

### TECHNICAL DATA

#### Product Description

Iron Prime 600 is designed to be a mainstay, universal primer for metal substrates subjected to harsh environments. Its impressive corrosion resistance and tenacious adhesion provide excellent protection of the substrate and make it an excellent choice for use as a barrier coat over sound, existing, conventional coatings. Iron Prime 600's rapid recoat time makes it highly adaptable to any workflow. Designed to provide excellent gloss holdout for a wide variety of topcoats, Iron Prime 600 will enhance the appearance of your finish coats. Iron Prime 600 is lead and chromate free.

#### Intended Uses

##### Apply to:

- Interior or exterior surfaces
- Previously primed surfaces
- Shop coat
- Ferrous metal
- Maintenance primer

##### Protects:

- Tanks
- Conveyors
- Structural or support steel
- Equipment
- Machinery

The above are general recommendations and not intended to limit the use of Iron Prime 600. Test areas are always recommended to confirm results.  
NOT INTENDED FOR IMMERSION SERVICE.

#### Physical Properties

Resin Type	Modified Alkyd
Finish/Sheen	Flat, 0-5 @ 60°
Colors	Gray LU-0500, White LU-1500, Red LU-5500
Solids by Weight	70%
Solids by Volume	49%
Theoretical Coverage*	786 ft <sup>2</sup> /gal @ 1 mil
Dry Film Thickness / Coat	3.0-4.0 mils (75-100 microns)
Wet Film to Achieve DFT	6.0-8.0 mils (150-200 microns)
Coverage at DFT*	197-262 ft <sup>2</sup> /gal
VOCs	3.33 lbs./gal (400 grams/liter)
Reduction Solvents	DO NOT THIN
Clean-up Solvents	Diamond Vogel N-3023 Xylol
Drying Time**	<b>Set to Touch:</b> 10-20 minutes at 70°F (21°C) and 50% Relative Humidity <b>Recoat Minimum:</b> 1-1 ½ hours at 70°F (21°C) and 50% Relative Humidity <b>Recoat Maximum:</b> 1 month at 70°F (21°C) and 50% Relative Humidity
ASTM D1640-83 reapproved 1989	

\* Coverage rates are estimates based on the products volume solids and make no allowance for material loss during application. Actual spread rates may vary dependent on applicator experience, surface porosity and texture.

\*\* Dry times vary with surface temperature, air movement, humidity and film thickness. Finish coat selection may extend maximum recoat, please request additional information by contacting Diamond Vogel Technical Service for detailed information.

#### Performance Characteristics

Iron Prime 600 meets or exceeds the following performance testing criteria:

Test Name	Test Method	Results
Abrasion Resistance	ASTM D 4060, CS-17 Wheel 1kg Load, 1000 Cycles	0.2291 wear index
Adhesion Testing	ASTM D 4541 Elcometer Pull Test	400 lb./sq. in.
Adhesion Testing	ASTM D 3359 Cross Hatch	Not less than 5B average
Impact Resistance	ASTM 2794	Direct 70 in./lbs. Reverse 10 in./lbs.
Heat Resistance	ASTM D 2485 High Temperature Service	Passes at 250°F (121°C)
Pencil Hardness	ASTM D 3363	4B
Cyclic Weathering	ASTM D-5894 - 840 hours	no face blistering, face rust rated 9, <3 mm scribe creepage
Corrosion Resistance	ASTM B 117-94 Salt Spray (Fog) Test - 504 hours	no face blistering, face rust rated 9, <1 mm scribe creepage

**TECHNICAL DATA****Qualifications**

Performance criteria meet or exceed Master Painters Institute (MPI) #95 approved standards.

**Surface Preparation**

All surfaces must be clean, sound, dry and free of all dirt, dust, wax, oil, grease, chalk and any other contamination that would interfere with new coating adhesion. Bare surfaces must be properly prepared.

**New Ferrous Metal & Previously Painted Surfaces:** Power or hand washing is recommended to remove contamination. If oil or grease is present, use of a cleaner/degreaser is required. All cleaning residue must be completely rinsed from the surface. Allow to dry. Remove all loose coatings, rust and corrosion by scraping, sanding or other abrading method as per SSPC-SP-2, Hand Tool Cleaning and SSPC-SP-3, Power Tool Cleaning. For new steel and complete removal of the old coating, abrasive blast according to SSPC-SP-6, Commercial Blast. Use proper abrasive to achieve a 1.5 to 2.0 mil profile as per SSPC-SP-6, Commercial Blast Cleaning. Blasted surfaces must be primed before flash rusting occurs.

**New Galvanized & Aluminum Surfaces:** Remove surface contamination or passivators by scrubbing with a cleaning and etching solution or blast per SSPC-SP-7, Brush-Off Blast.

**Weathered Galvanized & Aluminum Surfaces:** Power or hand wash with detergent and rinse thoroughly. The surface must be dull and have a profile; use a cleaning and etching solution if needed.

**Mildew:** Remove by using a solution of one part household bleach and three parts water. Apply to mildewed area and scrub. Allow solution to remain on the surface for 3 to 5 minutes and then rinse completely and allow to dry before coating application.

**Application**

Stir material prior to application. Intermix containers to ensure color uniformity of all material. Protect product from freezing prior to and during application. Minimum surface and air temperature required for application is 40°F (4°C) and at least 5°F (3°C) above the dew point. While this product is not subject to freezing, curing is affected by temperature, humidity and air movement; cold temperatures will greatly increase drying time. Application at elevated temperatures, wind conditions, and/or low humidity may require special application procedures to achieve proper film formation. Abrasive blasted steel with blast profile of 1.5 to 2.0 mils, should have a minimum of 3.0 to 4.0 mils DFT per coat. Two coats of primer are recommended to achieve uniform coverage and maximum protection.

**Airless Spray:** Flush airless lines with Xylol. Equipment must be clean prior to start. Thinning is not normally required. Thin only as needed for workability. Apply a wet coat in even, parallel passes with 50% overlap to avoid bare areas and pinholes. If required, crosshatch spray at right angles.

Tip Orifice	Atomizing Pressure	Material Hose ID	Manifold Filter
0.013" to 0.015"	2500–3000 PSI	1/4"	60 mesh

**Packaging****Shipping Weight**

Product	1 Gallon	5 Gallon	Product	1 Gallon	5 Gallon
Iron Prime 600	1 Gallon Pail	5 Gallon Pail	Iron Prime 600	12.43 lbs. (5.64 kg)	60.87 lbs. (27.61 kg)

**Storage**

Two years from date of manufacture when maintained in protected area and at temperatures of 40° to 100°F (4° to 38°C). Subject to inspection thereafter.

**Safety Precautions**

**\*WARNING!** If you scrape, sand, or remove old paint, you may release lead 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. Clean up carefully with a HEPA vacuum and wet mop. Before you start, find out how to protect yourself and your family by contacting the National Lead Information Hotline at 1-800-424-LEAD or log on to [www.epa.gov/lead](http://www.epa.gov/lead).

Paint products contain chemical ingredients, which are considered hazardous. Prior to use, read container label warnings and the current Safety Data Sheet for important health and safety information. Ensure these instructions are practiced during product application and cure. **Keep out of the reach of children.**

**TECHNICAL DATA****Safety Data**

“Safety Data Sheets” are available from your Diamond Vogel representative or the Diamond Vogel website at [www.diamondvogel.com](http://www.diamondvogel.com). Prior to use of this product, obtain and review the Safety Data Sheet for health and safety information. Read and observe all precautionary notices on container labels. **NOT INTENDED FOR RESIDENTIAL USE.**

**Limited Warranty**

The technical data and suggestions for use contained in this document are true and correct to the best of our knowledge at the date of issuance. The statements of this document do not constitute a warranty, expressed or implied, as to the performance of these products. Since Diamond Vogel does not control the application of its products, or the condition of the surfaces to which they are applied, Diamond Vogel’s liability will under no circumstances exceed replacement of the product. **All technical information is subject to change without notice.**

**Additional Information**

Cautions and Warnings information is located on the back panel of each product label. For current information regarding VOC regulations for specific geographical regions, please contact Technical Service at Diamond Vogel Corporate Headquarters, (Contact information is located at the bottom of the page).