

ADHESIVE SOLUTIONS

HumiSeal®

ENGINEERED BONDING SOLUTIONS
FOR DEMANDING APPLICATIONS





ADHESIVES FOR ELECTRONIC APPLICATIONS

material solutions for tomorrow's applications

HumiSeal Adhesive Solutions are specialty products designed by the leader in electronic and industrial coatings technologies. Our innovative approach to the formulation of structural bonding materials differentiates in today's market. HumiSeal's global presence, strong technical support, and fast custom formulation capabilities significantly compliments our position for tomorrow's adhesive solutions.

HumiSeal adhesives are engineered from a range of epoxy, urethane, and acrylate chemistries and may be cured using a variety of methods, such as two-part, heat, RTV, and UV-light. Additionally, our R&D chemists specialize in rapid deployment of custom formulations for your specific application needs.

Epoxies are thermosetting resins with excellent adhesion to metals, ceramics, glass, rubber, and some plastics due to their high cohesive strength. When fully cured, HumiSeal epoxy resins will not revert to a liquid phase with repeated heating. Epoxy adhesives inherently possess high chemical resistance, good electrical insulation, and structural integrity. The two-part products cure at room temperature, however the process

can be accelerated with the addition of heat or in some cases can be UV cured for fast throughput manufacturing.

Polyurethanes are thermosetting resins that are flexible and have good resistance to water and solvents. They also maintain high structural integrity and good adhesion to plastics, rubber, metals, and glass. HumiSeal urethane adhesives are two-part systems that can be stored conveniently at room temperature. UV cured adhesives consist of acrylated urethane and epoxy chemistries and are designed specifically for fast curing with exposure to UV light - typically in 30 seconds. Excellent electrical properties, flexible or rigid, and great bonding capabilities to a variety of materials make UV cured adhesives ideal for industrial or electronic high throughput applications.

HumiSeal Adhesive Solutions are found in a variety of markets, including aerospace, automotive, white goods, medical, and others. Whether you are working with high mechanical stresses such as vibration or impact, high temperature excursions, or caustic chemical exposure, HumiSeal adhesives demonstrate unparalleled strength and durability.

ADHESIVES		Chemistry	Viscosity Part A (CPs)	Viscosity Part B (CPs)	Mix Ratio	Pot Life (min)*	Handling Time (min)*	Full Cure**	Cure Type	Color	Hardness	Operating Temp (°C)	Applications	Substrates
2A20	General purpose adhesive or encapsulant. Medium viscosity with 1:1 mix ratio. Medium hardness with good flexibility. Wide range of applications with bonding capabilities to multiple substrates.	Urethane	9,000	1,100	1:1	< 8	10	18 hrs @ RT or 30 min @ 65°C	2 component with heat option	Clear	D45	-50 to 100	Electronic, industrial, and wide-range bonding	Metals, Hard to Bond Plastics, Glass, Ceramics, PolyCarb,
2A20HV	General purpose adhesive or encapsulant. High viscosity with 1:1 mix ratio and long work life. Medium hardness with good flexibility. Wide range of applications with bonding capabilities to multiple substrates.	Urethane	100,000	30,000	1:1	30	35	18 hrs @ RT or 20 min @ 65°C	2 component with heat option	Clear	D40	-60 to 125	Electronic, industrial, and wide-range bonding	Metals, Hard to Bond Plastics, Glass, Ceramics, PolyCarb,
2E24	Toughened 5 min epoxy adhesive capable of performing at low temperatures and bonding to wet surfaces. Thixotropic with 1:1 mix ratio. Will bond to variety of substrates.	Epoxy	Thixotropic	50,000	1:1	5	7	1 hr @ RT or 20 min @ 65°C	2 component with heat option	Translucent	D85	-60 to 125	Industrial and commercial bonding	Metals, Glass, Ceramics, Plastic
2E25	Epoxy adhesive or encapsulant with range of mix ratios and hardness resulting in high bond strength to variety of materials. Very good electric insulator, resistant to gasses, water, petroleum products, and acids. FDA compliant.	Epoxy	12,000	14,000	2:1 to 1:2	60	120	12 hr @ RT or 2 hrs @ 65°C	2 component with heat option	Amber	D64 to D80	-40 to 155	Electronic, industrial, and wide-range bonding	Metals, Glass, Ceramics, Plastic
2E26	Toughened adhesive or encapsulant designed for high humidity environments. High viscosity with 2:1 mix ratio. High resistance to physical shock, exposure to water, or chemicals.	Epoxy	130,000	10,000	2:1	120	60	24 hr @ RT or 2 hrs @ 65°C	2 component with heat option	Amber	D80	-60 to 150	Electronic and industrial bonding	Plastic, Metals
2E26-G	Two part epoxy potting and bonding material with easy 2:1 mix ratio. Provides good protection against high humidity, mechanical shock, and chemicals. This product is light weight with specific gravity of 0.77 and is sandable.	Epoxy	60,000	50,000	2:1	20	160	24 hr @ RT or 30 min @ 65°C	2 component with heat option	Gray	D76	-60 to 125	Electronics, industrial, aerospace bonding	Metals, Wood, Glass, Ceramics, Plastic
UV23	One part, UV/cationic cure epoxy adhesive. Capable of high temperature performance with good chemical and moisture resistance.	Epoxy	12,000	-	-	UV exposure	30 sec with UV exposure	24 hrs @ RT or 1 hr @ 150°C	UV/Cationic	Clear	D45	-50 to 150	Electronic and industrial bonding	Metals, Glass, Ceramics, Plastic
UV23LV	High strength, chemical resistant, low outgassing polymer system capable of surviving exposure up to 200°C. One part, UV/cationic cure epoxy adhesive.	Epoxy	2,500	-	-	UV exposure	30 sec with UV exposure	24 hrs @ RT or 1 hr @ 150°C	UV/Cationic	Clear	D80	-10 to 200	Electronic and industrial bonding	Metals, Glass, Ceramics, Plastic
UV21	One part, medium viscosity, fast curing urethane acrylate that bonds a wide variety of different substrates. Exhibits good surface wetting and adhesion to glass, metals, and a wide variety of plastic based substrates.	Urethane/Acrylate	4,500	-	-	UV exposure	30 sec with UV exposure	1 - 2 J/cm2 total exposure	UV	Clear	D36	-20 to 125	Electronic and industrial bonding	Metals, Glass, Ceramics, Plastic
UV22	One part, med-high viscosity, fast curing urethane acrylate that bonds a wide variety of different substrates. Toughened adhesive that exhibits good surface wetting and adhesion to glass, metals, and a wide variety of plastic based substrates.	Urethane/Acrylate	20,000	-	-	UV exposure	30 sec with UV exposure	1 - 2 J/cm ² total exposure	UV	Clear	D75	-20 to 125	Electronic and industrial bonding	Metals, Glass, Ceramics, Plastic
UV20GEL	One part, high-shear thinning, thixotropic paste designed for high mechanical shock protection and exceptional adhesion to variety of materials. Will cure rapidly with exposure to UV-light and develop high adhesion properties with ambient secondary moisture cure.	Urethane/Acrylate	Thixotropic	-	-	UV exposure	30 sec with UV exposure	1 - 2 J/cm ² /w secondary ambient moisture 48hrs	UV/moisture	Translucent	D15	-40 to 125	Electronics and industrial bonding and staking	Metals, Glass, Ceramics, Plastic
UV20HV	One part, high-shear thinning and high viscosity, outstanding wetting properties, designed for high mechanical shock protection and exceptional adhesion to variety of materials. Will cure rapidly with exposure to UV-light and develop high adhesion properties with ambient secondary moisture cure.	Urethane/Acrylate	75,000	-	-	UV exposure	30 sec with UV exposure	1 - 2 J/cm ² /w secondary ambient moisture 48hrs	UV/moisture	Translucent	D15	-40 to 125	Electronics and industrial bonding, staking, encapsulation	Metals, Glass, Ceramics, Plastic
ELECTRICALLY CONDUCTIVE ADHESIVES														
1E31-G	One part, thixotropic, Silver filled epoxy system to be used as a solder replacement. Quick cure providing excellent electrical conductivity (3x10 ⁻⁴ Ω*cm), high temperature and chemical resistance.	Epoxy	Thixotropic	-	-	Heat exposure		2 hr @ 120°C	Heat	Silver	D80	-20 to 150	Solder Replacement	Metals, plastics
2E32-G	Electrically conductive, silver filled epoxy adhesive paste recommended for bonding and sealing electronic applications which require a combination of good mechanical and electrical properties (3x10 ⁻⁴ Ω*cm). Creates strong, durable, bonds between dissimilar materials. Complies with NASA's Outgassing Spec.	Epoxy	650,000	700	100:6	30	60	24 hr @ RT or 1 hr @ 100°C	2 component with heat option	Silver	D85	-60 to 125	Solder Replacement	Metals, plastics
2E33-G	Long work life, two part, silver filled epoxy system designed to be used as a solder replacement. Thixotropic, cured at room temperature in 24-48 hours or accelerated with heat. Provides a high amount of flexibility, excellent electrical conductivity (1x10 ⁻⁴ Ω*cm), and chemical resistance.	Epoxy	Thixotropic	Thixotropic	1:1	100	180	24 hr @ RT or 1 hr @ 110°C	2 component with heat option	Silver	D40	-50 to 155	Solder Replacement	Metals, plastics

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. *Typical volume of 100g | **Cure time may shorten or lengthen depending on volume or mix ratio

A GLOBAL SOLUTION



HumiSeal • 295 University Avenue • Westwood • MA 02090 • USA
Tel: **+1 781 332 0734** • Fax: **+1 781 332 0703** • Email: **sales@humiseal.com**

HumiSeal Europe • 505 Eskdale Road • Winnersh • Wokingham • Berkshire • RG41 5TU • United Kingdom
Tel: **+44 (0)1189 442 333** • Fax **+44 (0)1189 335 799** • Email: **europesales@chasecorp.com**

HumiSeal India • J-154 • M.I.D.C. Bhosari • Pune – 411 026 Maharashtra • India
Tel: **+91 20 66308098** • Email: **indiasales@chasecorp.com**

HumiSeal Asian Support • Tel: 852-9451-6434 Fax: 852-2413-6289
asiatechsupport@humiseal.com

www.humiseal.com