product data

carboline®

Carbozinc® 11 WB

Selection & Specification Data

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
- High zinc loading per square foot
- Zero VOC
- Good resistance to salting
- Fast curing, quick handling
- Weldable version available Carboweld 11 WB
- Excellent application characteristics (less likely to pump packing or tip plug)
- 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
Matte

Topcoats
May be topcoated with epoxies, acrylics, silicones, or others as recommended. (Mist coats over the CZ 11 WB may be required to prevent topcoat bubbling.)

Dry Film Thickness
3.0 - 4.0 mils (75 - 100 microns) per coat
Don't exceed 6 mils (150 microns) in a single coat.

Solids Content By Weight Large Kit (Mixed Material)
Carbozinc 11 WB 79% ± 1%

Zinc content By Weight
Carbozinc 11 WB 83 ± 1% in the dried film

Theoretical Coverage Rate (Per mixed gallon by ASTM D2697)
Carbozinc 11 WB- 962 mil ft^2 (321 ft^2/gal at 3 mils; 7.9 m^2/liter @75 microns)

Allow for loss in mixing and application.

VOC Values
As supplied or applied: 0 lbs./gal (0 g/l)

Dry Temp. Resistance
Continuous: 750°F (399°C)
Non-Continuous: 800°F (427°C)

Limitations
Direct exposure to acids and caustics.

Substrates & Surface Preparation

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.

Application Equipment

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.
General Guidelines:

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.

Pump Ratio:	30:1 (minimum)
GPM Output:	3.0 (minimum)
Material Hose:	3/8" I.D. (minimum)
Tip Size:	0.017-0.019"
Output PSI:	1750-2400
Spray Gun:	Graco Model 510 mod B.T. Wiwa Model 500 F (1/2")
Filter Size:	60 mesh

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.

Carbozinc® 11 WB

Mixing & Thinning

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.

Ratio	.94 Gallon Kit	4.7 Gallon Kit
Part A:	0.70 gallon	3.5 gallons
Zinc Filler:	14.6 lbs.	73 lbs.

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.

Pot Life 8 hours at 75°F (24°C) and less at higher. Pot life ends when the coating becomes too thick to use.

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.

Caution 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.

Application Conditions

Condition	Material	Surface	Ambient	Humidity
Normal	60-85°F (16°-30°C)	50-95°F (10°C-35°C)	50-95°F (10°C-35°C)	40-85%
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. & 50% Relative Humidity	Dry to Handle	Dry to Topcoat
75°F (24°C)	30 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.

Packaging, Handling & Storage

Shipping Weight (Approximate)	**CZ 11 WB** .94 Gallon Kit	**CZ 11 WB** 4.7 Gallon Kit
Part A:	9 lbs.	42 lbs.
Zinc Filler:	14.6 lbs.	73 lbs.

Flash Point (Setaflash) None

Storage Temperature & Humidity 40° -100°F (4-43°C)
0-90% Relative Humidity
Store indoors. **Do not allow to freeze.**

Shelf Life:
Carbozinc 11 WB 24 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.**

Special Instructions Concerning Cure, Shipping and Storage

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.

carboline
350 Hanley Industrial Court, St. Louis, MO 63144-1599
314/644-1000 314/644-4617 (fax) www.carboline.com
An RPM Company

January 2008 replaces July 2004