

EP 1582

Transparent Epoxy Encapsulant

Typical Properties			
Property	Unit	Value	Test Method
Color / Component A	APHA	Pt-Co: 20 Clear / Transparent	ASTD D 1209 & Visual
Color / Component B	APHA	Pt-Co: 35 Clear / Transparent	ASTD D 1209 & Visual
Mixing Ratio (A:B)	By volume	1:1	
Density (as mixed)	Gram /cc	1.15	ASTM D792
Viscosity as Mixed at 25°C	cPs	11,000	ASTM D2196
Property as Cured			
Color	APHA	Pt-Co: 35 Clear / Transparent	ASTD D 1209 & Visual
Young's modulus	GPa	2.5	DMA
Dielectric Strength	Volt/mil AC	> 500	ASTM D149
Volume Resistivity	Ohm-cm	> 10E+12	ASTM D257
Coefficient of Thermal Expansion	ppm/C	155 (@ > Tg) 78 (@ < Tg)	IPC-TM-650
Adhesion (Al/Al lap shear)	Psi	> 1600	ASTM D1002
Tg	°C	50	DMA
Temperature Usage	°C	-80 to 180	TGA
Cure Profile			
Cure at 25°C	hr	6 to 8	DSC
Cure at 85°C	Min	15	DSC
Pot / Work Life at 25°C	Min	60	Viscosity double

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

Processing Instruction

For the package in a container (not in a cartridge), to ensure homogeneity of the material, the two components must be stirred thoroughly. Any possible air bubbles due to the mixing processing can be removed by applying 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

EP 1582 has a shelf life of at least 6 months when stored at 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

EP 1582 is a transparent epoxy adhesive for optical and electronic applications. After the two components are mixed, it can cure at room temperature or elevated temperature to form a transparent, colorless solid. It also forms strong bonding to various substrates such as metals, silicon, flip chip, BGA, ceramics, LTCC, Al, Cu, stainless steel, etc. EP 1582 is dispensable.

Special Features and Benefits

- Optical Transparency
- High thermal stability
- High structural bonding strength
- Low bleeding, low volatile
- Low ionic content

Typical Applications

- Opto-Electronic Applications
- LED Glob-Top Encapsulating
- Semiconductor and Telecommunications
- Optical Lens and IR Lens
- Fiber Optical Potting or Sealing
- Lens and Prism Bonding
- Bonding or Potting of Medical Devices
- Adhesive for Endoscopes or Light Guides
- Structural Bonding or Potting

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