RUST-OLEUM

META PRIME

DESCRIPTION

Rust-Oleum® META Prime utilizes patented, self-healing technology to extend coating life on surfaces subject to damage. It is an epoxy primer designed to maintain adhesion and prevent rust creep after the coating is damaged. When the surface is damaged, META Prime releases a healing agent that cures to regenerate protection to the coated surface.

META Prime can be used indoors or out. Epoxy coatings will yellow with age. This is most noticeable with interior applications of white or light colors which are not subjected to bleaching from sunlight. Exterior exposure over time will cause fading and chalking with all epoxy type coatings. These changes are cosmetic in nature only and film integrity and performance will not be adversely affected.

META Prime meets USDA requirements for incidental food contact.

Note: META Prime is suitable for water immersion service. However, do not use for immersion service in potable water tanks.

FEATURES

- Patented self-healing technology
- Maintains adhesion after damage
- Extended coating life
- Two-component epoxy

PRODUCTS

This is a two component system. Must order base and activator separately.

SKU	Description
310321	0.5 Gallon fill META Prime Base
310322	2.5-Gallon fill META Prime Base
310706	0.5 Gallon fill Activator
310707	2.5 Gallon fill Activator
313481	1-Gallon Kit contains 0.5 Gallons of 310321 and 0.5 Gallons of 310706

COMPATIBLE TOPCOATS

META Prime is compatible with all Rust-Oleum topcoats. Excellent performance may be obtained when top coating with the following systems.

3300 System Acrylic Aliphatic Urethane
9100 System DTM Epoxy Mastic
9400 System High Gloss Polyester Polyurethane
9700 System 250 VOC Acrylic Polyester Urethane
9800 System DTM Urethane Mastic

PRODUCT APPLICATION

SURFACE PREPARATION

ALL SURFACES: Remove all dirt grease, oil, salt and chemical contaminants by washing the surface with Original Krud Kutter® Cleaner/Degreaser or a suitable cleaner and water. Mold and mildew areas must be cleaned with a chlorinated cleaner or bleach solution. Rinse thoroughly with fresh water and allow to fully dry. All surfaces must be dry at time of application.

STEEL: Remove loose rust, mill scale and deteriorated coatings in accordance with SSPC-SP-3 Power Tool Cleaning. For optimum corrosion resistance, abrasive blast to SSPC-SP-6 Commercial Grade.

PREVIOUSLY COATED: Previously coated surfaces must be sound and in good condition. Smooth, hard or glossy finishes should be scarified by sanding to create a surface profile. To ensure product compatibility, a test patch is suggested.

GLAVANIZED METAL: Remove rust by hand or power tool cleaning.

MIXING

The base component must be properly mixed with the activator component before use. The mix ratio is 1:1. Thoroughly mix for 2-3 minutes.

APPLICATION

Apply only when air and surface temperatures are between 60-100°F (10-38°C) and surface temperature is at least 5°F above dew point. Ensure fresh air entry during application and drying. Airless spray is the preferred method of application. Other methods of application may compromise film build. Application by brush or roller may require a second coat to achieve the recommended dry film thickness.

EQUIPMENT RECOMMENDATIONS

BRUSH: Use a good quality synthetic bristle brush.
ROLLER: Use a good quality synthetic nap.
AIR-ATOMIZED SPRAY:

Method	Fluid Tip	Fluid Delivery	Atomizing Pressure
Pressure	0.055-0.070	12-16 oz./min.	40-60 psi
Siphon	0.055-0.070	—	40-60 psi
HVLP (var.)	0.043-0.070	8-10 oz./min.	10 psi at tip

Air cap for highest pressure

AIRLESS SPRAY:

Fluid Pressure	Fluid Tip	Filter Mesh
2000-3000 psi	0.013-0.017	100

Form: GDH-1165
Rev.: 111716

RUST-OLEUM

META PRIME

PRODUCT APPLICATION (cont.)

THINNING

Thinning is normally not required, except for air-atomized spray. For air-atomized spray application, thin only up to 10% by volume with 160402 Thinner after the components have been mixed. If the coating is going to be used in immersion service, up to 10% 165402 Thinner for air-atomized spray and up to 5% of 165402 Thinner for airless spray may be used.

NOTE: Addition of more than 10% of 160402 or 165402 Thinner will cause VOC to exceed 340 g/l. In this case, 333402 VOC exempt thinner can be used if needed.

CLEAN-UP

Use 160402 or 165402 Thinner.

PERFORMANCE CHARACTERISTICS

META Prime and competitive epoxy primers were top coated with consistent acrylic, alkyd, epoxy, and urethane systems. The panels were scribed and placed in salt fog per ASTM B117. After 1000 hours, the panels were removed and the scribe creep was measured. The results are contained below.

1000 Hour ASTM B117 Salt Fog		
Scribe Creep (mm)		
Product System	**Typical System**	**With META Prime - Prime Coat**
Epoxy Primer Only	**11.7**	**8.8**
Epoxy with Acrylic	**13.3**	**2.2**
Epoxy with Alkyd	**11.4**	**3.8**
Epoxy with Acrylic Urethane	**19.0**	**None**
Epoxy with Polyester Urethane	**21.5**	**None**
Epoxy with Epoxy	**11.0**	**6.8**

PERFORMANCE CHARACTERISTICS (cont.)

Removal of coating along scribe by mechanical means revealed extended underfilm corrosion where META Prime was not used.

1000 Hour ASTM B117 Salt Fog		
Corrosion Creep Observed When Coating Removed (mm)		
Product System	**Typical System**	**With META Prime – Prime Coat**
Epoxy Primer Only	**17.9**	**10.5**
Epoxy with Acrylic	**20.6**	**7.4**
Epoxy with Alkyd	**16.9**	**5.8**
Epoxy with Acrylic Urethane	**20.6**	**5.5**
Epoxy with Polyester Urethane	**20.0**	**6.4**
Epoxy with Epoxy	**19.9**	**7.5**

RUST-OLEUM

TECHNICAL DATA

META PRIME

PHYSICAL PROPERTIES

Resin Type		Polyamide Converted Epoxy	
Pigment Type		Calcium Borosilicate	
Solvents		Methyl Isobutyl Ketone, Xylene	
Weight*	**Per Gallon**	10.6-11.8 lbs.	
	Per Liter	1.3-1.4 kg	
Solids*	**By Weight**	75-78%	
	By Volume	62-65%	
Volatile Organic Compounds*		<340 g/l	
Recommended Dry Film Thickness (DFT) Per Coat		5.0-8.0 mils (125-200µ)	
Wet Film to Achieve DFT		8.0-13.0 mils (200-325µ)	
Theoretical Coverage at 1 mil DFT (25µ)		995-1042 sq.ft./gal. (24.5-25.6 m^2/l)	
Practical Coverage at Recommended DFT (assumes 15% material loss)		100-175 sq.ft./gal. (2.5-4.3 m^2/l)	
Mixing Ratio		1:1 Base to Activator by Volume	
Induction Period		30 minutes (60 minutes if the temperature is less than 65°F)	
Pot Life	**1 Gallon**	2-4 hours @ 70°F (21°C)	3-5 hours @ 60°F (15°C)
	5 Gallons	2 hours @ 70°F (21°C)	3 hours @ 60°F (15°C)
Dry Heat Resistance		NA	
Dry Times at 70-80°F (21-27°C) and 50% relative humidity	**Tack-free**	6-8 hours	
	Handle	8-14 hours	
	Recoat	16 hours up to 1 year depending on exposure environment	
	Topcoat	16 hours up to 1 year depending on exposure environment	
Shelf Life		3 years both components	
Safety Information		For additional information, see SDS	

Calculated values are shown and may vary slightly from the actual manufactured material.
*Activated material.

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