

# EP 1733

## Snap Cure and Low Coefficient of Thermal Expansion Epoxy Adhesive

Typical Properties			
Property	Unit	Value	Test Method
Color of Component		Grey / White	Visual
Density	Gram /cc	1.65	ASTM D792
Viscosity at 25°C	cps	98,000	ASTM D2196
Thixotropic Index		2.5	ASTM D2196
Property as Cured			
Color of Component		Grey / White	Visual
Hardness	Shore D	92	ASTM D2240
Dielectric Constant	@1000Hz	4.0	ASTM D150
Dielectric Strength	Volt/mil AC	> 400	ASTM D149
Volume Resistivity (@24°C)	Ohm-cm	> 10E+13	ASTM D257
Coefficient of Thermal Expansion	ppm/°C	75 (>T <sub>g</sub> ) 28 (<T <sub>g</sub> )	IPC-TM-650
T <sub>g</sub> (after cure at 150°C)	°C	145	DMA
Adhesion (Al / Al lap shear)	Psi	> 1500	ASTM D1002
Pot / Work Life at 25°C	Day	> 14	Viscosity double
Temperature Usage	°C	-80 to 180	TGA
Cure Profile			
If cure at 180°C	Second	15	Durometer
If cure at 150°C	minute	1	Durometer
If cure at 125°C	minute	3	Durometer

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

### Characteristics

EP 1733 is a snap cure epoxy adhesive for electronic bonding applications. It is a one-part and can be cured at elevated temperature in minutes or seconds. After cure, it provides strong bonding to silicon, BGA, ceramics, LTCC, aluminum, copper, stainless steel, etc. It has low coefficient of thermal expansion for reduced thermal stress. EP 1733 is dispensable and printable with screen or stencil.

### Special Features and Benefits

- Instant cure at elevated temperature
- Very stable at room temperature
- One part and readily to apply
- Strong bonding to various substrates
- Dispensable and printable
- Low bleeding, low volatile

### Typical Applications

- Bonding of die to LTCC, Al, Cu
- High speed bonding or sealing
- Dispensable and printable for patterning
- Attach PCBs, base plates, components
- Seal lids, covers, housings, connectors
- Aerospace & Automotive electronics
- Semiconductor & Telecommunications

EP 1733 has a shelf life of at least 6 months when stored in refrigerator (e.g. 4°C) in the originally sealed container.

### Processing Instruction

The adhesive is a pre-mixed adhesive as one part for easier applying. In order to keep longer usage life, please always store the original or left material in refrigerator (e.g. < 4°C).

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 1733 has a shelf life of at least 6 months when stored in refrigerator (e.g. 4°C) 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.

The data presented in this leaflet are in accordance with the present state of our knowledge, but do not absolve the user from carefully checking all supplies immediately on receipt. We reserve the right to alter product constants within the scope of technical progress or new developments. The recommendations made in this leaflet should be checked by preliminary trials because of conditions during processing over which we have no control, especially where other companies' raw materials are also being used. The recommendations do not absolve the user from the obligation of investigating the possibility of infringement of third parties' rights and, if necessary, clarifying the position. Recommendations for use do not constitute a warranty, either express or implied, of the fitness or suitability of the products for a particular purpose. For technical, quality, or product safety questions, please contact directly to United Adhesives Inc.