

Product Data Sheet

AkzoNobel Powder Coatings

Resicoat® EL Epoxy Powder Coating for Electrical Components HFG05QF ECA-1283 Safety Orange

Product Description Resicoat® EL HFG05QF ECA-1283 Safety Orange is an electrical grade functional epoxy powder coating designed for use in a wide variety of electrical, mechanical, and chemical applications. Made of hard, high edge coverage materials, HFG05QF is ideal for the integral insulation of electric motor cores, low and high voltage bus bars, hermetic connectors, and watt-hour meter coils.

| | | Typical Value | Method |
|--|---|--|------------|
| Powder Properties | Chemical type | Epoxy | |
| | Appearance | Smooth | |
| | Gloss level (Gardner 60°) | 60 – 70 | |
| | Specific gravity | 1.32 ± 0.05 g/cm ³ (Calculated) | |
| | Coverage @ 1.0 mil | 146 ft ² /lb/mil (Calculated) | |
| | Storage | Maximum 80°F | |
| | Shelf life | 12 months | |
| Application Data | Application Method | ESS onto Cold Part | |
| | Recommended Film thickness | 4 - 6 mils | |
| | Curing schedule | 15 minutes at 450°F | |
| Mechanical Tests | Flexibility | 1/8" Mandrel | ASTM D522 |
| | Adhesion | 100% | ASTM D3359 |
| | Impact Resistance, Direct | 40 in/lbs Minimum | ASTM 2794 |
| | Hardness | H Minimum | ASTM 3363 |
| Typical Performance Characteristics | Hardness, Shore D | 87 | ASTM D2240 |
| | Tensile Strength | 9500 psi | ASTM D638 |
| | Edge Coverage | >35%; Method "B" @ 12-16 mils | ASTM 2967 |
| | Coefficient of Thermal Expansion | 5.2 x 10 ⁻⁵ in/in/°C | ASTM D696 |
| | Thermal Conductivity (Ambient) | 0.143 W/(m*K) | ASTM E1461 |
| | Specific Heat | 1.176 J/g/K | ASTM E2716 |
| | Dielectric Constant | 4.0 | |
| | Dielectric Strength | 1200 volts/mil | ASTM D149 |
| Thermal Shock Resistance | Passes 10 cycles (+500°F to -67°F) | | |

Pre-treatment Steel surfaces to be coated must be clean and free from grease. For maximum protection, it is essential to pre-treat components prior to the application of Resicoat® EL. Iron phosphate and zinc phosphate of ferrous metals improve corrosion resistance.

Application **Resicoat® EL** powders can be applied by manual or automatic electronic spray equipment. It is recommended that for consistent application and appearance product be fluidized during application. Unused powder can be reclaimed using suitable equipment and recycled through the coating system.

Approvals This product is UL OCTD2.E34521 recognized to UL Designation ECA-1283. For UL OCTD2.E34521, following is the applicable data.

| Min Film Thickness (mm) | Metal Thickness (mm) | Flame Class UL-94 | HWI | HAI | RTI Elec | RTI Imp | RTI Str | CTI |
|-------------------------|----------------------|-------------------|-----|-----|----------|---------|---------|-----|
| 0.13 – 0.14 | 2.1 | V-0 | - | - | 130 | 130 | 130 | 2 |
| 0.45 – 2.3 | 2.1 | - | - | 0 | 130 | 130 | 130 | - |
| 0.57 – 0.63 | 2.1 | - | 0 | - | 130 | 130 | 130 | - |

Safety Precautions Please consult the Safety Datasheet (SDS).

Disclaimer **IMPORTANT NOTE:** The information in this data sheet is not intended to be exhaustive and is based on the present state of our knowledge and on current laws: any person using the product for any purpose other than that specifically recommended in the technical data sheet without first obtaining written confirmation from us as to the suitability of the product for the intended purpose does so at his own risk. It is always the responsibility of the user to take all necessary steps to fulfil the demands set out in the local rules and legislation. Always read the Material Data Sheet and the Technical Data Sheet for this product if available. All advice we give or any statement made about the product by us (whether in this data sheet or otherwise) is correct to the best of our knowledge but we have no control over the quality or the condition of the substrate or the many factors affecting the use and application of the product.

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