

SELECTION & SPECIFICATION DATA

Generic Type	Silicone alkyd zinc primer
Description	A zinc-filled, high temperature resistant primer for the protection of steel substrates at elevated temperatures up to 800°F (426°C). Excellent for use as both a new construction or maintenance primer for high heat steel surfaces. Suitable for use in any process industry where hot surfaces need corrosion protection.
Features	<ul style="list-style-type: none"> • VOC compliant to 340 g/l • Tolerant of power tool cleaned surfaces • Zinc filler provides excellent corrosion and undercutting resistance • May be applied over hot substrates up to 150°F (65°C) • Will air dry “tack free” at ambient but will remain soft until heat curing has been achieved • Typically topcoated with a silicone or modified silicone finish
Color	0700 (Grey) only
Finish	Flat
Dry Film Thickness	2.5 mils (64 microns) per coat
Solids Content	By Volume 49% +/- 2%
Theoretical Coverage Rate	786 ft ² /gal at 1.0 mils (19.3 m ² /l at 25 microns) 314 ft ² /gal at 2.5 mils (7.7 m ² /l at 62 microns) Allow for loss in mixing and application.
VOC Value(s)	Per EPA Method 24: 2.84 lbs/gal (340 g/l) Thinner 236 E (12.8 oz/gal): 2.84 lbs/gal (340 g/l) These are nominal values and may vary slightly with color. Product contains VOC-exempt t-butyl acetate. Check local regulations regarding product usage.
Dry Temp. Resistance	Continuous: 800°F (427°C)
Topcoats	May be topcoated with silicone and silicone modified finishes.

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	New Construction: Abrasive blast to SSPC-SP10 with a 0.5-1.0 (13-25 micron) surface profile. Spot Repair or Touch-Up: Power Tool clean to SSPC-SP3, SSPC-SP11, or SSPC-SP15.

MIXING & THINNING

Mixing	Thoroughly mix zinc dust into liquid before use. Keep agitated.
Thinning	May be thinned up to 12.8 oz./gal (10%) with Thinner #236E. 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	Use within 2 days after mixing in zinc dust.

Thermaline[®] 2977 VOC

PRODUCT DATA SHEET



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 for application of this material. Conventional spray application is preferred.

Conventional Spray | Agitated pressure pot equipped with dual regulators, 3/8" I.D. minimum material hose, with a maximum length of 50', Use 0.070" I.D. fluid tip and appropriate air cap. Lap each pass 50%.

Brush & Roller (General) | Recommended for touch up of small areas or where spray application is not permitted. Avoid excessive re-brushing or re-rolling.

Brush | Use a medium bristle brush.

Roller | Use a short-nap mohair roller cover with phenolic core.

APPLICATION CONDITIONS

Condition	Material	Surface	Ambient	Humidity
Minimum	55°F (13°C)	40°F (4°C)	40°F (4°C)	0%
Maximum	95°F (35°C)	150°F (66°C)	120°F (49°C)	90%

Industry standards are for substrate temperatures to be above the dew point. 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 w/ Other Finishes	Final Cure
77°F (25°C)	1 Hour	4 Hours	NR
300°F (149°C)	NR	NR	3 Hours

These times are based on a 2.5 mil (62 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. Excessive humidity or condensation on the surface during curing can interfere with the cure, can cause discoloration. During high humidity conditions, it is recommended that the application be done while temperatures are increasing. Ultimate film hardness and properties will occur after heat cure of 300°F (148°C) for 3 hours.

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. Hypersensitive persons should wear protective clothing, gloves and use protective cream on face, hands and all exposed areas.

CLEANUP & SAFETY

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. 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.
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PACKAGING, HANDLING & STORAGE

Shelf Life	Min. 24 months at 77°F (25°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)
Storage	Store Indoors
Shipping Weight (Approximate)	3.44 Gallon Kit Base = 37 lbs. Zinc dust = 15 lbs.
Flash Point (Setaflash)	63°F (17°C)

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.