



POLYURETHANE METAL RUST PRIMER

TECHNICAL DATA SHEET

PRODUCT DESCRIPTION:

ERSystems® Polyurethane Metal Rust Primer is a single component, aluminum pigmented, moisture-cure urethane primer for rusty surfaces. This coating offers excellent corrosion resistance when used by itself or top coated with our Polyurethane 300 system or other approved finish coating.

TYPICAL PROPERTIES:

Property	Typical Value
Percent Solid:	52% (By volume), 51 % (by weight)
Viscosity:	500 – 3000 cps
Color:	Aluminum Gray
Weight/Gallon	10.3 +/- 0.2 lbs./gal
VOC Content (minus exempt minus water)	227 g/l (calculated)
Shelf Stability	8 months
Flash Point	110°F (42°C)
Dry time: 75°F (23.9°C) and 45% RH	Set to Touch: 30 – 60 minutes Surface Dry: 1 ½-2 hours Dry Hard: 4-5 hours
** The shelf life for an unopened container stored at temperatures between 60°F (15.6°C) and 95°F (35°C) is 8 months from date of manufacture. Store out of direct sunlight in a cool, well-ventilated area. Avoid storing container directly on the floor or against an outside wall	

TYPICAL USES:

Uses include applications over marginally prepared metal substrates where hand and power tool cleaning of rust is specified. Because of its low viscosity, it penetrates porous, tightly bonded rust. It also adheres to many previously applied coatings that are weathered but sound.

PACKAGING:

- 5-gallon pail

COLOR:

- Aluminum Gray

APPLICATION EQUIPMENT:

- Application may be by brush, roller, or airless spray.
- **Brush or Roller:** Recommended for small areas or where over-spray may be a problem. Use a fine bristle brush or medium nap solvent resistant roller.
- **Airless Spray Equipment:** Airless spray equipment should be capable of producing a material output of 3/4 gallon per minute at 3,000 psi. Polyurethane Metal Rust Primer is designated a medium elastomeric coating with

a low viscosity for pump purposes. 3/8" to 1/2" high pressure hoses perform well. The spray gun should be fitted with a .013" - .018" nozzle - reverse-a-clean. Exact orifice size will vary with temperature and material requirements.

SURFACE PREPARATION:

Ferrous substrates must be prepared properly for maximum corrosion protection and long service life. All loose rust must be removed by power washing, wire brushing or sand blasting. Welded seams, weld spatter and lap and butt joints of structural or heavy gauge steel, require special attention because of the rough, irregular profiles which are difficult to coat. To prepare these areas, chip off all flux, weld, spatter, or laminations left from welding. All mill scale, rust, etc. should be removed by wire brushing or blast cleaning to obtain an approximate 2 mil. anchor pattern.

- New steel and aluminum surfaces should be cleaned or brushed to a 2 mil. profile to achieve maximum adhesion.
- New galvanized or galvalume steel must be cleaned to remove any rolling oils or grease before application of Polyurethane Metal Rust Primer.
- Non-ferrous substrates should be wire brushed to remove all loose coatings, rust, scale, or other contaminants.
- Prior to coating, wipe clean with a recommended clean-up solvent.

Existing coatings must be tested to determine compatibility and inter-coat adhesion. Apply a test area of 6 - 12 sq. inches of Polyurethane Metal Rust Primer, embed polyester leaving a fabric tail exposed and allow to cure. A 90° pull on the fabric tail will provide an indication of adhesion.

APPLICATION:

Surface must be properly prepared, clean, and dry prior to applying Polyurethane Metal Rust Primer. Best application will be achieved when the air temperature is 35°F. or higher and rising, and when the ambient temperature exceeds the dew point by at least 5°F. Apply 1/4 to 1/2 gallon (0.95 liter to 1.89 liters) per 100 square feet (4 to 8 wet mils) of Polyurethane Metal Rust Primer to obtain a 2 - 4 dry mil film. General light rust will be sufficiently sealed with a uniform 2 - 4 mil film. If rust is quite deeply pitted to produce a rough irregular surface two applications of 1/2 gallon (1.89 liters) per 100 square feet is recommended, with the first coat being back rolled if applied by airless spray. Polyurethane Metal Rust Primer should be stirred prior to use, to

insure a uniform mixture. Application of Polyurethane Metal Rust Primer with spray equipment may require some masking and erection of wind screens to prevent overspray and drift damage. Do not apply Polyurethane Metal Rust Primer over Silicone Coatings or Silicone caulks. Do not apply over asphalt coatings, plastic roof cement, coal tar coatings, etc.

CURING TIME AND RECOAT:

Polyurethane Metal Rust Primer must be recoated within 48 hours of application. At 75°F (23.9°C) and 45% R.H. Polyurethane Metal Rust Primer will be sufficiently cured to accept a recoat of Polyurethane Metal Rust Primer or a finish coat in 1 - 3 hours. Longer time must be allowed during colder temperature applications. Prior to top coating with Polyurethane 300, make sure Polyurethane Metal Rust Primer is cured and dry.

TEMPERATURE CONSTRAINTS:

For application temperatures below 40°F (4.45°C), consult ITW POLYMERS SEALANTS NORTH AMERICA, INC. Technical Service Department.

Curing is affected by reacting with atmospheric moisture. Solvents evaporate from the film as the primer dries. The lower the temperature, the slower the cure cycle. The substrate temperature range for application is 40°F (4.45°C) – 120°F (23.9°C).

CLEAN UP:

Upon completion of the application, tools, hoses, and equipment must be cleaned immediately with xylene (xylol) solvent

STORAGE:

Store dry, out of direct sunlight at 40–95°F (4–35 °C). Condition material to 65–85°F (18–30 °C) before using.

LIMITATION:

Polyurethane Metal Rust Primer cures by reacting with air moisture. Partially used containers should not be left open and exposed to the air. Curing in the once opened container can be slowed by placing plastic wrap directly over the surface of the coating and tightly resealing the container.

CAUTION!!!

Be sure area is well vented. The solvents used in Polyurethane Metal Rust Primer are flammable and, in some cases, irritating to the eyes and skin. Keep containers tightly closed and away from heat, sparks, and open flame.

Polyurethane Metal Rust Primer contains chemically active isocyanate groups that react with water, alcohols, and amines. Avoid breathing of vapors and contact with skin. Use appropriate chemical cartridge or air-supplied respirators where limited air movement might occur. In confined areas, adequate ventilation or fresh air supplied hoods must be provided during application. This primer is not intended for non-industrial use. Proper eye protection and protective clothing for the skin should be worn. Keep out of reach of children. If swallowed, **DO NOT** induce vomiting. Drink 1 to 2 glasses of water. Call a physician immediately.

The flow of material through pump and system could create static electricity. When pumping flammable materials, all equipment must be properly grounded to prevent static discharge and sparking, which could cause fire or explosions. Use only conductive or grounded air and material hoses and be sure that compressor and pump are properly grounded per manufacturer's recommendations.

PRIOR TO USE OF THIS MATERIAL,
READ ALL APPROPRIATE SAFETY DATA SHEETS

EXCLUSION OF WARRANTIES:

AS TO THE HEREIN DESCRIBED MATERIALS, ITW POLYMERS SEALANTS NORTH AMERICA, INC. MAKES NO WARRANTIES WHETHER EXPRESSED OR IMPLIED, INCLUDING BUT NOT LIMITED TO ANY IMPLIED WARRANTY OR MECHANABILITY OR FITNESS FOR A PARTICULAR PURPOSE. SINCE THE USE OF THE HEREIN DESCRIBED MATERIALS INVOLVES MANY VARIABLES IN METHODS OF APPLICATION, HANDLING AND/OR USE, THE USER IN ACCEPTING AND USING THESE MATERIALS ASSUMES ALL RESPONSIBILITY FOR THE END RESULT. THE PURCHASE OF THIS ITW POLYMERS SEALANTS NORTH AMERICA, INC. PRODUCT IS SUBJECT TO THE TERMS AND CONDITIONS OF AN "AS IS" SALE, AND IF THE PRODUCT IS PROVED TO BE DEFECTIVE, THE EXCLUSIVE REMEDY, AT ITW POLYMERS SEALANTS NORTH AMERICA, INC.'S OPTION, SHALL BE TO REPLACE THE DEFECTIVE ITW POLYMERS SEALANTS NORTH AMERICA, INC. PRODUCT. ITW POLYMERS SEALANTS NORTH AMERICA, INC. SHALL NOT OTHERWISE BE LIABLE FOR LOSS OF DAMAGES, WHETHER DIRECT, INDIRECT, SPECIAL, INCIDENTAL OR CONSEQUENTIAL, REGARDLESS OF THE LEGAL THEORY ASSERTED, INCLUDING NEGLIGENCE, WARRANTY OR STRICT LIABILITY.

Complete technical information is available from
ITW Polymers Sealants North America, Inc.