

## HIGH PERFORMANCE

## TECHNICAL DATA

### Product Description

Endura-Zinc 705 provides barrier and galvanic protection against corrosion in severe environments. Comparable performance to hot-dip galvanizing, Endura-Zinc 705 is a cost-effective solution to corrosion control. It is ideal for touchup and repair of galvanizing or inorganic zinc coatings.

### Intended Uses

**Apply to:**

- Exterior surfaces
- Industrial environments
- Shop coat
- Ferrous metal
- Maintenance primer
- Touch up or repairs

**Protects:**

- Tanks
- Weathered galvanized
- Structural or support steel
- Equipment
- Machinery

The above are general recommendations and not intended to limit the use of Endura-Zinc 705. Test areas are always recommended to confirm results.  
NOT INTENDED FOR IMMERSION SERVICE.

### Physical Properties

Resin Type	Epoxy Ester
Finish/Sheen	Flat, 0–5 @ 60°
Colors	Gray PL-0512
Solids by Weight	84%
Solids by Volume	46%
Percent of Zinc @ DFT	94%
Theoretical Coverage	737 ft <sup>2</sup> /gal @ 1 mil
Dry Film Thickness / Coat	2.0–3.5 mils (50–87.5 microns)
Wet Film to Achieve DFT	4.0–7.0 mils (100–175 microns)
Coverage at DFT*	210–368 ft <sup>2</sup> /gal
VOCs	3.75 lbs./gal (449 grams/liter)
Reduction Solvents	DO NOT THIN
Clean-up Solvents	Diamond Vogel N-3023 Xylol
Drying Time**	<b>Set to Touch:</b> 30 minutes at 70°F (21°C) and 50% Relative Humidity <b>Recoat:</b> 4 hours 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.

### Performance Characteristics

Endura-Zinc 705 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	1.138 wear index
Adhesion Testing	ASTM D 4541 Elcometer Pull Test	400 lb./sq. in.
Adhesion Testing	ASTM D 3359 Cross Hatch	Not less than 4B average
Impact Resistance	ASTM 2794	Direct <5 in./lbs. Reverse <5 in./lbs.
Heat Resistance	ASTM D 2485 High Temperature Service	Passes at 250°F (121°C)
Pencil Hardness	ASTM D 3363	F
Cyclic Weathering	ASTM D-5894 - 840 hours	Face blisters #8 few, face rust rated 8, <1 mm scribe creepage
Corrosion Resistance	ASTM B 117-94 Salt Spray (Fog) Test - 840 hours	Face blisters #8 few, face rust rated 10, <1 mm scribe creepage

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**Qualifications**

Performance criteria meet or exceed Master Painters Institute (MPI) #18 approval 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 prior to application of this product. See "System Selector" for appropriate primer to use depending on the substrate.

**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. For new steel and complete removal of the old coating, abrasive blast according to SSPC-SP-6, Commercial Blast Cleaning. 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.

**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 thoroughly prior to application. Constant agitation is recommended to keep heavy zinc material in suspension. Minimum surface and air temperature required for application is 40°F (4°C) and at least 5°F (3°C) above the dew point. Curing is affected by temperature, humidity and air movement. The minimums must be maintained for at least eight (8) hours in order to achieve proper film formation. Application at elevated temperatures, wind conditions, and/or low humidity may require special application procedures to achieve proper film formation.

**Brush or Roller:** 2 coats may be required to achieve proper dry film thickness when using brush or roller application. Apply product in full even coats. Maintain a wet edge. Allow the product to dry between coats (see the drying times chart for recoat period). A good quality natural bristle brush will make application easier. Select a roller cover suited for the texture of the surface to be coated.

**Airless Spray:** Flush airless lines with Diamond Vogel N-3023 Xylol. Equipment must be clean prior to start. Apply a wet coat in even, parallel passes with 50% overlap to avoid bare areas and pinholes. If required, crosshatch spray at right angles. Remove all filters from the unit and airless spray gun.

Tip Orifice	Atomizing Pressure	Material Hose ID	Manifold Filter
0.015" to 0.019"	2500–3000 PSI	1/4" or 3/8"	none

**Packaging**

**Shipping Weight**

Product	1 Gallon	5 Gallon	Product	1 Gallon	5 Gallon
Endura-Zinc 705	1 Gallon Pail	5 Gallon Pail 50% fill	Endura-Zinc 705	25.67 lbs. (11.64 kg)	64.72 lbs. (29.36 kg)

**Storage**

Two years from date of manufacture when maintained in protected area at a temperature 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.**

**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).