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EP 1646

Snap Cure High Voltage Resistant Non-Sump Epoxy

Typical Properties			
Property	**Unit**	**Value**	**Test Method**
Color / Component A		Off Brown	Visual
Color / Component B		Off White	Visual
Mixing Ratio (A : B)	By weight	2:1	
Density (as mixed)	Gram /cc	1.3	ASTM D792
Viscosity as Mixed at 25°C	cP.s	22,000	ASTM D2196
Thixotropic Index		3.5	ASTM D2196
Property as Cured			
Color		Yellow	Visual
Young's modulus	GPa	6.2	DMA
Dielectric Strength / Voltage Breakdown	Volt/mil AC	> 800	ASTM D149
Volume Resistivity (22℃)	Ohm-cm	> 10E+12	ASTM D257
Coefficient of Thermal Expansion	ppm/C	125 (@ > Tg) 78 (@ < Tg)	IPC-TM-650
Adhesion (Al/Al lap shear)	Psi	> 1600	ASTM D1002
Tg	℃	65	DMA
Temperature Usage	℃	-80 to 200	TGA
Cure Profile			
Cure at 25°C	Hour	12	Durometer
Cure at 100°C	Minute	15	Durometer
Cure at 125°C	Minute	8	Durometer
Pot / Work Life at 25°C (after mixing)	Minute	45	Viscosity double

These figures are only intended as a guide and should not be used in preparing specifications.

Characteristics

EP 1646 is a non-slump (thixotropic) epoxy adhesive for high voltage resistance applications. It is a fast cure ("snap-cure") system that can cure in minutes at elevated temperature such as over 100℃ after mixing of two components. It provides strong bonding to substances such as aluminum, copper, most of plastics, and FR4 based printed circuit board with excellent resistance to high voltage shocking and arching. The cured material also has strong resistance to oils and corrosive chemicals. EP 1646 can be dispensed from dual cartridge.

Special Features and Benefits

- Non-slumping formulation
- Fast cure (snap cure), and rmt curable
- Strong high voltage resistance
- Strong resistance to current arching
- High temperature stability
- Low bleeding
- No volatile (100% solid)
- Strong oil and chemical resistance

Typical Applications

- Aerospace electronics
- Automotive electronics
- Semiconductor and Telecommunications
- High voltage resistance potting
- Bonding of power devices
- Sealing of high voltage devices
- Thermally conductive bonding

EP 1646 has a shelf life of at least 6 months when stored below 5℃ in the originally sealed container.

Processing Instruction

Important! Only components A and B with the same lot number may be processed together! For the package in a container (not in a cartridge), to ensure homogeneity of the material, the components must be stirred thoroughly before they are removed or processed in order to uniformly disperse any fillers that might have settled during storage.

We recommend running preliminary tests to optimize conditions for the particular application. Comprehensive processing instructions can be obtained by contacting directly to United Adhesives, Inc.

Storage

EP 1646 has a shelf life of at least 6 months when stored below 5℃ in the originally sealed container. The 'Best use before end' date of each batch appears on the product label. Storage beyond the date specified on the label does not necessarily mean that the product is no longer usable. In this case however, the properties required for the intended use must be checked for quality assurance reasons.

Safety information

General hygiene regulations should be observed. Comprehensive instructions are given in the corresponding Material Safety Data Sheets. They are available on request from United Adhesives, Inc.