

HumiSeal® 1R32 LTX Products Conformal Coatings Preliminary Technical Data Sheet

HumiSeal® 1R32 LTX is a fast drying, single component acrylic conformal coating, specifically designed to protect against the effects of moisture, corrosive environments and dirt. It is specially formulated with reduced xylene and toluene concentration to be fully compliant with GB30981-2020.

Humiseal 1R32 LTX has the following advantages:

- Protection against moisture, salt / corrosive environments and dirt.
- Easy application with automated systems.
- Easy to cure and dry.
- Low odor in use.
- Low moisture vapor permeability.
- Fluoresces under UV for ease of inspection and is easily repaired.
- Easy removal using Humiseal® Strippers.
- Range of preblends thinners available for different application methods
- 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.

Humiseal 1R32 LTX is available in a range of pre-blends, which are formulated for use with no further dilution:

- Pre-blends with Thinner 600 are ideal for enhanced spray application
- Pre-blends with Thinner 789 are ideal for film coater systems. Heated systems may be needed for 120CPS pre-blends, providing improved coating coverage

Properties of HumiSeal® 1R32 LTX Pre-blended Products

Product	Viscosity (CPS)	Solids (%)	Density (g/cm ³)	VOC** (g/L)
1R32 LTX	200 ± 15	35 ± 3	0.91 ± 0.02	592
1R32 LTX/600 PB120	120 ± 5	29.5 ± 1.5	0.92 ± 0.02	649
1R32 LTX/789 PB120	120 ± 5	31.5 ± 1.5	0.89 ± 0.02	610
1R32 LTX/600 PB65	65 ± 5	23.5 ± 1.5	0.90 ± 0.02	689
1R32 LTX/789 PB65	65 ± 5	26.5 ± 1.5	0.87 ± 0.02	639

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

Recommended Coating Thickness	25 - 75 microns
Drying Time to Handle per Fed-Std-141, Meth. 4061	10 minutes
Recommended Curing Conditions	24 hrs @ RT or 30 min @ 76°C
Time Required to Reach Optimum Properties	7 days
Recommended Stripper	HumiSeal® Stripper 1080
Thermal Shock, 50 cycles per MIL-I-46058C	-65°C to 125°C
Coefficient of Thermal Expansion - TMA	170 ppm/°C below T _g 340 ppm/°C above T _g
Glass Transition Temperature - DSC	14°C
Modulus - DMA	2000 MPa @ -40°C 1050 MPa @ 20°C 8.5 MPa @ 60°C

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	2.5
Dissipation Factor, at 1MHz and 25°C, per ASTM D150-98	0.01
Insulation Resistance, per MIL-I-46058C	8.0 x 10 ¹⁴ ohms (800TΩ)
Moisture Insulation Resistance, per MIL-I-46058C	6.0 x 10 ¹⁰ ohms (60GΩ)
Fungus Resistance, per ASTM G21	Passes

Application of HumiSeal® 1R32 LTX Pre-Blended 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® 1R32 LTX 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.

Storage

HumiSeal® 1R32 LTX and 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 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

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.