

# EP1386

## Flexible Epoxy Encapsulant

Typical Properties			
Property	Unit	Value	Test Method
Color / Component A		Clear	Visual
Color / Component B		Clear	Visual
Mixing Ratio (A:B)	By volume	1 : 1	
Density (as mixed)	Gram /cc	1.1	ASTM D792
Viscosity as Mixed at 25°C	cPs	3,000	ASTM D2196
Property as Cured			
Color		Clear	Visual
Hardness	Shore A	70	ASTM D2240
Tensile Strength	Mpa	5.8	ASTM D638
Elongation	%	110	ASTM D638
Dielectric Constant	@1000Hz	4.3	ASTM D150
Dielectric Strength	Volt/mil AC	> 400	ASTM D149
Volume Resistivity (@24°C)	Ohm-cm	> 10E+12	ASTM D257
Coefficient of Thermal Expansion	ppm/°C	120	IPC-TM-650
Adhesion (Al/Al lap shear)	Psi	> 1500	ASTM D1002
Temperature Usage	°C	-80 to 180	TGA
Cure Profile			
If cure at 25°C	Hour	6 to 8	Durometer
If cure at 85°C	Minute	30	Durometer
Pot / Work Life at 25°C (after mixed up)	Minute	30	Viscosity double

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

### Processing Instruction

Only components A and B with the same lot number may be processed together! For potting applications, it is recommended to warm the parts to ~60 °C, and then do potting. Any possible air bubbles in mixing or potting process can be removed by vacuum.

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

EP1386 has a shelf life of at least 12 months when stored in ambient 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.

### Characteristics

EP1386 is a flexible epoxy adhesive for sealing or encapsulating electronic devices. It is a two-component, flowable formulation that cures at room or elevated temperature to provide strong bonding to various plastics, ceramics and metals. The flexibility reduces thermal stress and provides better thermal cycle performances. EP1386 is dispensable.

### Special Features and Benefits

- Flexibility for stress reduction
- Flowable for potting / encapsulation
- Strong fracture toughness
- Strong bonding to various substrates
- Low bleeding, low volatile

### Typical Applications

- Potting of electronic components
- Encapsulate parts, cavities
- Bonding of plastics, ceramics and metals
- Attach PCBs, base plates, components
- Seal lids, covers, housings, connectors
- Vibration dampening
- Thermal stress coupling
- Aerospace & Automotive electronics
- Semiconductor & Telecommunications

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