# Carbozinc® 11 WB

PRODUCT DATA SHEET

## SELECTION & SPECIFICATION DATA

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| **Generic Type** | Self-curing, water-based inorganic zinc primer. |
| **Description** | Carbozinc 11 WB is a water-based inorganic zinc rich primer that protects steel galvanically, eliminating subfilm corrosion. It meets VOC regulations while providing the proven performance of silicate zinc rich technology. It may be used as a primer under many different types of topcoats. |
| **Features** | • Excellent corrosion protection<br>• High zinc loading per square foot<br>• Zero VOC<br>• Good resistance to salting<br>• Fast curing, quick handling<br>• Weldable version available Carboweld 11 WB<br>• Excellent application characteristics (less likely to pump packing or tip plug)<br>• Meets Class B slip coefficient and creep testing criteria for use on faying surfaces. |
| **Color** | Gray (0700) standard. Green (0300) and Red (0500) available on special order. |
| **Finish** | Flat |
| **Dry Film Thickness** | 3 - 4 mils (76 - 102 microns) per coat<br><br>Don't exceed 6 mils (150 microns) in a single coat |
| **Total Zinc Dust in Dry Film** | By Weight: 83% |
| **Solids Content** | By Volume 60% +/- 2%<br><br>Measured in accordance with ASTM D 2697. |
| **Theoretical Coverage Rate** | 962 ft²/gal at 1.0 mils (23.6 m²/l at 25 microns)<br>321 ft²/gal at 3.0 mils (7.9 m²/l at 75 microns)<br>241 ft²/gal at 4.0 mils (5.9 m²/l at 100 microns)<br>Allow for loss in mixing and application. |
| **VOC Values** | As Supplied 0 lbs./gal (0 g/l) |
| **Dry Temp. Resistance** | Continuous: 750°F (399°C)<br>Non-Continuous: 800°F (427°C) |
| **Limitations** | Direct exposure to acids and caustics.<br>Carbozinc 11 WB is an alkali silicate zinc rich primer. Like all water-based inorganic zinc primers trace amounts of alkalinity may remain within its film after cure. This alkaline residue can be detrimental to coating integrity when water is allowed to puddle on its surface. Use only steel storage, shipping and structural design configurations that prevent the puddling or trapping of water. Trace amounts of alkaline residue may concentrate in a drying puddle and result in high pH values that dissolve the coating film. Thorough rinsing (after full cure) reduces the likelihood or scope of the problem. The use of Carbozinc (WB) Neutralizing Solution helps to mitigate these problems. |
| **Topcoats** | May be coated with Acrylics or Epoxies depending on exposure and need.<br><br>(Mist coats may be required to prevent topcoat bubbling.) |

## SUBSTRATES & SURFACE PREPARATION

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| **General** | Remove any oil or grease from the surface to be coated with clean rags soaked in Carboline Thinner #2 or Surface Cleaner #3 (refer to Surface Cleaner #3 instructions) in accordance with SSPC-SP1. |
| **Steel** | Abrasive blast to a minimum commercial finish in accordance with SSPC-SP6 with a 1-3 mil (25-75 microns) blast profile. An angular profile will provide maximum adhesion. |

## MIXING & THINNING

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| **Mixing** | Power mix base, then combine as follows: Tip: Sifting zinc through a window screen will aid in the mixing process by breaking up or catching dry zinc lumps. |
| **Thinning** | Not normally required. In hot or windy conditions it may be necessary to thin with clean, potable water 10-20% to ensure the film has a wet edge during application; or 30% when recoating with itself. |
| **Ratio** | **0.94 Gallon Kit**<br>Part A: 0.70 gal<br>Zinc Filler: 14.6 lbs.<br>**4.7 Gallon Kit**<br>Part A: 3.5 gal.<br>Zinc Filler: 73 lbs. |
| **Pot Life** | 8 hours at 75°F (24°C) and less at higher. Pot life ends when the coating becomes too thick 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.

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| **Spray Application (General)** | Remove any oil or grease from the surface to be coated with clean rags soaked in Carboline Thinner #2 or Surface Cleaner #3 (refer to Surface Cleaner #3 instructions) in accordance with SSPC-SP1. |
| **Conventional Spray** | Conventional spray is the preferred method of application for Carbozinc 11 WB. Pressure pot equipped with dual regulators, 3/8” I.D. minimum material hose, with a maximum length of 50’, 0.070” I.D. fluid tip and appropriate air cap. |
| **Airless Spray** | Modified spray guns recommended below will eliminate spray tails when airless is used.<br>Pump Ratio: 30:1 (minimum)<br>GPM Output: 3.0 (minimum)<br>Material Hose: 3/8” I.D. (minimum)<br>Tip Size: 0.017-0.019”<br>Output PSI: 1750-2400<br>Spray Gun: Graco Model 510 mod B.T. Wiwa Model 500 F (1/2”)<br>Filter Size: 60 mesh<br><br>Teflon packings are recommended and available from the pump manufacturer. Prior to use, flush all equipment with Thinner #21 followed by clean potable water. Keep material under mild agitation during application. If spraying stops for more than 10 minutes, recirculate the material remaining in the spray line. Do not leave mixed primer in the hoses during stoppages. |
| **Brush & Roller (General)** | Brush for touch-up only. Avoid excessive rebrushing. Use of a roller is not recommended. |

## APPLICATION CONDITIONS

| Condition | Material | Surface | Ambient | Humidity |
|---|---|---|---|---|
| Minimum | 50°F (10°C) | 40°F (4°C) | 40°F (4°C) | 0% |
| Maximum | 95°F (35°C) | 140°F (60°C) | 110°F (43°C) | 90% |

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 | Dry to Topcoat |
|---|---|---|
| 75°F (24°C) | 5 Minutes | 18 Hours |

These times are based on a 3 mil (75 micron) dry film thickness. Higher film thickness, insufficient ventilation, high humidity, or cooler temperatures will require longer cure times and could result in premature failure. Excessive humidity or condensation on the surface during curing can interfere with the cure. Unlike solvent-based inorganic zincs, water-misting the surface will not speed the cure. DO NOT water-mist Carbozinc 11 WB during initial cure cycle. Any loose salt that appears on the zinc surface as a result of prolonged weathering exposure must be removed prior to the application of additional coatings.
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## CLEANUP & SAFETY

**Cleanup**
Use clean, potable water. 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 as a tank lining or in enclosed areas, thorough air circulation must be used during and after application until the coating is cured. While this product has no organic solvents, any ventilation system should be capable of preventing the solvent vapor concentration from reaching the lower explosion limit for any 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.

## PACKAGING, HANDLING & STORAGE

**Shelf Life**
Carbozinc 11WB: 24 months at 75°F (24°C) 24 months at 75°F (24°C)
Zinc Filler: 24 months at 75°F (24°C) 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° -100°F (4-43°C) 0-90% Relative Humidity. **Do not allow to freeze.**

**Storage**
Store Indoors.

## PACKAGING, HANDLING & STORAGE

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| **Shipping Weight (Approximate)** | **0.94 Gallon Kit**<br>Part A: 9 lbs<br>Zinc Filler: 14.6 lbs.<br>**4.7 Gallon Kit**<br>Part A: 42 lbs.<br>Zinc Filler: 73 lbs. |
| **Flash Point (Setaflash)** | None |

## 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 or injuries resulting from use. Liability, if any, is limited to replacement of products. 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.