



# UV-Cured Powder Coating: Epoxy for Metal

## Technical Properties

### PRODUCT OVERVIEW

UVMax® UV-cured powder coating from Keyland Polymer is durable and functional for a variety of products and applications.

UVMax® Epoxy for Metal is an excellent coating for applications in the transportation, building materials, and industrial products markets.

Keyland can develop a wide range of powders to match to any RAL, Pantone, or supplied color standard.

### PRODUCT BENEFITS

- Zero VOCs
- Instant cure
- Highly durable and chemically resistant
- Wide range of applications
- Large pallet of colors, glosses, and textures

Property	Test Method	Result
<b>60° Gloss</b>	ASTM D 523	20 - 90 @ 60°
<b>Adhesion</b>	ASTM D 3359, Method B	5B (Pass)
<b>Pencil Hardness</b>	ASTM D 3363	2H - 4H
<b>Impact Resistance</b>	ASTM D 2794	120 - 160 In.-lbs Direct 120 - 160 In.-lbs Indirect
<b>Abrasion Resistance</b>	ASTM D 4060, CS-17 wheel, 500 g, 1000 cycles	25 - 35 mg material loss
<b>Conical Mandrel</b>	ASTM D 522	1/8" Mandrel No Cracking
<b>Salt Spray</b>	ASTM B 117	1000 Hrs. Pass < 1/8" Scribe Creep No Blisters

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Film properties were determined using 1.7 - 2.3 mils powder film over pretreated iron phosphated, chrome rinsed, 22 gauge, unpolished cold rolled steel test panels. Impact was determined at 2.0 mils.

## Application Data

Parameters	Recommendations
<b>Application</b>	Powder is typically sprayed using corona electrostatic spray guns.
<b>Melt</b>	Melt times will range from 1-4 minutes depending on metal thickness, part size, oven set temperatures, and type of oven.
<b>UV Cure</b>	It is recommended that opaque powder coatings be cured using gallium-doped lamps with a UVV dosage of 2000 – 4000 mJ/cm <sup>2</sup> and UVV intensity of 1000 – 2000 mW/cm <sup>2</sup> . A coating temperature of 90 - 120°C is recommended at the time of cure.
<b>UV LED Cure</b>	Certain unpigmented and pigmented powder coatings will cure using a UV LED lamp. Contact Keyland Polymer for product and process information.
<b>Storage and Shelf Life</b>	Dry and cool conditions below 21°C for 6 months are recommended for storage stability. Contact Keyland Polymer to confirm the appropriate storage conditions for your product.

Disclaimer: The recommendations and suggestions herein are made without guarantee or representation of results. Actual product performance will depend on the conditions in which the product is used. We recommend adequate testing in your laboratory or plant to determine if this product meets all of your finish requirements.