# **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.

- 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°C

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Min. Solids Content (1hr @80°C): >98.5%
Mix Ratio: 9:1 v/v
Viscosity (mixed) @ 25°C: Sprayable
Useable Life @ 20°C: 40 Minutes
Touch Dry Time at 20°C: 240 Minutes

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Recommended Drying Time: 10 Minutes @ 80°C

Dry Film Coating Colour: Blue Opaque

Recommended Coating Thickness:  $100-300\mu m$ Temperature Range:  $-65 \text{ to } +130^{\circ}\text{C}$ Thermal Shock Range:  $-65 \text{ to } +130^{\circ}\text{C}$ 

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

Shore Hardness: A50-60 Elongation at Break (BS EN ISO 537): 100%

Tensile Strength (BS EN ISO 537): 4.6 MPa @ 20°C Elastic Modulus (BS EN ISO 537): 1.5 MPa @ 20°C Dielectric Strength: 90 kV/mm

Surface Insulation Resistance:  $9 \times 10^{15} \Omega$ Moisture Resistance (IPC-CC-830):  $9.9 \times 10^{9} \Omega$ Flammability: Self-extinguishing

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



<u>Description</u>	<u>Packaging</u>	Order Code
2K350 Conformal Coating Part A 2K Part B 1L	5 Litre 1 Litre	E2K3505L E2KPBO01L
2K Part B 5L	5 Litre	E2KPBO05L

#### **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 also contains a UV trace, which allows inspection of the PCB after coating to ensure complete and even coverage; the stronger the reflected UV light, the thicker the coating layer is. UV light in the region of 375nm should be used for inspection. 2K350 is also opaque blue in colour, further facilitating visual inspection and improving contrast for Automated Optical Inspection Systems.

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