

Waterborne Enamel

Stock Colors

Technical Data Sheet (TDS)

Product Description

Crown Waterborne Enamel is a single component waterborne DTM topcoat. Corrosion properties of this DTM enamel may be enhanced with P-Series Metal Primers.

Product features:

- Acrylic formula for interior/exterior use
- Easy application & Cleanup
- Direct to Metal (DTM)
- Low odor
- Available in various colors
- Lead, chromate, and heavy metal free
- VOC Compliant

Recommended Uses

Waterborne Enamel is intended for industrial applications, either new build or maintenance.

Industries:

- Oilfield & Energy Service
- Industrial Equipment
- Construction Equipment
- Agricultural equipment
- General Metal applications

Mixing & Thinning

Waterborne Enamel is a single component product.

Stir each container thoroughly prior to use.

Product Characteristics

Typical Physical Properties	
Gloss:	Semi Gloss: 70+ GU at 60°
Volume Solids: (Single Component Unreduced) LV166 White	38% ± 2%
Volume solids will vary by color	
VOC (Unreduced): EPA Method 24 LV166 White	36 g/l 0.304 lb /gal
VOC content will vary with each color	
Shelf Life:	
Waterborne Enamel	2 years
For unopened product (77°F (25°C))	
Weight Gallon: LV166 White	10.5 ± 0.2lb/gal

Surface Prep

Surfaces to be finished must be clean, dry, and free of dirt, oil or any contamination that would adversely affect adhesion, protective properties, or appearance of the coating. Prepare metal surfaces to SSPC-SP2, SSPC-SP3 for normal requirements.

Note: For optimal corrosion resistance and adhesion on carbon steel surfaces, iron phosphate treatment is recommended and/or P200 Series Metal Primer.

For questions regarding other substrates contact your Crown Representative.

Application Method

Waterborne Enamel can be applied by conventional air, air-assist airless, airless, or dip, brush, or roller.

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Spray Gun Setup

Feed Type	Fluid Tip	Application Pressures (heel of gun)	Fluid Delivery
Siphon Feed	1.6-1.8 mm	40-50 psi	
Gravity Feed	1.6-1.8 mm	30-40 psi	
Pressure Feed	1.4-1.8 mm	50-60 psi	10-14 oz/min
Air Assist Airless	9 -17 Thou	1,000-1,800 psi	
Airless	11-15 Thou	1,700-3,000 psi	

Spray Viscosity

Supplied Viscosity - [77°F (25°C)]	
Stormer Viscometer	80 - 85 KU

Note: Material is packaged at a viscosity requiring little or no reduction for application by brush, roller, or airless spray equipment.

Note: Spraying viscosity and thinning will depend on ambient conditions, spray equipment used, and the desired surface finish.

IF THINNING IS REQUIRED:

Use only water to thin this product.

Film Build

Waterborne Enamel has a recommended film build thickness of:

Wet: WFT Unreduced	3.0 – 5.5 mils	75 – 140 microns
Dry: DFT	1.0 – 2.0 mils	25 – 50 microns

Theoretical coverage at 1.0 mil (25 microns)
 DFT: 609 ft² per gallon at 100% transfer efficiency.

Dry Times

	70°F (21°C)
To Touch	15 - 30 Minutes
To Handle	1 Hour
To Recoat	2 Hours
Through Dry	18 Hours

Optimum drying conditions are 60°F to 90°F (16°C to 32°C) at 50% R.H. Lower temperatures and high humidity will slow dry time. Surface must be dry and at least 5°F(3°C) above the dew point.

Note: Product may be force cured to enhance dry. Force cure temperatures in the range of 110-180°F may be utilized to accelerate water/solvent evaporation and speed oxidation.

Clean Up

Clean all equipment immediately after use with water. After flushing line with water, fill equipment with a polar/hydrophilic solvent such as butyl cello-solve, acetone, or MEK. When restarting spray operation, do an initial flush with water prior to filling line with waterborne enamel.

Ordering Information (sizing)

Package sizes available:
 1 gallon, 5 gallons, 55 gallon drum,
 300 gallon tote.
 Custom colors and sizes may be available.

Environmental Conditions

For optimum coating performance product, substrate and ambient temperature should be above 50°F (10°C). To prevent condensation during application the surface temperature must be 5°F (3°C) or more above the dew point.

Note: For use outside this range please contact your Crown Representative.

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Specifications

Test	Method	Result
Salt Spray/ Corrosion	ASTM B117	100 hours no field rusting, less than 1/8" creep from scribe 240 hours with w/P236 Primer
Adhesion	ASTM D3359	5A; 100% B-1000 panel
Impact resistance	ASTM D2794	80 lbs direct 50 lbs reverse
Flexibility	ASTM D522	1/8 mandrel bend: Pass

Storage Conditions

Storing partially used container:

To store partially used container replace lid securely. Store away from heat or open flame.

Mix thoroughly before reusing.

Keep from Freezing.

Store in Frost Free conditions.

Safety Precautions

Please refer to all Safety Data Sheets (SDS) before using this product. SDS sheets can be obtained by contacting Crown Paint.