RUST-OLEUM® SC9100 SYSTEM 100 VOC DTM EPOXY MASTIC

DESCRIPTION AND USES

The SC9100 System is a 100 g/l VOC two-component, high solids epoxy coating for use in moderate to severe environments. It is specifically designed for application directly on sound rusted steel with minimum surface preparation. It can also be used on clean steel, galvanized metal, concrete (including concrete floors), previously coated and slightly damp surfaces. The SC9100 System can be used indoors or out. While exposure to sunlight and certain interior lighting conditions causes fading and chalking of all epoxy type coatings, these changes are cosmetic in nature only and film integrity and performance will not be adversely affected.

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.

PRODUCTS

COATINGS

1-Gallon	5-Gallon	DESCRIPTION
254159	254165	Silver Gray
254157	254164	White
270672	----	Black

ACTIVATOR

1-Gallon	5-Gallon	DESCRIPTION
258455	258456	Standard Activator
254163	----	Immersion Activator

TINT BASES*

1-Gallon	5-Gallon	DESCRIPTION
254160	----	Light Tint Base
254162	----	Masstone Tint Base

*Tint bases use the Rust-Oleum 2020 Colorants

Rust-Oleum® SC9100 System complies with USDA FSIS regulatory sanitation performance standards for food establishment facilities. This coating is impervious to moisture and easily cleaned and sanitized.

PRODUCT APPLICATION

SURFACE PREPARATION

ALL SURFACES: Remove all dirt, grease, oil, salt and chemical contaminants by washing the surface with Krud Kutter® Cleaner Degreaser or other suitable cleaner. Rinse with fresh water and allow to thoroughly dry.

PRODUCT APPLICATION (cont.)

SURFACE PREPARATION (cont.)

STEEL: Hand tool (SSPC-SP-2) or power tool (SSPC-SP-3) clean to remove loose rust, scale, and deteriorated previous coatings to obtain a sound rusted surface. For optimum corrosion resistance, abrasive blast to commercial grade SSPC-SP-6, with a blast profile of 1-2 mils (25-50µ).

STEEL (IMMERSION): Abrasive blast clean to a minimum SSPC-SP-10 Near White Grade (NACE 2) and achieve a surface profile of 1.5-3 mils. All weld spatter must be removed along wield seams, rough welds should be ground smooth, and all sharp edges should be ground to a smooth radius.

PREVIOUSLY COATED: Previously coated surfaces must be sound and in good condition. Smooth, hard, or glossy finishes should be scarified by sanding or sweep blasting to create a surface profile. The High Performance SC9100 System 100 VOC DTM Epoxy Mastic is compatible with most coatings, but a test patch is suggested.

GALVANIZED METAL: Remove oil, dirt, grease and other chemical deposits with Krud Kutter® Cleaner Degreaser or other suitable cleaner. Remove loose rust, white rust or deteriorated old coatings by hand or power tool cleaning or brush off blasting. Rinse thoroughly with fresh water and allow to fully dry.

CONCRETE OR MASONRY: New concrete or masonry must cure 30 days before coating. Any concrete surface must be protected from moisture transmission from uncoated areas. Remove all loose, unsound concrete. Remove laitance and create a surface profile by either acid etching with Rust-Oleum 108402 Cleaning and Etch Solution, or by grinding. Surface sealers and curing agents must be removed by grinding.

MIXING

Both the base and activator components are highly pigmented. Mix each component thoroughly to ensure any settled pigment is re-dispersed before combining the components together. Combine at a 1:1 ratio by volume in a container large enough to hold the total volume. Mix thoroughly for 2-3 minutes. Power mixing is preferred. Do not mix more material than you plan to use within the listed pot life.

RUST-OLEUM® HIGH PERFORMANCE

RUST-OLEUM® SC9100 SYSTEM 100 VOC DTM EPOXY MASTIC

PRODUCT APPLICATION (cont.)

APPLICATION

Airless spray is the preferred method of application. However, brush, roller, or air-atomized spray may also be used. Refer to table for thinning recommendations. For proper performance, a dry film thickness of 5-8 mils per coat is required. Excessive brushing or rolling may reduce film thickness. Apply a second coat if necessary to achieve the recommended film thickness.

Apply only when air and surface temperatures between 60-100°F (15-38°C) and when the surface temperature is at least 5°F (3°C) above the dew point. Use in areas with adequate ventilation. The relative humidity should not be greater than 85%. Extremely high or low relative humidity can affect dry times and the final gloss of the coating. Low curing temperatures and/or condensation on the film while curing can affect appearance in the form of an amine blush. This can generally be removed with soap and water; however, in a case of extreme blushing, the performance of the coating may be slightly affected.

For water immersion service, use Industrial SC9100 System 100 VOC DTM Epoxy Mastic with the 254163 Immersion Activator. Do not use the 254163 Immersion Activator with tint bases. This system may be used for both salt and fresh water; do not use for the inside of potable water tanks. Apply at air and surface temperatures between 60-100°F (15-38°C), when the surface temperature is at least 5°F (3°C) above the dew point, and when relative humidity is below 85%. Apply two coats alternating color between coats to ensure complete hide. Allow 7 days cure after application of the second coat before immersion.

NOTE: If curing time exceeds 30 days, the surface must be scarified by sanding, or other method, prior to application of an additional coat or other finish coating.

EQUIPMENT RECOMMENDATIONS

(Comparable equipment also suitable)
BRUSH: Use a good quality synthetic bristle brush.
ROLLER: Use a good quality lamb's wool or synthetic fiber (3/8-1/2" nap)

AIR–ATOMIZED SPRAY

Method	Fluid Tip	Fluid Delivery	Atomized Pressure
Pressure	0.055-0.070	1-16 oz./min.	25-60 psi
Siphon	0.055-0.070	--	25-60 psi
HVLP (var.)	0.043-0.070	8-10 oz./min.	10 psi (at tip)

AIRLESS SPRAY

Fluid Pressure	Fluid Tip	Filter Mesh
1,800-3,000 psi	0.013-0.017	100

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 315512 Thinner after the components have been mixed. Substitution of thinner can affect VOC compliance.

CLEAN-UP

Use 315512 Thinner.

SHELF LIFE

Base components	3 years†
Activators	3 years†

†Unopened containers. Some settling may occur requiring mechanical mixing to re-disperse pigment.

PERFORMANCE CHARACTERISTICS

SYSTEM TESTED

Topcoat: SC9100

PENCIL HARDNESS
METHOD: ASTM D3363
RESULT: H (14 day cure)

CONICAL FLEXIBILITY
METHOD: ASTM D522
RESULT: 25%

IMPACT RESISTANCE (direct)
METHOD: ASTM D2794
RESULT: 40 in. lbs. (7 day cure)

GLOSS AT 60°F
METHOD: ASTM D4587
RESULT: 80-100% (7 day cure)

For chemical and corrosion resistance, see the Rust-Oleum Industrial Brands Catalog, Form # 275585.

CAUTION: Exposure of the SC9100 System during the curing stage of the coating to the by-products of propane combustion may cause discoloration to occur. During application and curing, propane fueled fork-lifts and other vehicles or propane fueled heaters should not be used in the area until the coating is fully cured. At least 72 hours.

RUST-OLEUM® HIGH PERFORMANCE

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PHYSICAL PROPERTIES

		FINISHES		TINT BASE FINISHES	
Resin Type		Cycloaliphatic modified amine converted epoxy		Cycloaliphatic modified amine converted epoxy	
Inhibitive Pigment		Calcium borosilicate		Calcium borosilicate	
Solvents		Exempt halogenated solvent Benzyl alcohol (activator only)		Exempt halogenated solvent Benzyl alcohol (activator only)	
Weight*	**Per Gallon**	12.5-13.2 lbs.		12.0-13.2 lbs.	
	Per Liter	1.5-1.6 kg		1.4-1.5 kg	
Solids*	**By Weight**	78-83%		80-85%	
	By Volume	75-80%		78-83%	
Volatile Organic Compounds*		<100 g/l (0.83 lbs./gal.)		<100 g/l (0.83 lbs./gal.)	
Mixing Ratio		1:1 Base:Activator (by volume)		1:1 Base:Activator (by volume)	
Recommended Dry Film Thickness (DFT) Per Coat		5-8 mils (125-200µ)		5-8 mils (125-200µ)	
Wet Film to Achieve DFT (unthinned material)		6.5-10.0 mils (162.5-250µ)		6.5-10.5 mils (162.5-262.5µ)	
Theoretical Coverage at 1 mil DFT (25µ)		1,214-1,278 sq.ft./gal. (29.9-31.4 m^2/l)		1,264-1,328 sq.ft./gal. (31.1-32.7 m^2/l)	
Practical Coverage at Recommended DFT (assumes 15% material loss)		130-220 sq.ft./gal. (3.2-5.4 m^2/l)		130-230 sq.ft./gal. (3.2-5.7 m^2/l)	
Induction Period		None required		None required	
Pot Life**	**2 gallons**	2-4 hours at 70°F (21°C)	1-2 hours at 90°F (32°C)	2-4 hours at 70°F (21°C)	1-2 hours at 90°F (32°C)
	10 gallons	2 hours at 70°F (21°C)	<1 hour at 90°F (32°C)	2 hours at 70°F (21°C)	<1 hour at 90°F (32°C)
Dry Times at 50% Relative Humidity	**Tack-free**	8-10 hours at 70°F (21°C)	16-24 hours at 50°F (10°C)	8-10 hours at 70°F (21°C)	16-24 hours at 50°F (10°C)
	Handle	10-16 hours at 70°F (21°C)	48-72 hours at 50°F (10°C)	10-16 hours at 70°F (21°C)	48-72 hours at 50°F (10°C)
	Recoat	24 hours to 30 days at 70°F (21°C)	72 hours to 30 days at 70°F (21°C)	24 hours to 30 days at 70°F (21°C)	72 hours to 30 days at 70°F (21°C)
Dry Heat Resistance		300°F (149°C) Color may shift above 150°F (66°C)		300°F (149°C) Color may shift above 150°F (66°C)	
Safety Information		For additional information, see SDS			

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

* Activated material

** Pot life is affected by air temperature, amount of material activated and the quantity of thinner used. Avoid activating large quantities at temperatures above 80°F (27°C). At temperatures above 90°F (32°C), the pot life of unthinned material in 5 gallon pails may be very short (less than one hour).