

**RUST-OLEUM®**

## 9800 SYSTEM DTM URETHANE MASTIC

### DESCRIPTION AND USES

A two component, high solids, high build, direct to metal, aliphatic acrylic polyurethane. This urethane mastic coating is designed to provide the ultimate protection of metal in moderate to severe environments. It can be used directly on sound rusted steel with minimum surface preparation. It can also be used on clean steel, galvanized metal, concrete and previously coated surfaces with proper surface preparation.

It provides a highly aesthetic, extremely durable, VOC compliant coating. It is suitable for tanks, towers, equipment, metal buildings, or chemical environments. It provides superior corrosion protection and color and gloss retention.

### PRODUCTS

#### FINISHES

1-Gallon	5-Gallon	Description
9815419	9815383	Alumi-NON®
9833419	9833383	Safety Green
9865419	9865383	Regal Red
9879419	—	Black
9871419	9871383	Dunes Tan
9822419	9822383	Marlin Blue
9844419	9844383	Safety Yellow
9868419	9868383	Tile Red
9892419	9892383	White
9882419	9882383	Silver Gray
9825419	9825383	Safety Blue
9845419	9845383	Equipment Yellow
9886419	9886383	Navy Gray
9801501	9801419	Activator

#### TINT BASES

1-Gallon	5-Gallon	Description
9805470	9805370	Red Base
9806470	9806370	Yellow Base
9807470	9807370	Masstone Base
9808405	9808375	Deep Base
9809415	9809377	Light Base

All standard colors (except 9815 Alumi-Non), tint bases and activators are USDA acceptable under FSIS Directive 11000.4 (Rev.1), November 24, 1995. Color subject to approval of USDA Inspector. Agriculture Canada accepted: 9815,9822,9825,9879, 9892, 9833, 9844, 9845, 9882, 9865, 9868, 9871 and 9886.

### COMPANION PRODUCTS

#### RECOMMENDED PRIMERS

9800 System DTM Urethane Mastic is self-priming and can be used without a primer in mild to moderate exposures. The use of a primer is required in severe exposures and on heavily rusted surfaces. Also, aluminum should be primed.

The following primers are recommended for conditions indicated:

- 9100: Severe conditions; enhanced adhesion over aluminum. (9115 should not be used as a primer)
- 9360, 9370 or 9380: Severe conditions; these primers can be topcoated within 30 days.
- 5369, 5381: Moderate conditions; enhanced adhesion over aluminum.
- 2068, 2082: Mild to moderate conditions; where a single-coat, fast dry primer is needed.

### PRODUCT APPLICATION

#### SURFACE PREPARATION

**ALL SURFACES:** Remove all dirt, grease, oil, salt and chemical contaminants by washing the surface with Pure Strength® Cleaner/Degreaser item #3599402, commercial detergent or other suitable cleaner. Two-component epoxy primers may require light scuff sanding or sweep blasting. 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:** Sand or scarify the surface to optimize adhesion. For optimum corrosion resistance, use one of the recommended primers as a prime coat. See primer labels and technical data sheet for correct surface preparation and application procedures.

**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 9800 System DTM Urethane Mastic finish is compatible with most coatings, but a test patch is suggested. **WARNING!** If you scrape, sand or remove old paint from any surface, you may release lead paint dust. **LEAD IS TOXIC. EXPOSURE TO LEAD DUST CAN CAUSE SERIOUS ILLNESS, SUCH AS BRAIN DAMAGE, ESPECIALLY IN CHILDREN. PREGNANT WOMEN SHOULD ALSO AVOID EXPOSURE.** Wear a NIOSH-approved respirator to control lead exposure. Carefully clean up with a wet mop or HEPA vacuum.



## TECHNICAL DATA

# 9800 SYSTEM DTM URETHANE MASTIC

### PRODUCT APPLICATION (cont.)

Before you start, find out how to protect yourself and your family by contacting the U.S.EPA/Lead Information Hotline at 1-800-424-LEAD or log on to [www.epa.gov/lead](http://www.epa.gov/lead).

**GALVANIZED METAL:** New galvanized steel must be free of grease, oil, or wax surface treatments prior to coating. Solvent wiping maybe required.

**CONCRETE AND MASONRY:** Scrape and wirebrush or power tool clean to remove any loose or unsound concrete, masonry or deteriorated coatings. Acid etch smooth concrete with 108 Cleaning and Etching Solution. New concrete or masonry must cure 30 days before coating. Any concrete surface must be protected from moisture transmission.

#### APPLICATION

Apply only when air and surface temperatures are between 40-100°F (5-38°C) and surface is at least 5°F (3°C) above the dew point. Can be applied by brush, roller or spray. For proper performance, a dry film thickness of 3 to 5 mils (75 to 125 μ) percoat is required. Excessive brushing or rolling may reduce film thickness. The 9800 System DTM Urethane Mastic can accommodate wet-on-wet recoat after 2 hours of dry time. However this process should be conducted by experienced painters only. Application must be done by spray, and since a wet film thickness gauge is impractical during the application of the second coat, care must be used to avoid excessive film build. Excessive film thickness or application of the second coat before the recommended dry time (2 hours) can result with micro-wrinkling or pinholes; either of which will lower the gloss of the finish. Wet-on-wet application of the 9800 System Urethane Mastic finish can also be done over a first coat of 9100 System DTM Epoxy Mastic (except 9115) or one of the Rust-Oleum® Industrial Primers: 9360, 9370, or 9380.

#### EQUIPMENT RECOMMENDATIONS

**BRUSH:** Good quality natural or synthetic bristle recommended.

**ROLLER:** Good quality lamb's wool or synthetic fiber recommended.

**AIR-ATOMIZED SPRAY:**

Method	Fluid Tip	Fluid Delivery	Atom. Pressure
Pressure	0.050-.070	10-16 oz./min.	25-60 psi
Siphon	0.043-.070	—	25-60 psi
HVLP	0.050-.070	—	10 psi at tip

**AIRLESS SPRAY:**

Fluid Pressure	Fluid Tip	Filter Mesh
1,800-3,000	0.013-.017	100

### PRODUCT APPLICATION (cont.)

#### THINNING

For air-atomized spray thin as necessary with 190 or 333 thinner up to ½ pt./gal.

#### MIXING

Premix base component before adding activator, then combine at a 5:1 ratio by volume and mix together. Once opened, the 9801 Activator must be used within one week. This coating requires no induction time and can be applied immediately after base and activator are mixed.

#### CLEAN-UP

190 Thinner

### PERFORMANCE CHARACTERISTICS

#### System Tested

Topcoat: 9800 System DTM Urethane Mastic

#### PENCIL HARDNESS

METHOD: ASTM D3363

RESULT: F-H

#### CONICAL FLEXIBILITY

METHOD: ASTM D522

RESULT: 32%+

#### CYCLIC PROHESION

Rating 1-10, 10=best

METHOD: ASTM D5894, 4 cycles, 1,344 hours

RESULT: 10 per ASTM D714 for blistering

RESULT: 10 per ASTM D610 for rusting

#### IMPACT RESISTANCE (direct/reverse)

METHOD: ASTM D2794

RESULT: 160/160 in.-lbs.

#### TABER ABRASION

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

RESULT: 74 mg. loss

#### GLOSS (60°)

METHOD: ASTM D523

RESULT: 94% (color-white)

#### ACCELERATED WEATHERING (% gloss retention)

METHOD: ASTM D4587, QUV Type A bulb, 1,551 hours

RESULT: 95% gloss retention (color-white)

For chemical and corrosion resistance, see the Rust-Oleum Industrial Brands Catalog (Form #206275).



## TECHNICAL DATA

# 9800 SYSTEM DTM URETHANE MASTIC

### PHYSICAL PROPERTIES

		FINISH COLORS	TINT BASES
<b>Resin Type</b>		Aliphatic isocyanate converted acrylic polyurethane (ASTM type V)	Aliphatic isocyanate converted acrylic polyurethane (ASTM type V)
<b>Solvents</b>		Methyl amyl ketone, butyl acetate, esters	Methyl amyl ketone, butyl acetate, esters
<b>Weight*</b>	<b>Per Gallon</b>	9.2-11.2 lbs.	9.4-10.8 lbs.
	<b>Per Liter</b>	1.1-1.3 kg.	1.1-1.3 kg.
<b>Solids*</b>	<b>By Weight</b>	70-74%	70-73%
	<b>By Volume</b>	58-62%	60%
<b>Volatile Organic Compounds*</b>		<340 g./l. (2.8 lbs./gal.)	<340 g./l. (2.8 lbs./gal.)
<b>Recommended Dry Film Thickness (DFT) Per Coat</b>		3-5 mils (75-125μ)	3-5 mils (75-125μ)
<b>Wet Film to Achieve DFT</b>		5-8 mils (125-200μ)	5-8 mils (125-200μ)
<b>Theoretical Coverage at 1 mil DFT (25μ)</b>		930-990 sq. ft./gal. (22.9-24.4 m <sup>2</sup> /l.)	960 sq. ft./gal. (23.6 m <sup>2</sup> /l.)
<b>Practical Coverage at Recommended DFT (assumes 15% material loss)</b>		160-280 sq. ft./gal. (3.9-6.9 m <sup>2</sup> /l.)	165-275 sq. ft./gal. (4.0-6.8 m <sup>2</sup> /l.)
<b>Mixing Ratio</b>		5:1 base to activator by volume	5:1 base to activator by volume
<b>Induction Period†</b>		None required	None required
<b>Pot Life @ 77°F &amp; 50% RH</b>		2-3 hours	2-3 hours
<b>Dry Times at 70-80°F (21-27°C) and 50% rel. hum.</b>	<b>Tack-free</b>	3-6 hours	3-6 hours
	<b>Handle</b>	6-9 hours	6-9 hours
	<b>Recoat</b>	9-12 hours	9-12 hours
<b>Force Cure</b>		n/a	n/a
<b>Dry Heat Resistance</b>		300°F (149°C)	
<b>Shelf Life</b>		2 years for base, 1 year for activator; open activator must be used within one week	
<b>Safety Information</b>	<b>Flash Point</b>	95°F (35°C) setaflash	
	<b>Contains</b>	No lead has been deliberately added	
	<b>Warning!</b>	<b>WARNING! FLAMMABLE LIQUID AND VAPOR. VAPOR HARMFUL. MAY AFFECT THE BRAIN OR NERVOUS SYSTEM CAUSING DIZZINESS, HEADACHE OR NAUSEA. CAUSES NOSE, THROAT, EYE AND SKIN IRRITATION. CONTAINS ALIPHATIC POLYISOCYANATE; METHYL AMYL KETONE AND BUTYL ACETATE SOLVENTS. FOR INDUSTRIAL OR COMMERCIAL USE ONLY. KEEP OUT OF REACH OF CHILDREN. SEE THE PRODUCT MATERIAL SAFETY DATASHEET (MSDS) AND LABEL WARNINGS FOR ADDITIONAL SAFETY INFORMATION.</b>	

\*Activated material.

†For brush and roller applications, a 30 minute set time is recommended.

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

The technical data and suggestions for use contained herein are correct to the best of our knowledge, and offered in good faith. The statements of this literature do not constitute a warranty, express, or implied, as to the performance of these products. As conditions and use of our materials are beyond our control, we can guarantee these products only to conform to our standards of quality, and our liability, if any, will be limited to replacement of defective materials. All technical information is subject to change without notice.



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