# Technical Data Sheet



### 2K350

## **Two-Component Polyurethane Coating**

2K350 is a flame retardant, high performance two-component, solvent-free conformal coating, designed specifically for selective coating processes. 2K350 is characterised by greater coating thickness, enhanced edge coverage and shows extreme flexibility and extremely low stress on components. 2K350 is formulated to cure quickly with oven curing.

- Improved high temperature performance and flame retardant
- Hydrophobic; excellent resistance to humidity, condensation and immersion in water
- Soft coating; provides low stress during typical automotive thermal shock cycles
- High coating thickness achievable; enhanced edge coverage for better protection

Approvals RoHS Compliant (2015/863/EU): Yes

REACH Compliant: Yes

IPC-CC-830 Rev. C: Meets Requirements

**Liquid Properties** Appearance: Opaque Blue Liquid

Density @ 20°C: 1.12 g/ml (mixed)

Flash Point:  $>100^{\circ}$ C Min. Solids Content (1hr @80°C): >98.5% Mix Ratio: 5:1 v/v Viscosity (mixed) @ 25°C: Sprayable

Useable Life (mixed static mixer): 5 Minutes
Touch Dry Time at 20°C: 24 Hours

Recommended Drying Time: 10 Minutes @ 80°C 40-60 Mins @ 50-60°C

**Dry Film Coating** Colour: Blue Opaque

Recommended Coating Thickness: 100-300μm
Temperature Range: -65 to +130°C
Thermal Shock Range: -65 to +130°C

Thermal Shock (1000 cycles): No cracking, blistering or delamination\*

Elongation at Break (BS EN ISO 537): 100%

Tensile Strength (BS EN ISO 537):  $2.5 \pm 0.2$  MPa Elastic Modulus (BS EN ISO 537):  $3.8 \pm 0.4$  MPa Dielectric Strength: 90 kV/mm Surface Insulation Resistance:  $9 \times 10^{15} \Omega$  Moisture Resistance (B24 @ 85°C/85%RH)  $158 \times 10^9 \Omega$  Self-extinguishing

\*Other thermal shock regimes are also possible, i.e. different temperatures, number of cycles, etc.

All information is given in good faith but without warranty. Properties are given as a guide only and should not be taken as a specification.

Electrolube cannot be held responsible for the performance of its products within any application determined by the customer, who must satisfy themselves as to the suitability of the product.

Ashby Park, Coalfield Way, Ashby de la Zouch, Leicestershire LE65 1JR T +44 (0)1530 419 600 F +44 (0)1530 416 640 BS EN ISO 9001:2008 Certificate No. FM 32082



<u>Description</u>	<u>Packaging</u>	Order Code
2K350 Conformal Coating Part A	32oz	E2K35032OZ
2K Part B	20oz	E2KPBO20OZ

### **Directions for Use**

2K350 is intended to be applied by selective spray coating. It is recommended that the use of a high accuracy, volumetric metering system, such as progressive cavity pumps are used to control the mix ratio of the two components. It is recommended that a minimum 10 turn static mixer is used to ensure complete mixing of the two components prior to reaching the dispense valve. The use of a heated applicator block can result in reduced film builds and faster cycle times. 60°C is a typical set-point.

The material works best when a relatively high flow rate and low atomising air combination is used, but this will depend on the design of the assembly, required cycle times and other process considerations. Machine settings for various 2K selective spraying options are available upon request.

#### Inspection

2K350 is an opaque blue colour which enables visual inspection of the PCB after coating to ensure complete and even coverage. The blue opaque nature of the material improves contrast for Automated Optical Inspection Systems.

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