

HumiSeal[®] 1B73EPA Pre-blend Acrylic Conformal Coatings Technical Data Sheet

HumiSeal[®] 1B73EPA is a fast drying, single component, acrylic conformal coating intended for use on printed circuit assemblies. HumiSeal[®] 1B73EPA is also produced as pre-blended products, at a range of viscosities, suitable for a variety of applications. HumiSeal[®] 1B73EPA, and its Pre-blends, demonstrate excellent flexibility, fluoresce under UV light for ease of inspection and are easily repaired. HumiSeal[®] 1B73EPA coating is MIL-I-46058C qualified, IPC-CC-830, RoHS Directive 2011/65/EU and EPA 33/50 compliant, and recognized under UL File Number E105698. After complete cure, the properties of HumiSeal[®] 1B73EPA Pre-blends and HumiSeal[®] 1B73EPA are comparable.

Properties of HumiSeal[®] 1B73EPA Pre-blend Products

Product	Viscosity (cPs)	Solids (%)	Density (g/cm ³)	VOC (g/L)	Shelf Life (DOM, months)
1B73 EPA	230 ± 30	23 ± 3	0.96 ± 0.03	739.0	24
1B73 EPA PB 54 CPS	54 ± 5	17 ± 1	0.94 ± 0.03	780.2	24
1B73 EPA/600 PB 44 CPS	44 ± 5	16 ± 1	0.96 ± 0.01	806.4	12
1B73 EPA/600 PB 65 CPS	65 ± 5	19 ± 1	0.96 ± 0.03	777.6	12
1B73 EPA	230 ± 30	23 ± 3	0.96 ± 0.03	739.0	24

Recommended Coating Thickness	25 - 75 microns
Drying Time to Handle per Fed-Std-141, Meth. 4061	30 minutes
Recommended Curing Conditions	24 hrs @ RT or 60 min. @ 76°C
Time Required to Reach Optimum Properties	7 days
Recommended Stripper	HumiSeal [®] Stripper 1080EU
Thermal Shock, 50 cycles per MIL-I-46058C	-65°C to 125°C
Coefficient of Thermal Expansion - TMA	67 ppm/°C
Glass Transition Temperature - DSC	42°C
Modulus - DMA	11.1 MPa
Flammability, per UL 94	V-0
Dielectric Withstand Voltage, per MIL-I-46058C	>1500 volts
Dielectric Breakdown Voltage, per ASTM D149	6300 volts
Dielectric Constant, at 1MHz and 25°C, per ASTM D150-98	2.6
Dissipation Factor, at 1MHz and 25°C, per ASTM D150-98	0.01
Insulation Resistance, per MIL-I-46058C	5.5 x 10 ¹² ohms (550TΩ)
Moisture Insulation Resistance, per MIL-I-46058C	7.0 x 10 ¹⁰ ohms (70GΩ)
Fungus Resistance, per ASTM G21	Passes

Application of HumiSeal[®] 1B73EPA Pre-blend Products

Conformal coatings can be successfully applied to substrates that have been cleaned prior to coating and also to substrates assembled with low residue “no clean” 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[®] 1B73EPA Pre-blends are specifically diluted to a viscosity for immediate use. No additional dilution is required. Customers should establish which pre-blend is suitable for their equipment and application method before commercial use. HumiSeal[®] Technical Support should be contacted if any further advice on pre-blends and equipment is required.



HumiSeal®

Dipping

A controlled rate of immersion and withdrawal (5-15 cm/min) will further ensure even deposition of the coating and ultimately a uniform film. During the application, evaporation of solvent causes an increase in viscosity that should be adjusted by adding small amounts of HumiSeal® Thinner 600. Viscosity in the dip tank should be checked regularly, using a simple measuring device such as a Zahn or Ford viscosity cup.

Spraying

HumiSeal® 1B73EPA Pre-blends are available which can be sprayed using conventional spraying equipment. Spraying should be done in an environment with adequate ventilation so that the vapour and mist are carried away from the operator. The specific pre-blend used and the pressure applied will depend on the specific type of spray equipment used and operator technique.

Brushing

HumiSeal® 1B73EPA Pre-blends are available which may be brushed onto surfaces. Uniformity of the film depends on specific pre-blend chosen and operator's technique.

Storage

HumiSeal® 1B73EPA Pre-blends 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 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 India

J-154, M.I.D.C Bhosari
Pune 411 026
Maharashtra
India
Tel: +91 20 66308098
indiatechsupport@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

HumiSeal Europe Support

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

The information contained here is provided for product selection purposes only and is not to be considered specification or performance data. Under no circumstance will the seller be liable for any loss, damage, expense or incidental or consequential damage of any kind arising in connection with the use or inability to use its product. Specific conditions of sale and Chase's limited warranty are set out in detail in Chase Corporation Terms and Conditions of Sale. Those Terms and Conditions are the only source that contain Chase's limited warranty and other terms and conditions.