



RUST-OLEUM® 5300 SYSTEM WATER-BASED EPOXY

DESCRIPTION AND USES

The 5300 System is a two-component, polyamine-cured water-based epoxy coating designed for use in moderate to severe industrial environments for protection of steel structures. It can also be used on non-ferrous and masonry surfaces. Provides excellent chemical, abrasion and corrosion resistance in these environments.

The 5300 System Enamels comply with USDA FSIS regulatory sanitation performance standards for food establishment facilities. This coating is impervious to moisture and easily cleaned and sanitized.

PRODUCTS

FINISHES

SKU (1-Gallon)	DESCRIPTION
5323408	Marlin Blue
5344408	Safety Yellow
5368408	Tile Red
5371408*	Dunes Tan
5379408	Black
5382408	Silver Gray
5392408	White
5301604	Activator

TINT BASES

SKU (1-Gallon)	DESCRIPTION
5308421	Deep Tint Base
5309404	Light Tint Base

*Made to Order only. Contact Rust-Oleum Customer Service for details.

PACKAGING

The 5300 System finishes and tint bases are packaged in short-filled gallon containers (116 ounces) that must be mixed with the 5301 Activator, which is packaged in a 1-pint container (16 ounces). When combined, the final yield is one full gallon.

COMPANION PRODUCTS

RECOMMENDED PRIMERS

SKU (1-Gallon)	DESCRIPTION
5369405	Red Primer
5381405	Gray Primer
5303502	Primer Activator

PRODUCT APPLICATION

SURFACE PREPARATION

ALL SURFACES: Remove all dirt, grease, oil, salt and chemical contaminants by washing the surface with Rust-Oleum® Krud Kutter® Cleaner Degreaser, commercial detergent or other suitable cleaner. Mold and mildew areas must be cleaned with a chlorinated cleaner or bleach solution. Rinse thoroughly with fresh water and allow to fully dry. The 5300 System can be applied to a slightly damp surface provided the relative humidity is within the recommended application range and the moisture will evaporate.

STEEL, GALVANIZED AND ALUMINUM: Hand tool (SSPC-SP-2) or power tool (SSPC-SP-3) clean to remove loose rust, mill scale, and deteriorated previous coatings. A brush-off abrasive blast (SSPC-SP-7) may be used as an alternative to scraping and wire brushing. Wire brushing or a brush-off blast is especially effective in removing white rust (oxidation) from galvanized steel. Abrasive blasting to a minimum Commercial Grade (SSPC-SP-6, NACE 3) with a 1-2 mil (25-50µ) surface profile is recommended for optimal performance. Abrasive blast cleaned steel requires two coats.

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. The 5300 System Water Based Epoxy Finish is compatible with most coatings, but a test patch is suggested.

CONCRETE AND MASONRY: Hand or power tool clean to remove all loose or unsound concrete, masonry, or previous coating. Very dense, non-porous concrete should be acid etched or abrasive blasted to remove the laitance layer and create a surface profile. Allow new concrete to cure for 30 days before coating.

RUST-OLEUM®
HIGH PERFORMANCE
 INDUSTRIAL COATINGS

RUST-OLEUM® 5300 SYSTEM WATER-BASED EPOXY

PRODUCT APPLICATION (cont.)

MIXING

The 5300 System base components must be premixed before adding the 5301 Activator. Combine the base component and activator at the required mixing ratio by volume, mix for 2-3 minutes; then allow the material to set for the required 30 minute induction time.

APPLICATION

Apply only when the air and surface temperatures are between 60-100°F (15-38°C) and the surface temperature is at least 5°F (3°C) above the dew point. 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. Mix thoroughly before applying. On bare concrete, thin first coat 25% with fresh clean water to maximize penetration into the concrete. Thin after the induction time has elapsed.

EQUIPMENT RECOMMENDATIONS

(Comparable equipment also suitable)

BRUSH: Use a good quality synthetic bristle brush.

ROLLER: Use a good quality synthetic cover.

AIR-ATOMIZED SPRAY

Method	Fluid Tip	Fluid Delivery	Atomized Pressure
Pressure	0.050-0.070	1-16 oz./min.	40-60 psi
Siphon	0.050-0.070	--	40-60 psi
HVLP	0.050-0.070	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

THINNING

BRUSH/ROLLER: Normally not required. Use 5-10% fresh water if needed (approximately 1/2 pint per gallon).

AIR ATOMIZED SPRAY: Fresh water. Use up to 10% as needed (approximately 1 pint per gallon).

AIRLESS SPRAY: Normally not required.

CLEAN-UP

Soap and water. Once the coating begins to cure, it will be necessary to use 160 Thinner or Methyl Ethyl Ketone (MEK) to remove cured coating.

PERFORMANCE CHARACTERISTICS

SYSTEM TESTED

Topcoat: 5300 System Water-Based Epoxy

PENCIL HARDNESS

METHOD: ASTM D3363

RESULT: F (30 days)

CYCLIC PROHESION

Rating 1-10, 10=best

METHOD: ASTM D5894, 2 cycles, 672 hours

RESULT: 10 per ASTM D714 for blistering

RESULT: 9 per ASTM D1654 for corrosion

RESULT: 10 per ASTM D610 for rusting

IMPACT RESISTANCE (Direct)

METHOD: ASTM D2794

RESULT: 100 in.-lbs.

TABER ABRASION

METHOD: ASTM D4060, CS-17 wheels, 1,000 gram load, 1000 cycles

RESULT: 118 mg. loss

60° GLOSS

METHOD: ASTM D523

RESULT: 80-95%

For chemical and corrosion resistance, see page 4 of the Rust-Oleum Industrial Brands Catalog (Form #275585).

EPOXY	TECHNICAL DATA	RO-52
	RUST-OLEUM® 5300 SYSTEM WATER-BASED EPOXY	

PHYSICAL PROPERTIES

		FINISHES	TINT BASES
Resin Type		Polyamine epoxy	
Pigment Type		Varies with color	
Solvents		Water, propoxyethanol, aromatic hydrocarbons	
Weight	Per Gallon	10-11 lbs.	9.5-10.5 lbs.
	Per Liter	1.2-1.3 kg	1.1-1.3 kg
Solids	By Weight	51%	45-52%
	By Volume	38%	36-40%
Volatile Organic Compounds		<250 g/l (2.08 lbs./gal.)	
Recommended Dry Film Thickness (DFT) Per Coat		1.5-2.5 mils (37.5-62.5µ)	
Wet Film to Achieve DFT		4.0-6.5 mils (100-162.5µ)	
Practical Coverage at Recommended DFT (assumes 15% material loss)		200-350 sq. ft./gal. (4.9-8.6 m ² /l)	
Mixing Ratio		7:1 base to activator (by volume)	
Induction Period		30 minutes	
Pot Life @ 77°F & 50% RH		6-8 hours	3-5 hours
Dry Times at 70-80°F (21-27°C) and 50% Relative Humidity	Touch	30 minutes-1 hour	1-2 hours
	Handle	2-5 hours	3-6 hours
	Recoat	1-2 hours	1-2 hours
Force Cure		20 minutes at 225°F (dry to handle after cooling)	
Dry Heat Resistance		300°F (149°C)	
Shelf Life		5 years; 2 weeks for tinted products (after colorant is added). Tint bases may shift slightly in color over time, affecting touch-up appearance; also bases must be used within two weeks after tinting. The tint bases use the 2030 colorants. Because masstone base is not available, not all tint colors are available. Refer to the Tint System Color Card and Formula Book for details.	
Safety Information		For additional information, see SDS	

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

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