

HumiSeal® 1A33 SEC Urethane Conformal Coating Provisional Technical Data Sheet*

HumiSeal® 1A33 SEC is an air drying, single component, polyurethane conformal coating. HumiSeal® 1A33 SEC is formulated to provide increased coverage on component edges, when compared to other similar coatings. HumiSeal® 1A33 SEC is formulated for effective application using atomized spray application methods, although other methods can also be used.

HumiSeal® 1A33 SEC demonstrates the following advantages:

- Contains no free isocyanates
- Excellent coverage of sharp edge components.
- Extremely low moisture vapor permeability.
- Protection against moisture, salt / corrosive environments, and dirt.
- Excellent Chemical Resistance.
- Fluoresces under UV for ease of inspection and is easily repaired.
- Compliant with GB30981-2020**

**Standard GB30981-2020 defines limits on VOCs and solvent usage for Conformal Coatings. Standard GB/T 23990-200 defines the test method for Solvent % analysis.

Typical Properties of HumiSeal® 1A33 SEC Liquid Coating

Density, per ASTM D1475	0.87 ± 0.02 g/cm ³
Solids Content, % by weight per ISO3251	35 ± 2 %
Viscosity, per ASTM D2196 (dependant on shear)	50 to 2000 cPs at 25°C
VOC	566 grams/litre***
Drying Time to Handle, per Fed-Std-141, Meth. 4061	< 20 minutes
Shelf Life at Room Temperature, from DOM	6 months

** Conformal coatings are exempt from VOC restrictions as defined in GB30981-2020

Typical Properties of HumiSeal® 1A33 SEC Cured Coating

Recommended Coating Thickness	25 - 100 microns
Optional Curing Conditions to Reach Optimum Properties	30 days @ RT 30 hours @ 76°C 20 hours @ 88°C
Recommended Stripper	HumiSeal® Stripper 1063
Dielectric Withstand Voltage, per MIL-I-46058C	>1500 volts
Surface Insulation Resistance 85C/85% RH IPC CC 830	9.0 Log ₁₀ Ohms

*This Technical Data Sheet is marked as provisional until sufficient manufacturing experience is gained to define the specification.

Application of HumiSeal[®] 1A33 SEC

Conformal coatings can be successfully applied to boards that have been cleaned prior to coating and also to boards assembled using low residue “no clean” assembly materials. Users should perform adequate testing to confirm compatibility between the conformal coating and their particular assembly materials, process conditions and cleanliness level. Please contact HumiSeal for additional information.

HumiSeal[®] 1A33 SEC is specifically formulated to shear during application to a viscosity suitable for atomized spray application. No additional dilution is required. HumiSeal[®] Technical Support should be contacted if any further advice on application methods is required.

Storage

HumiSeal[®] 1A33 SEC 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 ambient temperature.

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.

Contact HumiSeal[®]

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