

## Vor-ink™ CX911 Product Sheet

### PRODUCT DESCRIPTION

Vor-ink™ CX911 is an electrically conductive ink designed specifically for spray coating. This product adheres to coated papers, PET, and a variety of other substrates. Vor-ink™ retains conductivity after repeat flexing and offers excellent adhesion and abrasion resistance.

**Table 1. Typical uncured properties of CX911**

Color	Black
Appearance	Liquid
Solids Content	15% nvs
Density	0.9 g/cc

**Table 2. Typical cured properties of CX911**

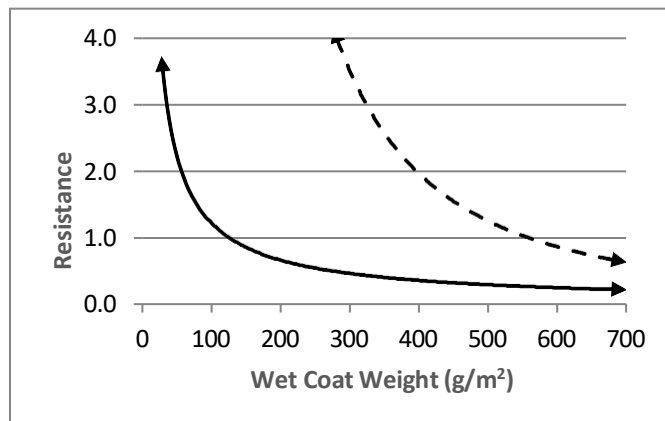
Sheet Resistivity (Measured with Guardian SRM-232)	0.25 ohm/sq
Wet Coat Weight	700 g/m <sup>2</sup>
Dried Film Thickness (200 mesh stainless steel screen)	100 µm
Sheet Resistivity	1 Ω/sq/mil

*Typical properties based on Vorbeck laboratory studies performed under controlled conditions (20 mil wet film thickness, 130°C curing for 10 min., Acculam<sup>R</sup> Epoxyglas G10/FR4 Substrate). Data provided is for information only and is not intended to represent the product specifications.*

1 mil = 25 micron

### PROCESSING

Vor-ink™ CX911 should be conditioned to room temperature before use. For best results, Vor-ink™ should be thoroughly mixed prior to use. Vor-ink™ is highly shear thinning and hand stirring is generally adequate but if the ink is thick, mechanical stirring may be necessary. Avoid excessive agitation as this may cause air entrapment. In general, the ink is ready to coat after mixing and no thinning is necessary. As needed, the ink viscosity can be adjusted using thinner provided by Vorbeck Materials.



**Figure 1. Typical CX911 sheet resistances based on applied wet coat weight. Solid line indicates expected values for coatings cured at 130°C for 10 min. Dashed line indicates expected values for coatings cured at 25°C for 24hrs.**

### CURING

Vor-ink™ CX911 can be dried with convection ovens, infrared or forced-air dryers and can be dried at temperatures as low as 25 °C, although best results are typically achieved by drying for 5-10 minutes at 120 °C to 130 °C. Drying temperatures and times will change depending on the particular drying used and so users should experiment to determine the appropriate settings for their specific curing. Completeness of curing can be determined by measuring sheet resistance versus time. When fully dried, there should be less than a 5% change in sheet resistance between subsequent time intervals drying. Depending on the substrate, Vor-ink™ can be heated to temperatures up to 200 °C, with a brief exposure to 400 °C.

## Vor-ink™ CX911 Technical Data Sheet

### **CLEAN UP**

Clean up of Vor-ink™ can be achieved with common commercial solvent-based cleaners.

### **APPLICATION ASSISTANCE**

Vorbeck application specialists are available at 301-497-9000.

### **HEALTH AND SAFETY**

Users should consult the Vor-ink™ Safety Data Sheet (SDS) for health and safety information pertaining to this product.

### **STORAGE AND HANDLING**

Product should be stored between 5-25°C. Vor-ink™ should not be exposed to temperatures above 40°C. Shelf-life is six (6) months in an unopened container. Customers may return unused ink to Vorbeck for disposal. Empty containers larger than 5 gallons should be returned to Vorbeck.

### **NOTICE**

All statements, recommendations, and information contained herein are based on Vorbeck lab studies. Data provided is for information only and is not intended to represent the product specifications and should not be used to establish specifications or used alone for product design. While the information is based on data believed to be reliable, Vorbeck makes no warranties as to the data's accuracy or reliability for a particular use and assumes no liability from its use. It is the responsibility of the user to determine the suitability of this material for his/her intended purpose and application.

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By: KF/DS