



SELECTION & SPECIFICATION DATA

Generic Type	Zinc-Rich Polyurethane
Description	A two component moisture cured organic zinc-rich primer for protection of steel in salt and weathering environments. Excellent maintenance or general use zinc primer over commercially blasted steel. Certified for potable water immersion using a near white metal blast. Use as a shop primer where quick recoat and cure times are required. Carbozinc 621 PW is user friendly for field touch-up of inorganic zinc primers.
Features	<ul style="list-style-type: none"> • High level of zinc loading • Uses high purity ASTM D 520 Type III zinc dust • Excellent adhesion • Resists mudcracking • Excellent application properties • Superior undercutting protection • May be topcoated in 4 hours • Fast cold cure • Long recoat window • Tough durable film • VOC compliant to current AIM regulations • NSF/ANSI Standard 61 compliant • Certified by UL to meet the drinking water criteria of NSF/ANSI/CAN 600
Color	Green (0300) only
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: 88%
Solids Content	By Volume 61% +/- 2%
Theoretical Coverage Rate	978 ft ² /gal at 1.0 mils (24.0 m ² /l at 25 microns) 489 ft ² /gal at 2.0 mils (12.0 m ² /l at 50 microns) 326 ft ² /gal at 3.0 mils (8.0 m ² /l at 75 microns) Allow for loss in mixing and application.
VOC Values	Thinner 10 : 13 oz/gal: 3.2lbs/gal (384 g/l) As Supplied : 2.8 lbs/gal (335 g/l) These are nominal values.
Dry Temp. Resistance	Continuous: 200°F (93°C) Non-Continuous: 250°F (121°C)
Limitations	Not recommended for acid, alkali, or severely corrosive environments without appropriate topcoats.



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Topcoats | **Any coating being directly applied to Carbozinc 621 PW will require a mist coat to minimize bubbling.**
 For water immersion, mist coat with Carboguard 635 VOC, then topcoat with Carboguard 635 VOC. Other topcoats for immersion service may be acceptable, contact Carboline Tech Service for recommendations.
 For atmospheric service, Carbozinc 621 PW may be topcoated with waterborne acrylics, epoxies, polyurethanes, polysiloxanes, and other coatings as recommended by Carboline.

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.

TYPICAL CHEMICAL RESISTANCE

Exposure	Fumes	Splashes & Spills
Acids	Not Recommended	Not Recommended
Alkalies	Not Recommended	Not Recommended
Salt	Excellent	Excellent
Solvents	Excellent	Excellent
Water	Excellent	Excellent

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. **DO NOT MIX PARTIAL KITS.**
 Tip: Sifting zinc through a window screen will aid in the mixing process by breaking up or catching dry zinc lumps.

Thinning | **Must be thinned with 13 oz/gal (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.

Ratio | 3.63 Gallon Kit
 Part A: 2.37 gallons
 Zinc Filler Type III: 73 lbs.
0.72 Gallon Kit
 Part A: 0.47 gallons
 Zinc Filler Type III: 14.6 lbs

Pot Life | 8 Hours at 75°F (24°C) and less at higher temperatures (i.e. 90°F has 4 hours pot life). Pot life ends when coating becomes too viscous to use. Higher temperatures, high humidities and other forms of moisture contamination will shorten pot life. Repeated dipping of a wet brush or roller into the material or using the material when its temperature is below the dew point will introduce moisture into the product and shorten pot life. This material is moisture sensitive. Moisture contamination will shorten working time and cause gelation.

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: 30:1 (min.)* GPM Output: 3.0 (min.) Material Hose: 3/8" I.D. (min.) Tip Size: 0.019-0.023" Output PSI: 1500-2000 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 is spray application.)

APPLICATION PROCEDURES

General	When topcoating, it will be necessary to apply a "mist coat" to adequately seal the zinc primer, directly followed by a full coat. For potable water, Carboguard 635 VOC mist coating should be thinned 10% with Thinner 76 and a light coat at 2-3 mils DFT (3.5-5 mils WFT) should be applied and allowed to "flash off" before applying a full coat of Carboguard 635 VOC.
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APPLICATION CONDITIONS

Condition	Material	Surface	Ambient	Humidity
Minimum	35°F (2°C)	35°F (2°C)	35°F (2°C)	20%
Maximum	90°F (32°C)	100°F (38°C)	90°F (32°C)	80%

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.

Carbozinc[®] 621 PW

PRODUCT DATA SHEET



CURING SCHEDULE

Surface Temp.	Dry to Handle	Dry to Topcoat	Cure for Service
35°F (2°C)	8 Hours	8 Hours	48 Hours
50°F (10°C)	5 Hours	6 Hours	36 Hours
75°F (24°C)	4 Hours	4 Hours	24 Hours
100°F (38°C)	1 Hour	4 Hours	18 Hours

These times are based on 50% relative humidity and a 3.0 mil (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. Maximum recoat period 12 months when clean and dry.

TESTING / CERTIFICATION / LISTING

Potable Water Certifications	Potable Water Use Limitations @ 75°F (24°C):
	Max DFT: 4 mils (102 microns) # Coats: 1 to 2 Tank Rating: >100,000 gal (378541.18 Liters) Pipe Rating: Not Rated Valve Rating: Not Rated Thinning: Thinner 10 at 10% by volume 1 Day Cure Required before service

CLEANUP & SAFETY

Cleanup	Use Thinner 2 or xylol. 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

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 Indoors.



PACKAGING, HANDLING & STORAGE

Shipping Weight | 0.72 Gallon Kit - 20 lbs. (9 kg)
(Approximate) | 3.63 Gallon Kit - 98 lbs. (45 kg)

Flash Point (Setaflash) | Part A: 114°F (46°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 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.