

**RUST-OLEUM®**



**RUST-OLEUM® 3800 SYSTEM  
DTM ACRYLIC ENAMEL**

**DESCRIPTION AND USES**

The 3800 System DTM Acrylic Enamel is a fast dry, water-based, low VOC, acrylic finish for indoor or outdoor direct-to-metal (DTM) applications. The 3800 System is suitable for use in a mild to moderate environments.

The 3800 System complies with USDA FSIS regulatory sanitation performance standards for food establishment facilities. This coating is impervious to moisture and easily cleaned and sanitized.

MPI #161, #163, #164 certified. (Refer to the MPI website for the most current listing of MPI certified products.)

**PRODUCTS**

**FINISHES - GLOSS**

1-Gallon	5-Gallon	DESCRIPTION
314389	316531	Gloss White
314388	316533	Navy Gray
314387	316534	Black
314410	316535	Safety Red
314409	316536	Safety Yellow
314407	316537	Safety Green
314209	316538	Safety Blue
315510	316544	Safety Orange
315506	316540	Silver Gray
315508	316542	Dunes Tan
315509	316543	Forest Green

**FINISHES - SATIN**

1-Gallon	DESCRIPTION
350412	Black

**FINISHES - FLAT**

1-Gallon	5-Gallon	DESCRIPTION
340657	340665	Flat White
340656	340664	Flat Black

**TINT BASES - GLOSS**

1-Gallon	5-Gallon	DESCRIPTION
314594	316518	Light Tint Base
314593	316519	Deep Tint Base
314592	316520	Masstone Tint Base

**PRODUCTS (cont.)**

**TINT BASES – SEMI GLOSS**

1-Gallon	5-Gallon	DESCRIPTION
324167	324170	Light Tint Base
324168	324171	Deep Tint Base
324169	324172	Masstone Tint Base

**TINT BASES - SATIN**

1-Gallon	5-Gallon	DESCRIPTION
340652	340660	Light Tint Base
340649	340658	Deep Tint Base
340651	340659	Masstone Tint Base

**TINT BASES - FLAT**

1-Gallon	5-Gallon	DESCRIPTION
340655	340663	Light Tint Base
340653	340661	Deep Tint Base
340654	340662	Masstone Tint Base

**TINT BASE MAXIMUM COLORANT**

1-Gallon	5-Gallon	DESCRIPTION
4 oz.	20 oz.	Light Tint Base
8 oz.	40 oz.	Deep Tint Base
12 oz.	60 oz.	Masstone Tint Base

**TINT GUIDELINES:**

Semigloss Masstone base: Max 8 oz. loading of 888 E, & 808 AXX, B, E, T, L  
 Gloss Deep base: Max 6 oz. loading of 808 B  
 Satin Deep base: Max 6 oz. loading of 808 B  
 Gloss Light base: Max 3 oz. loading of 808 B, T

The 3800 System DTM Tint Bases can be applied direct-to-metal (DTM), however optimal corrosion protection is achieved when the finish coat is used in conjunction with one of the recommended primers.

Priming is recommended when Tint Bases exceed 2 oz. of colorant per gallon.

**RECOMMENDED PRIMERS**

- Rust-Oleum ROC Prime 100
- Rust-Oleum Universal Acrylic Primer
- Sierra Performance™ Griptec™ Acrylic Primer

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**PRODUCT APPLICATION**

**SURFACE PREPARATION**

**ALL SURFACES:** Remove all dirt, grease, oil, salt and chemical contaminants by washing the surface with Krud Kutter Original Cleaner Degreaser, commercial detergent or other suitable cleaner. Mold and mildew 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:** Hand tool (SSPC-SP-2) or power tool (SSPC-SP-3) clean to remove loose rust, mill scale, and deteriorated previous coatings.

**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 Rust-Oleum 3800 System DTM Acrylic Enamel is compatible with most coatings, but a test patch is suggested.

**APPLICATION**

Apply only when the air and surface temperatures are between 50-100°F (10-38°C) and the surface temperature is at least 5°F (3°C) above the dew point. The relative humidity should not be greater than 95%.

The dry times published on page 3 are under conditions of 70-80°F (21-27°C) and a relative humidity of 50%. At lower temperatures, the dry times will be increased and the full development of the coating's physical properties will take longer. Improved air flow will aid the curing process when temperatures are below 50°F or the relative humidity is greater than 80%.

**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.

**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
1,600-2,400 psi	0.013-0.017	100

**THINNING**

**BRUSH/ROLLER:** Normally not required. When necessary, thin with fresh water.

**AIR ATOMIZED SPRAY:** Up to 1 pint per gallon.

**AIRLESS SPRAY:** Up to ½ pint per gallon.

**PRODUCT APPLICATION (cont.)**

**CLEAN-UP**

Soap and water.

**PERFORMANCE CHARACTERISTICS**

**PENCIL HARDNESS**

METHOD: ASTM D3363 (1 week cure)

RESULT: 2B

**CONICAL FLEXIBILITY**

METHOD: ASTM D522

RESULT: >33%

**SALT SPRAY (250 hours)**

METHOD: ASTM B117 (Rust)

RESULT: 8

METHOD: ASTM D1654 (Scribe Creep)

RESULT: Rating 3

METHOD: ASTM D714 (Blisters)

RESULT: Rating 9

**IMPACT RESISTANCE (Direct/Reverse)**

METHOD: ASTM D2794

RESULT: <25, <75

**60° GLOSS**

METHOD: ASTM D2243

RESULT: High Gloss: 85+

Semi-Gloss: 35-55

Satin: 20-35

**ACCELERATED WEATHERING (% Gloss Retention)**

METHOD: ASTM D4587, QUV Type A bulb, 500 hours

RESULT: 48-52%

<b>ACRYLIC</b>	<b>TECHNICAL DATA</b>	<b>RO-127</b>
	<b>RUST-OLEUM® 3800 SYSTEM DTM ACRYLIC ENAMEL</b>	

### PHYSICAL PROPERTIES

		3800 SYSTEM DTM ACRYLIC ENAMEL
<b>Resin Type</b>		Acrylic
<b>Pigment Type</b>		Varies with color
<b>Solvents</b>		Water, Glycol Ether
<b>Weight</b>	<b>Per Gallon</b>	8.5-10.9 lbs.
	<b>Per Liter</b>	1.02-1.31kg
<b>Solids</b>	<b>By Weight</b>	34.9-50.6%
	<b>By Volume</b>	32.6-39.6%
<b>Volatile Organic Compounds</b>		<250 g/l (2.08 lbs./gal.)
<b>Recommended Dry Film Thickness (DFT) Per Coat</b>		2.0-3.0 mils (50-75µ)
<b>Wet Film to Achieve DFT</b>		5.0-8.0 mils (125-200µ)
<b>Theoretical Coverage at 1 mil DFT (25µ)</b>		522-635 sq.ft./gal. (12.8-15.6 m <sup>2</sup> /l)
<b>Practical Coverage at Recommended DFT (assumes 15% material loss)</b>		150-270 sq.ft./gal. (3.7-6.6 m <sup>2</sup> /l)
<b>Dry Times at 70-80°F (21-27°C) and 50% Relative Humidity</b>	<b>Touch</b>	15 minutes
	<b>Handle</b>	45 minutes
	<b>Recoat</b>	2 hours
	<b>Full Cure</b>	7 days
<b>Dry Fall Properties</b>		A minimum 12 foot drop is required to ensure overspray dries to a removable dust when applied at a minimum of 70°F (21°C) and with <50% RH. Avoid overspray from depositing on metal surfaces above 120°F (49°C).
<b>Dry Heat Resistance</b>		200°F (93°C)
<b>Shelf Life</b>		3 years
<b>Safety Information</b>		For additional information, see SDS

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

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