

HumiSeal[®] 1A33/521 PB65 Urethane Conformal Coating

Technical Data Sheet

HumiSeal[®] 1A33/521 PB65 is a single component polyurethane conformal coating that has been formulated for use in automated spray equipment without requiring additional thinning. HumiSeal[®] 1A33/521 PB65 demonstrates excellent flexibility, fluoresces under UV light for ease of inspection and is easily repaired.

Properties of HumiSeal[®] 1A33/521 PB65

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| Density, per ASTM D1475 | 0.93 ± 0.02 g/cm ³ |
| Solids Content, % by weight per Fed-Std-141, Meth. 4044 | 40 ± 2 % |
| Viscosity, per Fed-Std-141, Meth. 4287 | 65 ± 5 centipoise |
| VOC | 559 grams/litre |
| 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°C |
| Recommended Stripper | HumiSeal [®] Stripper 1063 |
| 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 | 193 ppm/°C |
| Glass Transition Temperature - DSC | 26°C |
| 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 |
| Insulation Resistance, per MIL-I-46058C | 2.0 x 10 ¹⁴ ohms (800TΩ) |
| Moisture Insulation Resistance, per MIL-I-46058C | 1.6 x 10 ¹⁰ ohms (16GΩ) |
| CTI, per UL746E @ 600 volts | 0 PLC |
| Fungus Resistance, per ASTM G21 | Passes |

Application of HumiSeal[®] 1A33/521 PB65

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[®] 1A33/521 PB65 can be sprayed using automated spraying equipment. Spraying should be done in an environment with adequate ventilation so that the vapour and mist are carried away from the operator.

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Storage

HumiSeal[®] 1A33/521 PB65 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.

Contact HumiSeal[®]

HumiSeal North America

201 Zeta Drive
Pittsburgh, PA 15238
USA
Tel: +1 412-828-1500
Toll Free (US only): 866-828-5470
sales@humiseal.com

HumiSeal Technical Center

295 University Avenue
Westwood, MA 02090
USA
Tel: +1 781-332-0734
Fax: +1 781-332-0703
techsupport@humiseal.com

HumiSeal Europe

505 Eskdale Road, IQ Winnersh
Berkshire RG41 5TU
UK
Tel: +44 (0)1189 442 333
Fax: +44 (0)1189 335 799
europesales@chasecorp.com

HumiSeal Europe Support

Tel: +44 (0)1189 442 333
Fax: +44 (0)1189 335 799
europetechsupport@chasecorp.com

HumiSeal S.A.R.L

4/6 Avenue Eiffel
78420 Carrieres-Sur-Seine
France
Tel: +33 (0) 1 30 09 86 86
Fax: +33 (0) 1 30 09 86 87
humiseal.sarl@chasecorp.com

HumiSeal Asian Support

Tel: 852-9451-6434
Fax: 852-2413-6289
asiatechsupport@humiseal.com

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