

HumiSeal® 1A33PB64 Urethane Conformal Coating **Technical Data Sheet**

HumiSeal® 1A33PB64 is a single component polyurethane conformal coating that has been formulated for use in automated spray equipment without requiring additional thinning. HumiSeal® 1A33PB64 demonstrates excellent flexibility, fluoresces under UV light for ease of inspection and is easily repaired.

Properties of HumiSeal® 1A33PB64

Density, per ASTM D1475 $0.93 \pm 0.02 \,\mathrm{g/cm^3}$ Solids Content, % by weight per Fed-Std-141, Meth. 4044 39 ± 2 %

Viscosity, per Fed-Std-141, Meth. 4287 64 ± 3 centipoise

559 grams/litre VOC

Drying Time to Handle per Fed-Std-141, Meth. 4061 15 minutes Recommended Coating Thickness 25 - 75 microns

Optional Curing Conditions to Reach Optimum Properties 30 days at RT

30 hours @ 76°C 20 hours @ 88 ℃

HumiSeal[®] Stripper 1063 Recommended Stripper

Shelf Life at Room Temperature, DOM 24 months Thermal Shock, 50 cycles per MIL-I-46058C -65℃ to 125℃

Coefficient of Thermal Expansion - TMA 193 ppm/°C Glass Transition Temperature - DSC 26℃

Modulus - DMA 27.2 MPa

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 3.6

Dissipation Factor, at 1MHz and 25°C per ASTM D150-98 0.03

 $2.0 \times 10^{14} \text{ ohms (800T}\Omega)$ $1.6 \times 10^{10} \text{ ohms (16G}\Omega)$ Insulation Resistance, per MIL-I-46058C Moisture Insulation Resistance, per MIL-I-46058C

Application of HumiSeal® 1A33PB64

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® 1A33PB64 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® 1A33PB64 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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