Ultra High Temperature Epoxies

INCURE Ultra High Temperature Epoxy Adhesives are specially designed for bonding and potting applications to 316℃. These high-temp epoxy adhesives can be applied to a wide range of substrates, offering exceptional chemical, electrical and mechanical properties.

Features

- *Low Shrinkage*
- *Excellent Flexibility*
- *High Thermal Conductivity*

Overview of Product Spectrum			
HANDLING AND CURING			
Product	UHTE-5320	UHTE-5321	UHTE-5322
Mix Ratio by Weight, resin:hardener	1:1	Not Applicable	100:12
Specific Gravity, gms/cc @ 25℃	1.23	.95	1.66
Mixed Viscosity, @ 25℃, cP	8,500	35,000	11,000
Pot Life, 100 gm mass @ 25℃, hrs	2.5	Not Applicable	≤1.0
Recommend Cure, hr/℉	2/200 +2/235	.3/180 +.5/350	24/100 +2/200
Alternate Cure, hr/℉	3-4/300	24/RT +.5/350	24/RT +2/200
CURED PROPERTIES			
Color	Amber	Black	Grey
Hardness, Shore D	89	Not Determined	87
CTE, in/in/℉ x 10^{-6} (℃)	18 (33)	48 (86)	25 (45)
Tensile Shear Strength, psi[*1]	2,800	3,750	1,800
Flexural Strength, psi	18,000	Not Determined	15,500
Dielectric Strength, volts/mil	450	300	50
Dielectric Constant, 1.0 kHz	3.01	Not Determined	Not Determined
Dissipation Factor	.01	Not Determined	Not Determined
Volume Resistivity, ohms-cm	4.0 x 10^{14}	1.0 x 10^{13}	1.0 x 10^{5}
Chemical Resistance	Good	Excellent	Good
Cure Shrinkage, in/in[*2]	.01	Not Determined	.003
Temperature Resistance, ℉ (℃)	-76/572 (-60/300)	-76/600 (-60/316)	-103/572 (-75/300)

[*1] Tested according to ASTM D1002-94. This is a method for determining the shear strength of a single lap-joint metal coupons in tension loading.

[*2] Linear shrinkage is measured using a 3/4 lb casting mass.

APPLICATION NOTES

Surface Preparation
All surfaces must be free of corrosives, dirt, grease, oil, oxides, paint or other foreign matter.

Mixing
Two-component products should be mixed thoroughly prior to dispensing. For high viscosity systems each component can be preheated separately @100-125℉ to facilitae mixing and dispensing.

Application
In most cases, the adhesive should be applied to both surfaces maintaining a glue line of less than 10 mils. After assembling the parts, pressure should be applied to the assembly to prevent warpage and reduce air entrapment. Refer to the above for curing guidelines.

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