

As with all powder coatings, this product may vary between lot numbers, KV settings, mil thickness, oven temperatures, application equipment and technique. We recommend a clear topcoat to maintain the appearance and prevent oxidation on metallic powder coatings.

Always coat a sample before any production to determine if this product meets all your requirements.

### Item Code / Color Name:

ESS 4441 Flatter Black

### Suggested Cure Time and Temperature:

The cure time starts when the substrate reaches temperature. Always check temperature of thickest part of the substrate.

10 Minutes at 400°F (204°C)

### Special Instructions / Notes:

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

Epoxy products are not recommended for exterior application. While a clear top coat may improve UV resistance and the overall durability of the finish, it can occasionally change the appearance of the color it is being applied over. We recommend spraying a test panel before applying it to your project to ensure that the final color meets your project specifications.

### Powder Properties:

Thermosetting Powder Coating

Powder Type: Epoxy

Gloss: Flat: 0-6 Gloss Units

Recommended Use: Interior

Adhesion/Crosshatch: 5B

Mandrel Bend: 98% Resistance

Indirect Impact: 60 Inch-pounds

Direct Impact: 60 Inch-pounds

Pencil Hardness: 3H

Specific Gravity: 1.47+/-0.05

Storage: Store in a cool, dry environment 70° F (21° C)

Shelf Life: 6-8 Months

### Application:

Pre-treatment and proper prep to substrate before powder coating are critical factors in developing maximum corrosion resistance and maximizing the product's lifetime. Electrostatic spray to a cold substrate. Please see application guide for additional information.

**Recommended Mil Thickness: 2.0-3.0 Mils**

## Equipment Information:

Gun System: Nordson Encore LT  
Fluidized Hopper Recommended  
Not Recommended for Tribo Application  
Suggested Nozzle: Conical Tip With Diffuser  
Alternative tips can be used but may cause color variation.

## 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-pounds to 160 inch-pounds, with 160 inch-pounds being the highest achievable rating.
- **Type of Substrate:** Mild Steel Q panel/ Aluminum Q panel (Blasted/ Unblasted)

Not all powder coating is recommended for exterior use; it is the buyer's responsibility to ensure they purchase a product 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 topcoats applied to interior finishes may improve UV resistance and durability of the product but DOES NOT ensure a long-lasting exterior finish. Please conduct your own testing to ensure the products you choose meet your requirements.

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