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HumiSeal®

HumiSeal® 1B31 Aerosol Conformal Coating Technical Data Sheet

HumiSeal® 1B31 Aerosol is a fast drying, clear acrylic conformal coating intended for use on printed circuit assemblies. The product is conveniently dispensed from aerosol cans utilizing an environmentally safe, non-ODP propellant and contains UV tracer for inspection under black light. The coating may be removed chemically using HumiSeal® Stripper 1080. HumiSeal® 1B31 Aerosol is RoHS Directive 2002/95/EC compliant.

Properties of HumiSeal® 1B31 Aerosol

Solids Content, % by weight per Fed-Std-141, Meth. 4044	12 ± 1 %
VOC	537 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	8.0×10^{14} ohms (800TΩ)
Moisture Insulation Resistance, per MIL-I-46058C	6.0×10^{10} ohms (60GΩ)
Fungus Resistance, per ASTM G21	Passes

Application of HumiSeal® 1B31 Aerosol

1. Allow 48 hours minimum to reach room temperature before using cans stored or received during cold weather.
2. When applied in conditions of high ambient humidity, blushing (cloudy white film) may appear. Heating the coated assembly in an oven for 1/2 hour at 76°C eliminates this condition.
3. Cleanliness of the substrate is extremely important to the successful application of a conformal coating. Surfaces should be free of moisture, dirt, wax, grease and all other contaminants. Otherwise, ionic or organic residues on the substrate could be trapped under the coating and cause problems with adhesion or electrical properties. The highest long term reliability for a coated printed circuit assembly will be when the conformal coating is applied over a clean, dry substrate.

   The application of conformal coatings over no clean flux is a common practice. The user should perform adequate testing to confirm compatibility between the conformal coating and their particular assembly materials and process conditions. Please contact HumiSeal for additional information.

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4. Mask areas not requiring coating from overspray using suitable non-silicone masking methods or materials.
5. Shake can vigorously before using and repeat frequently during use.
6. Best results are obtained by spraying from a distance of 30 - 40cm in light even coats. A film thickness of 25 - 75 microns is sufficient to provide protection.
7. To clean nozzle after use, hold can upside down, then press nozzle for a few seconds.

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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