



As with all powder coatings, this product may vary between lot numbers, KV settings, mil thickness, oven temperatures, application equipment, substrate material and technique. We recommend a clear topcoat to maintain the appearance and prevent oxidation on metallic powder coatings. **Always coat a sample prior to any production to determine if this product meets all your requirements.**

**Product Number and Name:** ESS-10171 – Zinc Primer

**Suggested Cure Time and Temperature:** 10 minutes at 400°F

**Note:** Each additional coat of powder will act as an insulator which will require additional time for the substrate to reach temperature. Extend cure times as needed.

**As always, the cure timer starts when the thickest portion of the substrate reaches cure temperature.**

**Special Instructions/Notes:**

Primers should always be used as base coats underneath another coating. Due to their Epoxy based nature, they are not coatings that should be left as-is exposed to the elements outside. However, they can be applied by themselves for indoor applications.

**Powder Properties:**

Thermosetting Powder Coating

Powder type: Epoxy

Specific Gravity: 2.8 +/- 0.05

Storage: Store in a cool, dry environment of ~70° F

Shelf Life: 6-8 Months

**Application:**

Pretreatment and proper preparation of the substrate prior to powder coating is a critical factor in developing maximum corrosion resistance as well as maximizing the lifespan of the product.

Electrostatic spray to cold substrate

Recommended Mil Thickness: 2.0-3.0mils

**Equipment information:**

Fluidized hopper recommended.

Tribo compatible: Not recommended for tribo application.

Suggested spray gun nozzle: No specific spray nozzle required.

**Testing parameters are as follows:**

- **Gloss Units and levels** are measured at a 60° angle
- **Adhesion** is measured on a scale of 0B, 1B, 2B, 3B, 4B, 5B, with 5B being the highest achievable rating.
- **Flexibility or Conical Mandrel Bend:** “100% Resistance” is the highest achievable rating and indicates that the coating did not crack or spall.
- **Impact Performance Direct/ Indirect** is measured on a scale of 0 inch-lbs. to 160 inch-lbs., with 160 inch-lbs. being the highest achievable rating.
- **Salt Spray Corrosion** testing is used to evaluate the relative corrosion resistance of coated panels exposed to a salt spray or fog at an elevated temperature. Coated panels are placed in an enclosed salt spray chamber at a 15-30-degree angle and subjected to a continuous indirect spray of a neutral (pH 6.57.2) saltwater solution. The chamber/cabinet is kept at an operating temperature of 95°F and fogging a 5% salt solution at the required 1.0-2.0mL/hr.

**Testing Results:**

Type of Substrate: Mild steel Q panel/Aluminum Q panel

Cure Method: Coating underwent a proper cure cycle through a pre-heated convection oven.

Nozzle type used for testing: Conical

Average Mil Thickness of panels: 2.0-2.5mils

KV setting: 50KV

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|--|-----------------------|
| • <b>Gloss Unit</b>                          | <b>37-70GU</b>        |
| • <b>Gloss Level</b>                         | <b>Semi-Gloss</b>     |
| • <b>Adhesion</b>                            | <b>4B</b>             |
| • <b>Flexibility or Conical Mandrel Bend</b> | <b>90% Resistance</b> |
| • <b>Impact Performance Direct</b>           | <b>120Inch-pounds</b> |
| • <b>Impact Performance Indirect</b>         | <b>120Inch-pounds</b> |
| • <b>Salt Spray</b>                          | <b>4000Hrs</b>        |

**PLEASE NOTE**

Not all powders are recommended for exterior use, it is the buyer’s responsibility to ensure they are purchasing a product that is best suited for the intended application. Certain pigment types, such as those found in the Illusion Series and Transparent powders do not have the same level of UV resistance as those found in Solid Tone finish types.

Exterior tops coats applied to interior finishes may prolong the fading process but DOES NOT ensure a long-lasting exterior finish. Please conduct your own testing to ensure the products you choose meet your requirements.

Applicable for product manufactured after:  
Revisions:

NIC Industries, Inc. does not warranty the use or application of the materials it manufactures or supplies. Our only obligation shall be to replace any defective materials supplied by us after we have determined it to be defective. We assume no liability for damages of any kind and the user accepts the product “as is” and without any warranties, expressed or implied. The suitability of the product or intended use shall be the sole responsibility of the user.

The information contained in this bulletin we believe to be correct to the best of our knowledge and testing. The recommendations and suggestions herein are made without guarantee or representation as to results. We recommend that you make adequate tests in your laboratory or plant to determine if this product meets all your requirements.