

RUST-OLEUM®

7400 SYSTEM DTM 450 VOC ALKYD ENAMEL

DESCRIPTION AND USES

7400 System DTM 450 VOC Alkyd Enamels are designed for indoor and outdoor steel surfaces. Excellent resistance to general weathering, salt air, mild chemical fumes and light abrasion. Available in high gloss, semi-gloss, flat, and metallic finishes. Not for use on galvanized steel.

If desired, the 7400 System DTM 450 VOC Alkyd Enamels 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.

Semi-gloss finishes are designed for interior and sheltered exterior surfaces only. Metallic finishes #470402 and #473402 may also be used on surfaces subject to heat in the temperature range of up to 350°F (176°C). Use over #X-60402, #3469402 or #7669402 red primers.

PRODUCTS

FLAT FINISHES

1-Gallon	5-Gallon	Description
412402	—	Flat Black
2764402	—	Flat White

METALLIC FINISHES

1-Gallon	5-Gallon	Description
470402	—	Aluminum
473402	—	Heavy-Duty Aluminum
1020402	—	Blue Aluminum
1030402	—	Green Aluminum

PRODUCTS (cont.)

SEMI-GLOSS FINISHES

1-Gallon	5-Gallon	Description
7232402	—	Pleasant Green
7280402	—	Light Neutral Gray
7290402	—	Semi-Gloss White

HIGH GLOSS FINISHES

1-Gallon	5-Gallon	Description
559402	—	International Orange
634402	634300	High Gloss Black
717402	—	Clear (Clear-Sele®)
721402	721300	National Blue
745402	—	Tile Red
865402	865300	Dunes Tan
866402	—	Marlin Blue
904402	—	Machine Tool Gray
906402	906300	Silver Gray
925402	925300	Safety Blue
933402	—	Safety Green
935402	—	Vista Green
944402	944300	Safety Yellow
956402	—	Safety Orange
964402	—	Safety Red
975402	975300	Navy Gray
977402	—	Chestnut Brown
1210402	1210300	Fire Hydrant Red
1282402	1282300	Forest Green
2766402	2766300	High Gloss White
7434402	7434300	Green (John Deere)
7446402	—	Yellow
7447402	—	Yellow (New Caterpillar)
7448402	—	Yellow (Old Caterpillar)

TINT BASES†

1-Gallon	5-Gallon	Description
7405408	—	Red
7406408	—	Yellow
7407408	7407388	Masstone
7408411	7408391	Deep
7409418	7409394	Light

†All tint bases are high gloss finishes


COMPANION PRODUCTS
RECOMMENDED PRIMERS

678402	Quick Dry Red Primer
769402	Damp Proof Red Primer
960402	Zinc Chromate Yellow Primer
1060402	Heavy-Duty Rust-Inhibitive Gray Primer
1069402	Heavy-Duty Rust-Inhibitive Red Primer
7069402	Red Shop Coat Primer
7086402	Quick Dry Gray Primer
X0060402	Zinc Chromate Red Primer

COMPATIBLE PRIMERS

1573402	Speedy Dry Enamel Rust-Inhibitive Primer
3202504	Clear-Blue Undercoat
7069402	Red Shop Coat Primer
8469402	Red Rusted Metal Primer
8492402	White Clean Metal Primer

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. 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 all loose rust, mill scale, and deteriorated previous coatings. If abrasive blasting cleaning is used, then two coats of recommended primer is required. See the primer Technical Data Sheet for more information.

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® Alkyd Enamel Primers are 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. 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.

APPLICATION

Apply only when air and surface temperatures are between 32-100°F (0-38°C) and surface temperature is at least 5°F (3°C) above the dew point.

EQUIPMENT RECOMMENDATIONS

BRUSH: Use a good quality natural or polyester bristle brush.

ROLLER: Use a good quality natural or polyester cover. Use a short nap roller for smooth surfaces, and a medium nap roller for rough surfaces.

PRODUCT APPLICATION (cont.)
AIR-ATOMIZED SPRAY:

Method	Fluid Tip	Fluid Delivery	Atom. Pressure
Pressure	0.055-0.070	16 oz./min.	25-60 psi
Siphon	0.055-0.070	—	25-60 psi
HVLP (var.)	0.043-0.070	8-14 oz./min.	60-90 psi*

*10 psi max.at tip

AIRLESS SPRAY (HIGH GLOSS):

Pump Ratio	Fluid Pressure	Fluid Tip	Filter Mesh
30:1	1,600-2,400 psi	0.013-0.017	100

AIRLESS SPRAY (ALL OTHERS):

Pump Ratio	Fluid Pressure	Fluid Tip	Filter Mesh
30:1	1,600-2,400 psi	0.013-0.019	60

THINNING

BRUSH/ROLLER: Normally not required.

AIR-ATOMIZED SPRAY: 333402 Thinner: Use up to 15% by volume.

AIRLESS SPRAY: 333402 Thinner: Normally not required. If needed use up to 5% by volume.

CLEAN-UP

633402 Thinner or Mineral spirits.

PERFORMANCE CHARACTERISTICS
PENCIL HARDNESS

METHOD: ASTM D3363

RESULT: 5B

GLOSS AT 60°

METHOD: ASTM D4587 (450 hours)

RESULT: 98 (color-black)

CYCLIC PROHESION

Rating 1-10, 10=best

METHOD: ASTM D5894 3 cycles, 1008 hours

RESULT: 10 ASTM D714 for blistering

RESULT: 9 ASTM D2610 for rusting

IMPACT RESISTANCE (direct)

METHOD: ASTM D-2794

RESULT: >160

ACCELERATED WEATHERING (% gloss retention)

METHOD: ASTM D4587, QUV Type A bulb, 450 hours

RESULT: 84% Gloss Retention (color-black)

TABER ABRASION

METHOD: ASTM D4060 CS17 wheels 500g load/1000 cycles

RESULT: 61.6 mg loss

For chemical and corrosion resistance see page 4 of the Rust-Oleum Industrial Brands Catalog Form #206275.

PHYSICAL PROPERTIES

		HIGH GLOSS	SEMI-GLOSS	FLAT	METALLIC
Resin Type		Modified alkyd	Modified alkyd	Modified alkyd	Modified alkyd
Pigment Type		Varies with color	Varies with color	412402 Carbon Black 2764402 Titanium Dioxide	Leaving and non-leaving aluminum
Solvents		Aliphatic hydrocarbons	Aliphatic hydrocarbons	Aliphatic hydrocarbons	Aliphatic hydrocarbons
Weight	Per Gallon	7.6-8.9 lbs.	9.5-10.2 lbs.	11.2-11.4 lbs.	7.9-8.3 lbs.
	Per Liter	0.9-1.1 kg	1.1-1.2 kg	1.3-1.4 kg	0.9-1.0 kg
Solids	By Weight	51-59%	61-65%	70-71%	49-51%
	By Volume	42-43%	43-45%	47-48%	37-39%
Volatile Organic Compounds		<450 g/l (3.75 lbs./gal.)	<450 g/l (3.75 lbs./gal.)	<450 g/l (3.75 lbs./gal.)	<500 g/l (4.2 lbs./gal.)
Recommended Dry Film Thickness (DFT) Per Coat		1.5-2.5 mils (37.5-62.5µ)	1.5-2.5 mils (37.5-62.5µ)	1.5-2.5 mils (37.5-62.5µ)	470402 and 473402 1.0-1.5 mils (25-37.5µ); 1020402 and 1030402 1.5-2.5 mils (37.5-62.5µ)
Wet Film to Achieve DFT (unthinned material)		3.5-6.0 mils (87.5-150µ)	3.5-6.0 mils (87.5-150µ)	3.0-5.5 mils (75-137.5µ)	470402 and 473402 3.0-4.0 mils (75-100µ); 1020402 and 1030402 4.0-6.5 mils (100-162.5µ)
Theoretical Coverage at 1 mil DFT (25µ)		675-690 sq. ft./gal. (16.6-17.0 m ² /l)	690-720 sq. ft./gal. (17.0-17.8 m ² /l)	775-770 sq. ft./gal. (18.5-18.9 m ² /l)	590-625 sq. ft./gal. (13.5-15.4 m ² /l)
Practical Coverage at Recommended DFT (assumes 15% material loss)		230-390 sq. ft./gal. (5.7-9.6 m ² /l)	235-410 sq. ft./gal. (5.8-10.1 m ² /l)	255-435 sq. ft./gal. (6.3-10.7 m ² /l)	200-530 sq. ft./gal. (4.9-13.0 m ² /l)
Dry Times at 77°F (25°C) and 50% Relative Humidity	Tack-free	2-4 hours	2-4 hours	2-4 hours	2-4 hours
	Handle	5-9 hours	5-9 hours	5-9 hours	5-9 hours
	Recoat	24 hours	24 hours	24 hours	24 hours
Dry Heat Resistance		212°F (100°C)	212°F (100°C)	212°F (100°C)	350°F (177°C)*; 212°F (100°C)**
Electrostatic Conductivity		—	—	—	50 megohms
Shelf Life		5 years	5 years	5 years	5 years
Specifications		Can be used in USDA-regulated facilities based on FSIS Directive 11,000.4 (Rev.4), November 24, 1995, & Ag Canada acceptable	Can be used in USDA-regulated facilities based on FSIS Directive 11,000.4 (Rev.4), November 24, 1995, & Ag Canada acceptable	Can be used in USDA-regulated facilities based on FSIS Directive 11,000.4 (Rev.4), November 24, 1995, & Ag Canada acceptable	Can be used in USDA-regulated facilities based on FSIS Directive 11,000.4 (Rev.4), November 24, 1995, & Ag Canada acceptable
Safety Information	Flash Point	104°F (40°C)	104°F (40°C)	104°F (40°C)	104°F (40°C)
	Contains	Lead-free	Lead-free	Lead-free	Lead-free
	Warning!	COMBUSTIBLE LIQUID AND VAPOR. HARMFUL IF INHALED MAY AFFECT BRAIN OR NERVOUS SYSTEM CAUSING DIZZINESS, HEADACHE OR NAUSEA. CAUSES RESPIRATORY TRACT, EYE AND SKIN IRRITATION. FOR INDUSTRIAL OR COMMERCIAL USE ONLY. KEEP OUT OF REACH OF CHILDREN. SEE THE PRODUCT MATERIAL SAFETY DATA SHEET (MSDS) AND LABEL WARNINGS FOR ADDITIONAL SAFETY INFORMATION.			

*470402, 473402; **1020402, 1030402

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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