

HumiSeal[®] 1B31/521 PB25 Acrylic Conformal Coating

Technical Data Sheet

HumiSeal[®] 1B31/521 PB25 is a fast drying, single component, acrylic coating that has been formulated for use in automated spray equipment without requiring additional thinning. HumiSeal[®] 1B31/521 PB25 demonstrates excellent flexibility, fluoresces under UV light for ease of inspection and is easily repaired. HumiSeal[®] 1B31/521 PB25 coating is RoHS Directive 2002/95/EC compliant.

Properties of HumiSeal[®] 1B31/521 PB25

Density, per ASTM D1475	0.89 ± 0.02 g/cm ³
Solids Content, % by weight per Fed-Std-141, Meth. 4044	16 ± 2 %
Viscosity, per Fed-Std-141, Meth. 4287	23 ± 3 centipoise
VOC	745 grams/litre
Drying Time to Handle per Fed-Std-141, Meth. 4061	10 minutes
Recommended Coating Thickness	25 - 75 microns
Recommended Curing Conditions	24 hrs @ RT or 30 min @ 76°C
Time Required to Reach Optimum Properties	7 days
Recommended Stripper	HumiSeal [®] Stripper 1080
Shelf Life at Room Temperature, DOM	24 months
Thermal Shock, 50 cycles per MIL-I-46058C	-65°C to 125°C
Coefficient of Thermal Expansion - TMA	170 ppm/°C below T _g 340 ppm/°C above T _g
Glass Transition Temperature - DSC	14°C
Modulus - DMA	2000 MPa @ -40°C 1050 MPa @ 20°C 8.5 MPa @ 60°C
Dielectric Withstand Voltage, per MIL-I-46058C	>1500 volts
Dielectric Breakdown Voltage, per ASTM D149	7500 volts
Dielectric Constant, at 1MHz and 25°C per ASTM D150-98	2.5
Dissipation Factor, at 1MHz and 25°C per ASTM D150-98	0.01
Insulation Resistance, per MIL-I-46058C	8.0 x 10 ¹⁴ ohms (800TΩ)
Moisture Insulation Resistance, per MIL-I-46058C	6.0 x 10 ¹⁰ ohms (60GΩ)
Fungus Resistance, per ASTM G21	Passes

Application of HumiSeal[®] 1B31/521 PB25

Cleanliness of the substrate is of extreme importance for the successful application of a conformal coating. Surfaces must be free of moisture, dirt, wax, grease, flux residues and all other contaminants. Contamination under the coating could cause problems that may lead to assembly failures.

Spraying

HumiSeal[®] 1B31/521 PB25 can be sprayed using automated spraying equipment. Spraying should be done in an environment with adequate ventilation so that the vapor and mist are carried away from the operator.

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Storage

HumiSeal® 1B31/521 PB25 should be stored away from excessive heat or cold, in tightly closed containers. HumiSeal® products may be stored at temperatures of 0 to 35°C. Prior to use, allow the product to equilibrate for 24 hours at a room temperature of 18 to 32°C.

Caution

Application of HumiSeal® Conformal Coatings should be carried out in accordance with local and National Health and Safety regulations.

The solvents in HumiSeal® Conformal Coatings are flammable. Material should not be used in presence of open flame or sparks. Use only in well-ventilated areas to avoid inhalation of vapours or spray. Avoid contact with skin and eyes.

Consult MSDS/SDS prior to use.

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