

2K301FC

Two-Component Polyurethane Coating

DESCRIPTION

2K301FC is a high performance two-component conformal coating, designed specifically for selective coating processes. **2K301FC** is characterized by greater coating thickness and enhanced edge coverage and shows extreme flexibility and extremely low stress on components.

READ ENTIRE TECHNICAL BULLETIN BEFORE USING THIS PRODUCT

FEATURES AND BENEFITS

- Improved high temperature performance coating
- 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

APPROVALS

Standard	Status
RoHS Compliant (2015/863/EU)	Yes
REACH Compliant	Yes
IPC-CC-830	Meets Requirement

PRODUCT INFORMATION

For available packaging sizes please visit:

electrolube.com

PHYSICAL PROPERTIES

Category	Results
Liquid Properties	
Appearance	Clear liquid with green/blue tint
Density @ 20 °C (g/mL) mixed	0.93
Flash Point	>100 °C
Solid Content (1hr @ 80 °C)	>98 %
Mix Ratio	4:1 v/v
Viscosity @ 20 °C (mPas) Part A Part B	Sprayable 25,000 to 35,000 1,400 to 2,000
Useable Life @ 20 °C	6 Minutes (Static Mixer)
Recommended Drying Time	10 minutes @ 80 °C 20 minutes @ 70 °C 40 minutes @ 60 °C 80 minutes @ 50 °C
Dry Film Coating	
Color	Pale yellow, transparent
Recommended Coating Thickness	200 to 350 µm
Temperature Range (°C)	-65 to 150
Thermal Shock Range (°C)	-65 to 150
Thermal Shock (1000 Cycles)	No cracking, blistering or delamination*
Shore Hardness	A35 to A50
Glass Transition Temperature (Tg)	-47 °C (DMA)
Elastic Modulus	5.22 MPa @ -40 °C 2.67 MPa @ 20 °C 2.96 MPa @ 130 °C
Dielectric Strength (kV/mm)	90

Category	Results
Dielectric Constant	2.5
Surface Insulation Resistance (Ω)	2×10^{16}
Dissipation Factor @ 1 MHz, 25 °C	0.01
Moisture Resistance (Ω) IPC-CC-830	1.63×10^{10}
Tensile Strength (MPa)	1.2 MPa @ 20 °C
Elongation at Break (ASTM D638/4)	80 to 90 %

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

APPLICATION GUIDELINES

2K301FC is intended to be applied by selective spray coating. It is recommended to use a high-accuracy, volumetric metering system to control the mix ratio of the two components. The two components will be fed through a static mixer and an atomizing spray valve prior to the application onto the board.

The use of a suitable fluid supply system is recommended to avoid contact of the two components to the humidity prior to mixing.

Machine settings for various 2K selective spraying options and further processing details are available upon request.

INSPECTION

2K301FC 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.

SAFETY & WARNING

It is recommended that the company/operator read and review the Safety Data Sheets for the appropriate health and safety warnings before use. **Safety Data Sheets are available.**

CONTACT INFORMATION

To confirm this document is the most recent version, please contact
TechnicalSupportTeam@hkw.co.uk
www.electrolube.com

North America 109 Corporate Blvd. South Plainfield, NJ 07080, USA 1.800.367.5460	Europe Ashby Park Coalfield Way Ashby de la Zouch Leicestershire, LE65 1JR, UK 44.01530.41960	Asia 8/F., Two Sky Parc 51 Hung To Road Kwun Tong, Kowloon, Hong Kong 852.2500.5365
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Also read carefully warning and safety information on the Safety Data Sheet. This data sheet contains technical information required for safe and economical operation of this product. READ IT THOROUGHLY PRIOR TO PRODUCT USE . Emergency safety directory assistance: US 1 202 464 2554, Europe + 44 1235 239 670, Asia + 65 3158 1074, Brazil 0800 707 7022 and 0800 172 020, Mexico 01800 002 1400 and (55) 5559 1588

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