

EP1715

Die Attach Snap Cure Epoxy Adhesive

Typical Properties			
Property	Unit	Value	Test Method
Color of Component		Off white / Brown	Visual
Density	Gram /cc	1.2	ASTM D792
Viscosity at 25°C	cps	28,000	ASTM D2196
Thixotropic Index		2.2	ASTM D2196
Property as Cured			
Color of Component		Off white / Brown	Visual
Hardness	Shore D	87	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	57 (<Tg) 135 (>Tg)	IPC-TM-650
Tg (after cure at 150°C)	°C	125	DMA
Adhesion (Al / Al lap shear)	Psi	> 1800	ASTM D1002
Temperature Usage	°C	-80 to 180	TGA
Cure Profile			
Cure at 180°C	second	10 to 15	Durometer
Cure at 150°C	second	30	Durometer
Cure at 125°C	minute	3	Durometer
Pot / Work Life at 23°C	week	3	Viscosity double
Storage Life at <= 4°C	Month	6	Viscosity double

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

Processing Instruction

Apply adhesive to substrate by dispense or stencil/screen printing. The surface of the substrate must be free of dust, grease and any other contaminants. Place the die or component into adhesive. At temperature of 150°C to 210°C, press the die/component with a thermode and a define pressure. A post cure of a couple minute at 140C may also recommend.

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).

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.

Characteristics

EP1715 is a snap cure epoxy adhesive for electronic bonding applications. It can be cured in 8 to 30 seconds at 150°C to 210°C. It is a one-part, long pot life, no solvent formulation that provides strong bonding to silicon, BGA, ceramics, FR4, LTCC, aluminum, copper, stainless steel, etc. with impact resistance and moisture resistance. EP1715 is dispensable and printable.

Special Features and Benefits

- Fast cure at elevated temperature
- Cure in seconds at 180°C by pressing a semiconductor with a thermode at defined pressure
- Moisture resistance
- Strong bonding to various substrates
- Low bleeding, low volatile, lo ionic content

Typical Applications

- Bonding of die to LTCC, Al, Cu
- Bonding for film lamination
- Attach PCBs, base plates, components
- Seal lids, covers, housings, connectors
- Vibration dampening
- Aerospace & Automotive electronics
- Semiconductor & Telecommunications

EP 1715 has a shelf life of at least 6 months when stored in refrigerator (e.g. 4°C) in the originally sealed container.

Storage

EP1715 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.