiss and Graco. Keep material under mild agitation during application. If spraying stops for more than 10 minutes, re-circulate the material remaining in the spray line. Do not leave mixed primer in the hoses during work stoppages.
Conventional Spray	Agitated pressure pot equipped with dual regulators, 3/8” I.D. Minimum material hose, .70” I.D. fluid tip and appropriate air cap.
Airless Spray	Pump Ratio : 30:1 (min) Spray Output : 3.0 (min) Material Hose : 3/8” I.D. (min) Tip Size : .019-.023” Output PSI : 1500-2000 Filter Size : 60 mesh Teflon packings are recommended and available from the pump manufacturer.
Brush	For touch-up areas only. Use medium bristle brush and avoid re-brushing.

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Roller	Not recommended

APPLICATION CONDITIONS

Condition	Material	Surface	Ambient	Humidity
Minimum	-18°C (-0°F)	-18°C (-0°F)	-18°C (-0°F)	30%
Maximum	54°C (129°F)	93°C (199°F)	54°C (129°F)	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 the proper adhesion to the substrate. Special application techniques may be required above or below normal application conditions.

CURING SCHEDULE

Surface Temp.	Dry to Topcoat
-18°C (-0°F)	7 Days
4°C (39°F)	48 Hours
24°C (75°F)	18 Hours
32°C (90°F)	16 Hours

These times are based on a 3.0-4.0 mils (75-100 microns) dry film thickness. Higher film thickness, insufficient ventilation, high humidity or cooler temperature will require longer cure times and could result in solvent entrapment and premature failure. Humidity level below 50% will require cure times.
Note: Any salting that appears on the zinc surface as a result of prolonged weathering exposure must be removed prior to application of additional coats. Loose zinc must be removed from the cured film by rubbing with fiberglass screen wire, if “dry spray/over spray” is evident on the cured film and a topcoat will be applied. For accelerated curing or where the relative humidity is below 40%, allow an initial 2-hour ambient cure followed by misting with water or steam to keep the coated surface wet for a minimum of 8 hours and until the coated surface achieves hardness.

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 safely precautions. Hypersensitive persons should wear protective clothing, gloves and use protective cream on face, hands and all exposed areas.
Ventilation	When used as 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. 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. In confined areas, workmen must wear appropriate respiratory protection. 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 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.**
Shipping Weight (Approximate)	3.8-Liter Kit: 9 kg 19-Liter Kit: 45 kg
Storage Temperature & Humidity	Storage Temperature: 40°F-100°F (4°C-38°C) Relative Humidity: 0-100%
Flash Point (Setaflash)	Part A: 59°F (15°C) Zinc Filler: NA
Storage	Store indoors

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.