

HumiSeal® 1B59 SEC Synthetic Rubber Conformal Coating Technical Data Sheet*

HumiSeal® 1B59 SEC is an air drying, single component, synthetic rubber conformal coating. HumiSeal® 1B59 SEC is formulated to provide increased coverage on component edges, when compared to other similar coatings. HumiSeal® 1B59 SEC is formulated for effective application using atomized spray application methods, although other methods can also be used.

HumiSeal® 1B59 SEC demonstrates the following advantages:

- Excellent coverage of sharp edge components.
- Extremely low moisture vapor permeability.
- Protection against moisture, salt / corrosive environments, and dirt.
- Improved thermal stability compared with other conformal coatings.
- Excellent flexibility putting low stress on components.
- Fluoresces under UV for ease of inspection and is easily repaired.

Properties of HumiSeal® 1B59 SEC Liquid Coating

Density, per ASTM D1475	0.84 ± 0.02 g/cm ³
Solids Content, % by weight per ISO3251	17 ± 2 %
Viscosity, per ASTM D2196 (dependant on shear)	200 to 2000CPS at 25°C
VOC	697.2 grams/litre
Drying Time to Handle, per Fed-Std-141, Meth. 4061	< 20 minutes
Shelf Life at Room Temperature, from DOM	6 months

Properties of HumiSeal® 1B59NSLU Cured Coating

Recommended Coating Thickness	25 - 75 microns
Recommended Curing Conditions	24 hrs @ RT or 30 min @ 76°C
Recommended Stripper	HumiSeal® Stripper 1080
Minimum Operating Temperature	-65°C
Maximum Operating Temperature	150°C
Glass Transition Temperature - DSC	-50°C
Modulus - DMA	75 MPa @ -40°C 20 MPa @ 20°C
Elongation at -40°C	200%
Elongation at 23°C	450%
Dielectric Withstand Voltage, per MIL-I-46058C	>1500 volts
Surface Insulation Resistance 85C/85% RH IPC CC 830	9.5 Log ₁₀ Ohms

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

Application of HumiSeal[®] 1B59 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[®] 1B59 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[®] 1B59 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 a 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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