Hydroplate® MCZ

PRODUCT DATA SHEET

SELECTION & SPECIFICATION DATA

Generic Type	Two-component, zinc-rich, moisture-cured, aromatic polyurethane
Description	Organic zinc-rich primer formulated for superior corrosion resistance on steel surfaces. Designed for potable water tank applications, it provides excellent adhesion and long-term protection in aggressive environments. Its extended recoat window offers flexibility for both field and shop applications. Suitable for properly prepared surfaces, this primer ensures durable performance in new construction and maintenance projects.
Features	• Certified to meet NSF/ANSI 61/600 for contact with potable water • Up to 12 month recoat window • Superior undercutting and cathodic protection properties • May be topcoated in 18 hours • Conforms to multiple AWWA D102 ICS and OCS systems • Excellent application properties • Dry fall properties • Tenacious adhesion to properly prepared surfaces • Good resistance to settling during application
Color	Blue (0100)
Finish	Flat
Dry Film Thickness	2 - 3 mils (51 - 76 microns) DFT Do not exceed 4.0 mils (100 microns) DFT.
Total Zinc Dust in Dry Film	By Weight: 83% +/- 2%
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) 342 ft²/gal at 3.0 mils (8.4 m²/l at 75 microns) Allow for loss in mixing and application.
VOC Values	Thinner 10 : 13 oz/gal: 3 lbs/gal (362 g/l) **As Supplied** : 2.6 lbs/gal (312 g/l) These are nominal values.
Dry Temp. Resistance	Continuous: 200°F (93°C) Non-Continuous: 250°F (121°C)
Topcoats	For NSF immersion, may be topcoated with other Carboline NSF 61/600 certified epoxies. Contact Carboline technical service for other product or system recommendations. For atmospheric service, this product may be topcoated with waterborne acrylics, epoxies, polyurethanes, polysiloxanes, and other coatings as recommended by Carboline.

Potable Water Certifications

UL Potable Water	Tank	Pipe	Dry Film Thickness	Cure For Service
Certification Rating	≥ 5,000 gallons	≥ 24 inches	Max 5 mils in 1-2 coats	7 days at 75 F

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 in accordance with SSPC-SP1.
Steel	Atmospheric exposure: SSPC-SP6 with a 1.5-2 mil (38-50 microns) angular blast profile. Immersion: SSPC SP-10 with a 1.5-2 mil (38-50 microns) angular blast profile.
Ductile or Cast Iron	**Immersion and Buried Service:** Abrasive blast clean per NAPF 500-03-04. **Non-Immersion:** Remove all oil and grease from surface by Solvent Cleaning per NAPF 500-03-01.

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 mesh screen. DO NOT MIX PARTIAL KITS. Tip: Sifting zinc through a mesh screen will aid in the mixing process by breaking up or catching dry zinc lumps.
Thinning	**Thinning is not required** If necessary, thin up to 10% with Thinner 10. 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	8 Hours at 75°F (24°C) and less at higher temperatures (i.e. 90°F/32°C has 4 hours pot life) Pot life ends when coating becomes too viscous to use. This material is moisture sensitive. Higher temperature, higher humidity and any other form of moisture contamination will shorten pot life.

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. 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: 45:1 (min.)* GPM Output: 3.0 (min.) Material Hose: 3/8” I.D. (min.) Tip Size: 0.019-0.023” Output PSI: 2000-4000 Filter Size: 60 mesh *PTFE packings are recommended and available from the pump manufacturer.
Brush	Use a high quality medium bristle brush and avoid rebrushing. For small areas and touch-up only. (Preferred method for large areas is spray application.)
Roller	Use a short nap roller and avoid excessive rerolling. (Preferred method for large areas is spray application.)

APPLICATION PROCEDURES

General

This product should be applied within the recommended dry film thickness (DFT) range. Applying this product at thicknesses exceeding 4.0 mils (100 microns) DFT in a single coat may result in blistering, extended cure times, or adhesion issues with subsequent topcoats. To ensure proper film integrity and coating performance, always follow specified application guidelines and verify thickness using appropriate measurement techniques.

APPLICATION CONDITIONS

Condition	Material	Surface	Ambient	Humidity
Minimum	50°F (10°C)	35°F (2°C)	35°F (2°C)	40%
Maximum	90°F (32°C)	120°F (49°C)	110°F (43°C)	99%

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. Special application techniques may be required above or below normal application conditions.
Note: Avoid application over visible droplets, puddles of water or ice crystals. If applied over moisture, the coating may blister, bubble and/or exhibit poor adhesion.

CURING SCHEDULE

Surface Temp.	Dry to Handle	Dry to Topcoat
35°F (2°C)	24 Hours	48 Hours
50°F (10°C)	15 Hours	26 Hours
75°F (24°C)	5.5 Hours	18 Hours
100°F (38°C)	2.5 Hours	12 Hours

These times are based on 50% relative humidity and a 3.0 mil (75 micron) dry film thickness. Lower humidity, higher film thickness, insufficient ventilation or cooler temperatures will require longer cure times and could result in solvent entrapment and premature failure.
For potable water service, refer to Carboline's certified product listing on UL's Product iQ website (info.carboline.com/potable) for details on cure, maximum DFT, and other requirements. If the primer is topcoated for potable water service, follow the longest potable water cure requirement of products used in the combined coating system. Maximum recoat period of 12 months when clean and dry. Additional surface preparation may be required after 6 months.

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 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

Packaging	3.73 Gallon (14.1 L) Kit Part A: 2.5 gallons (9.5 liters) Zinc Filler Type III: 73 lbs (33 kg) — 0.75 Gallon (2.8 L) Kit Part A: 0.5 gallons (1.9 liters) Zinc Filler Type III: 14.6 lbs (6.6 kg)
Shelf Life	Part A: Min. 24 months at 75°F (24°C) Zinc Filler Type III: 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 in a cool, dry well-ventilated area. Keep container closed and upright when not in use to prevent leakage.
Shipping Weight (Approximate)	0.75 Gallon (2.8 L) Kit: 21 lbs. (9.5 kg) 3.73 Gallon (14.1 L) Kit: 100 lbs. (45.4 kg)
Flash Point (Setaflash)	Part A: 100°F (38°C) Zinc Filler Type III: 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 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.