

Selection & Specification Data

Generic Type	Self-curing inorganic zinc primer.
Description	A high solids, inorganic zinc rich primer that protects steel galvanically, eliminating subfilm corrosion. It meets VOC regulations regarding metal filled coatings while providing the proven performance of alkyl silicate zinc rich technology. Recommended where long term corrosion resistance and undercutting corrosion protection is desired. Typical applications include steel bridges, structural steel and tanks where abrasive blasting can be used in surface preparation. Provides outstanding corrosion protection with or without topcoats in typical weathering and marine environments.
Features	<ul style="list-style-type: none"> ▪ Excellent corrosion protection. ▪ Available in ASTM D520, Type II zinc version. ▪ Outstanding application properties. ▪ Accepts a variety of topcoats. ▪ Less than 3.5 lbs./gal VOC. ▪ VOC compliant. ▪ Meets Class B slip co-efficient and creep testing criteria for use on faying surfaces.
Color	Green (0300)
Finish	Matte
Primers	Apply directly to substrate or other inorganic zincs as recommended.
Topcoats	May be topcoated with epoxies, phenolics, vinyls, acrylics, silicones, or others as recommended. Under certain conditions a mist coat or tie coat is required to minimize topcoat bubbling.
Dry Film Thickness	3.0 mils (75 microns). Dry film thickness in excess of 6.0 mils (150 microns) per coat is not recommended.
Solids Content	By Weight: 86% ± 2%
Zinc Content	By Weight: 75% Minimum in dry film
Theoretical Coverage Rate	1220 mil ft ² (30.0 m ² /l at 25 microns) 407 ft ² at 3.0 mils (10.0 m ² /l at 75 microns) As measured per NACE 6A181. Allow for loss in mixing and application.
VOC Values	EPA Method 24: 3.20 lbs./gal (389 g/l) Thinned: 20 oz/gal w/ #26: 3.79 lbs./gal (454 g/l) 20 oz/gal w/ #33: 3.77 lbs./gal (451 g/l) 20 oz/gal w/ #237 3.62 lbs./gal (434 g/l) These are nominal values.
Limitations	Not recommended for immersion service or direct or indirect exposure to acids or alkalies without a recommended topcoat.

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.
Steel	<u>Non-Immersion:</u> SSPC-SP6 to obtain a blast profile 1.0-3.0 mils (25-75 micron). An angular blast profile will provide for 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)	The following spray equipment has been found suitable and is available from manufacturers such as Binks, DeVilbiss and Graco.
Conventional Spray	Agitated pressure pot equipped with dual regulators, 3/8" I.D. minimum material hose, with a maximum length of 50', .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: .017-.021" Output PSI: 2100-2500 Filter Size: 60 mesh *Teflon packings are recommended and available from the pump manufacturer.
Brush	For touch-up of areas less than one square foot only. Use medium bristle brush and avoid rebrushing.
Roller	Not recommended

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Carbozinc® 12 VOC

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.

Ratio

	<u>0.94 Gal Kit</u>	<u>4.65 Gal Kit</u>
Part A:	0.69 gal. (short filled)	3.42 gal. (short filled)
Zinc Filler:	14.6 lbs.	73 lbs.

Thinning **Spray:** May be thinned up to 20 oz/gal (16%) with Thinner #26 or #237 for ambient and warm surfaces. For extremely warm or windy conditions, may be thinned up to 20 oz/gal (16%) with Thinner #33. Use of thinners other than those supplied or recommended by Carboline may adversely affect product performance and void product warranty, whether expressed or implied.

Touch-Up: May be thinned up to 30% (38 oz) for small touch-up areas only by brush. Avoid re-brushing.

Carboline Thinner #236E may also be used to thin this product to minimize HAP and VOC emissions. Consult Carboline Technical Service for guidance.

Pot Life 8 Hours at 75°F (24°C) and less at higher temperatures. Pot life ends when coating becomes too viscous to use.

Cleanup & Safety

Cleanup Use Thinner 21 or Isopropyl Alcohol. 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 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 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	50°-85°F (10°-29°C)	40°-90°F (4°-32°C)	40°-90°F (4°-32°C)	40-90%
Minimum	50°F (10°C)	20°F (-7°C)	20°F (-7°C)	30%
Maximum	90°F (32°C)	130°F (54°C)	115°F (46°C)	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 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
40°F (4°C)	4 Hours	48 Hours
75°F (24°C)	1 Hour	18 Hours
90°F (32°C)	¾ Hour	16 Hours

These times are based on 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. Humidity levels below 50% will require longer cure times. **Notes:** Any salting that appears on the zinc surface as a result of prolonged weathering exposure must be removed prior to the application of additional coatings. Also, loose zinc must be removed from the cured film by rubbing with fiberglass screen wire if when "dry spray/overspray" is evident on the cured film and a topcoat will be applied.

Packaging, Handling & Storage

Shipping Weight (Approximate)	<u>0.94 Gallon Kit</u> 23 lbs. (11 kg)	<u>4.65 Gallon Kit</u> 102 lbs. (49 kg)
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Flash Point (Setaflash)	Part A: 59°F (17°C) Zinc Filler: NA
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Storage (General)	Store Indoors.
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Storage Temperature & Humidity	40° - 100°F (4-38°C). 0-90% Relative Humidity
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Shelf Life	Part A: 12 months at 75°F (24°C) Part B: 24 months at 75°F (24°C) Special Zinc Filler (ASTM D520, Type II): 24 months at 75°F (24°C)
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***Shelf Life: (actual stated shelf life) when kept at recommended storage conditions and in original unopened containers.**



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