

# OE1582

## Transparent Epoxy Encapsulant

Typical Properties			
Property	Unit	Value	Test Method
Color / Component A	APHA	Pt-Co: 50 Clear / Transparent	ASTD D 1209 & Visual
Color / Component B	APHA	Pt-Co: 10 Clear / Transparent	ASTD D 1209 & Visual
Mixing Ratio (A:B)	By vol. / wt.	2 : 1	
Density (as mixed)	Gram /cc	1.05	ASTM D792
Viscosity as Mixed at 25°C	cPs	7,500	ASTM D2196
Property as Cured			
Color	APHA	Pt-Co: 35 Clear / Transparent	ASTD D 1209 & Visual
Hardness	Shore D	70	DMA
Refractive Index	n <sub>D</sub> (25°C)	1.564	ASTM D542
% Transmittance (1 mm thick)	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	123 (@ > Tg) 58 (@ < Tg)	IPC-TM-650
Adhesion (Al/Al lap shear)	Psi	> 1200	ASTM D1002
Tg	°C	80	DMA
Temperature Usage	°C	-80 to 180	TGA
Cure Profile			
Cure at 25°C	hr	24	Hardness
Cure at 80°C	Min	60	DSC
Cure at 125°C	Min	15	DSC
Pot / Work Life at 25°C	hr	4	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 mixing, 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

OE1582 has a shelf life of at least 12 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

OE1582 is a water clear optically transparent epoxy adhesive / potting compound for L.E.D. encapsulating, fiber optics, clear potting, or any optical and electronic applications. After the two components are mixed, it can be cured at elevated temperature to form 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 and optical transparency
- 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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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.