

OE1581

Optical Transparent Epoxy Encapsulant

Typical Properties			
Property	Unit	Value	Test Method
Color / Component	APHA	Pt-Co: 20 Clear / Transparent	ASTD D 1209 & Visual
Density	Gram /cc	1.05	ASTM D792
Viscosity as Mixed at 25°C	cPs	3470	ASTM D2196
Property as Cured			
Color	APHA	Pt-Co: 30 Clear / Transparent	ASTD D 1209 & Visual
Hardness	Shore D	70	DMA
Refractive Index	n _D (25°C)	1.564	ASTM D542
% Transmittance	360 nm to 1000 nm	95% to 99%	ASTD D1003
Flexible Strength	Mpa	120	ASTM D790
Compress Strength	Mpa	150	ASTM D695
Dielectric Strength	Volt/mil AC	> 500	ASTM D149
Volume Resistivity	Ohm-cm	> 10E+12	ASTM D257
Coefficient of Thermal Expansion	ppm/C	120 (@ > Tg) 60 (@ < Tg)	IPC-TM-650
Adhesion (Al/Al lap shear)	Psi	> 800	ASTM D1002
Tg	°C	75	DMA
Temperature Usage	°C	-80 to 180	TGA
Cure Profile			
Cure at 85°C	Hr	2	DSC
Cure at 125°C	Min	30	DSC
Pot / Work Life at 25°C (After thawing)	Hr	8	Viscosity double

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

Processing Instruction

Please let the compound thaw at room temperature before apply. Thawing time is typically 10 to 30 min depending on container size. Longer thawing time may need for larger size container. Any possible air bubbles in 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

OE1581 has a shelf life of at least 6 months when stored at -40°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.

Characteristics

OE1581 is one component water clear optically transparent epoxy adhesive / potting compound for L.E.D. encapsulating, fiber optics, clear potting, or any optical and electronic applications. After cured at elevated temperature, it forms a transparent, colorless solid with strong bonding to various substrates such as metals, silicon, flip chip, BGA, ceramics, LTCC, Al, Cu, stainless steel, etc. It is formulated with anti-ultraviolet protecting to minimize yellowing over time. It also provides bubble free and glass smooth finish.

Special Features and Benefits

- Water clear optical transparency
- One component and ready to use
- High 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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