



RUST GRIP®

SERIES PRODUCTS

Application Instructions (8/18/17)

RUST GRIP® is a one-part, metallic-filled moisture-cured, penetrating polyurethane that can be used as a primer, topcoat or to encapsulate. It can be applied to metal, concrete, masonry and wood, as specified. It comes in three formulas: RUST GRIP-1 is the basic formula, RUST GRIP-ME is for hot climates and RUST GRIP ULVOC is for low VOC concerns.

SURFACE PREPARATION

Surface must be clean from oil, tar, rust, grease, salts, and films.

- 1) Use general degreaser if needed.
- 2) Clean surface using TSP (tri-sodium-phosphate) or a citrus cleaner to release dirt and degreaser residue.
- 3) Pressure-wash if possible @ 3500 psi.
- 4) Salt contamination on a surface can come as a result of salt water, fertilizers, and car exhaust. Use Chlor*Rid or equivalent to decontaminate surface if salts are present. Acceptable levels: Nitrates: 5-10 mcg/cm², Sulfates: 5-10 mcg/cm², Chlorides: 3-5 mcg/cm²

Surface must be completely dry before applying.

- 1) RUST GRIP® must be applied during proper temperatures and the prescribed overcoat window of the coating over which it will be applied.
- 2) If applied over an existing coating having a glossed or shiny finish, it must be sanded and roughed to remove gloss before application, to improve the profile.
- 3) Additional coats of RUST GRIP® can only be applied when the 1st coat becomes tacky to the touch and has little to no transfer of coating; in most cases, 1-2 hours or less. After this stage, the surface must be lightly sanded to improve the profile.

NOTE: If pack rust or mil-scale exists, they must be removed by grit blast, power tool or pneumatic zip gun. Glossy surfaces should be sanded to a dull finish to improve the profile and enhance adhesion. If mil-scale exists on hot rolled steel, the pores will be blocked and the surface must be taken to a SSPC – SP6 or SP11. Once these steps are taken, begin Surface Preparation Instructions. (Above)

NOTE: Never use a needle gun. This compacts rust into the pores and blocks RUST GRIP from anchoring.

MIXING

- 1) Mix by hand or with a power drill using low-medium speed with NO vortex. (A vortex will draw moisture into the coating.) The coating will be a yellowish green color. Mix continuously (with no vortex) until the entire surface of the coating turns a silver gray color. Mix for two more minutes making sure all paste is off of the bottom.

NOTE: Once container is opened, the product must either be used completely, or sealed with plastic before re-attaching lid after use, or repackaged and sealed well in an unlined metal can. Product may thicken if left open in can. Pour off the amount you intend to use after proper stirring. If left open, the product will harden in the container. For start & stop (lunch), drop gun into solvent pail and cover.

ONCE OPENED, PAIL WORKABILITY CHANGES ACCORDING TO AMBIENT CONDITIONS –

4 hours at 70°F degrees (21°C) at 60% or higher Relative Humidity.
Cooler temperatures or lower humidity, more workability time.
Warmer temperature or high humidity; less workability time.

CURE TIME

- 1) RUST GRIP / RUST GRIP UL VOC: 30-60 minutes to tack-free when 70°F. (21°C) at 40% relative humidity; fully cures in thirty days when 70°F (21°C) at 40% relative humidity.
- 2) RUST GRIP-ME: 60-120 minutes to tack free when 80°F (26C) or higher at 50% RH or higher; fully cures in 21 days when 80°F (26°C) at 50% RH or higher; overcoat up to 24 hours.

APPLICATION

- 1) RUST GRIP® can be applied by soft bristle brush or ¼" nap roller made for solvent use or spray. If application is by spray, use a standard airless sprayer (1.5 gallons/minute at 3,300 psi) with a .013-.017 tip.
- 2) In all applications (brush or roller), apply at "half-speed" and use a cross-hatch method (side-to-side, then top-to-bottom) slowly to prevent pinholes and allow penetration.
- 3) If encapsulating rust, lead-based paint, other bio-hazardous materials or bridges, brushing is the preferred application method. Apply the first coat by brush (keeping it very wet at all times), using the cross-hatch method. Go about 30 feet then return to the beginning and apply a second coat identical to the first. A third coat may be required. This method will insure the coating is worked into the pores and fully encapsulates the existing surface, while leaving enough coating over the surface to avoid pinholes.
 - Maximum/minimum surface temperature when applying: 150°F (65°C) / 50°F (10°C)
 - Maximum surface temperature after curing: 325°F (163°C)
 - Failure will occur at a constant temperature => 325°F (163°C)

APPLICATION NOTES:

- 1) The number of coats necessary and the thickness of each will be in accordance with the job specifications, blast profile, or rust profile.
- 2) Temperatures must always be a minimum of 5 degrees above the dew point during application.
- 3) At high RH values of 60% or more, Rust Grip® cures very quickly and the window for applying another layer of coating is very short. At 85% RH, it could be determined that one has only an hour or less over-coat window depending on the ambient temperature. The higher the temperature, the faster solvents evaporate out of the coating. It is always best to overcoat immediately when the first coat of Rust Grip® becomes dry to the touch. Since the curing process is so dependent on ambient temperature and RH, the physical touch-test is always the best approach when working in high humidity environments. RH of 60% and up.
- 4) For high ambient temperatures and high surface temperatures, SPI recommends RUST GRIP-ME. This will provide a slower cure time in high heat, to make over-coating more manageable.
- 5) Surface profile must be factored when estimating the spread rate and amount of product required. Allow for penetration into the profile and adjust accordingly (i.e. if the profile takes 2 mil (50 micron) to fill before achieving the 6 mils dry(150 microns) then you must figure 8 mil (200 microns) dry as the appropriate spread rate).
- 6) HIGH-HEAT SYSTEM: a) HPC applied over hot surface at thickness according to temperature level, b) RUST GRIP® applied @ 150sf (14.5sm) for toughness, then c) SP Liquid Membrane for water/air seal plus rubber flex for movement.
- 7) Apply RUST GRIP® at a minimum thickness of 12 mils wet/6 mils dry over the highest peaks of the surface profile. Allow for absorption into the substrate and filling profile when figuring spread rate.
- 8) Use Acetone to aid in drying surface before applying RUST GRIP®, when needed. DO NOT use mineral spirits or any other solvent for this purpose.

CLEANING EQUIPMENT

- 1) If breaks are taken, spray systems should be flushed with solvent.
- 2) After completion, spray system should be flushed and cleaned with MEK or Xylene; brushes and rollers should be discarded.