



ZERO RUST APPLICATION GUIDE

Zero Rust® is a phenolic modified alkyd coating with outstanding corrosion resistance. It forms a barrier which keeps oxygen and water away from the steel substrate. Water and oxygen are necessary ingredients in the corrosion process and if they cannot get to the steel, then the steel will not rust. Zero Rust® has outstanding adhesion, another critical factor in corrosion protection.

Zero Rust® withstands 2,000 hours in ASTM-B117 salt spray testing with 3.5 mils of dry film. Nearest competitive product tested is less than 500 hours. Salt spray testing accelerates corrosion in an extremely harsh environment and the level of performance exhibited by Zero Rust® is outstanding. Many years of service in a wide variety of field applications confirms the outstanding performance of Zero Rust® in the real world as well. For maximum protection on bare steel surfaces, Zero Rust® should be applied at 3.0 - 3.5 mils dry film over profile (equal to 2 coats at 3.5 mils wet).

SURFACE PREPARATION: Thoroughly clean all surfaces of any dirt, oil, grease, silicone and any other contaminants. Remove all loose rust. As with any paint product, a direct relationship exists between surface preparation and product performance. Usually, sandblasting is not required. **However,** if the surface has been polished or otherwise altered to create a smooth surface, the surface should then be sandblasted or properly abraded with 220-320 grit paper before finishing to promote adhesion.

New Steel: If any mill scale is present it should be removed before applying Zero Rust®. Any mill scale left intact will become the weak link in the system. If the Zero Rust® film should break, corrosion will likely occur between the mill scale and the steel and move sideways from the break in the film.

Rusty Surfaces: Remove all loose scale and powdery rust. Hand tooling is generally adequate. Zero Rust requires a solid foundation for bonding.

Partially Rusted, Partially Painted Surfaces: When repairing a painted surface that has deteriorated, total removal of the old paint is preferred. As with mill scale, the old paint is the weak link in the system. If total removal of the old paint is not feasible, it is important to remove any loose paint from the surface. The cleaner and tighter the surface, the better the resultant paint job. Pay particular attention to paint edges that lift and curl. For best results, use a rotary sander to feather out paint edges adhering to exposed steel.

THINNING: Application with airless spray equipment requires no thinning and can be done directly from the can. Zero Rust® is heavy bodied, and thinning is required for siphon or gravity gun applications. A reduction of 10-20% by volume with VOC exempt solvent is typical. Acetone, methyl acetate, and PCBTf are VOC exempt and work well for thinning. Prepackaged blends utilizing the above solvents are also available. When using a brush or roller, thin to suit.

APPLICATION: Mix well before using. Apply with spray, brush or roller. Unthinned Zero Rust® should be applied with a total wet film thickness of 6.0 mils, yielding approximately 3.0 mils of dry film after solvent evaporation. If thinned before application, wet film thickness must be increased accordingly. Maximum corrosion protection requires 3.0 - 3.5 mils of dry film on bare steel.

Apply when surface temperature is 50° - 95°F.

For best results apply in two coats using a crisscross pattern from one coat to the next. This reduces the chance of having pinholes that run from the surface of the film to the steel and yields a more uniform film build. The first coat should be applied at 3.5 mils wet (approximately 1.5 mils dry). Allow the solvents in the first coat adequate time to flash off before applying the second coat. The first coat is typically set to touch and ready to re-coat in 20-30 minutes. After the first coat, has flashed off, apply the second coat at 3.5 mils wet for a total dry film thickness of approximately 3.0 - 3.5 mils.

Avoid over-application and allow adequate flash off time between coats. Failure to do so will extend dry times dramatically. Use a wet film gauge to insure application at the proper film thickness.

Black and red oxide have the best corrosion resistance. Apply one of these as the first coat and use one of the other Zero Rust colors as the second coat when a different color is desired.

DRYING TIME: Dry times will vary greatly depending on applied film thickness, reduction, air movement, flash time between coats, relative humidity and temperature. Properly applied Zero Rust dries to touch in 30 minutes and is tack free in one hour when dried at 70°F and 50% relative humidity.

Do not over apply. Excess film will extend dry times dramatically and waste material with no improvement in corrosion resistance. Use a wet film gauge to insure application at the proper film thickness.

TOPCOATS: Zero Rust® will chalk and the color will fade in exterior applications. This does not affect its corrosion resistance. If gloss and long-term color retention are important, we recommend coating with a durable topcoat. Topcoats are typically applied when the second coat of Zero Rust® is set to touch or after it has dried 24 hours (when applied at recommended wet film thickness). If Zero Rust® is dried 24 hours or more before top-coating, scuff sanding is recommended. Certain solvents in topcoats can act like paint strippers and lift or wrinkle Zero Rust®. As Zero Rust® cures it becomes more solvent resistant and the possibility of wrinkling diminishes. Some topcoats do not contain strong enough solvents to wrinkle Zero Rust® at any point in the cure. Therefore, it is crucial to check a specific topcoat's suitability for use with Zero Rust®.

SERVICE TEMPERATURE RANGE: Zero Rust® can withstand intermittent temperatures of 250-300° F before the coating starts to break down. Heat resistance varies by color, with black performing the best.

GENERAL: Zero Rust® is available in versions meeting all VOC requirements in the US and Canada. Zero Rust® is not recommended for submersion applications or for application to galvanized steel.

CLEANUP AND WASTE DISPOSAL: Use VOC exempt solvents such as acetone to clean equipment. Dispose of waste and residue in accordance with local, state and federal regulations.

COVERAGE: Covers approximately 250-300 square feet per gallon at the recommended dry film thickness of 3.0 mils. Rate will vary depending on Zero Rust® version used and transfer efficiency. Aerosols cover approximately 10 square feet per can.

SIZES AVAILABLE: Primers: 12 oz. aerosols, quarts and gallons. Topcoats: 12 oz. aerosols.