

# SE 1352

## Optical Clear Flexible Epoxy Adhesive

Typical Properties			
Property	Unit	Value	Test Method
Color of Component A	APHA	Pt-Co: 20 Clear / Transparent	ASTD D 1209 & Visual
Color of Component B	APHA	Pt-Co: 25 Clear / Transparent	ASTD D 1209 & Visual
Mixing Ratio	In wt. / vol.	10 : 1	
Density (after mixing)	Gram /cc	1.0	ASTM D792
Viscosity at 25°C (after mixing)	cps	35,000	ASTM D2196
Property as Cured			
Color	APHA	Pt-Co: 30 Clear / Transparent	ASTD D 1209 & Visual
Hardness	Shore A	58	ASTM D2240
Tensile Strength	Mpa	2.8	ASTM D638
Elongation	%	83	ASTM D638
Dielectric Constant	@1000Hz	3.0	ASTM D150
Dielectric Strength	Volt/mil AC	> 500	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	> 600	ASTM D1002
Temperature Usage	°C	-80 to 180	TGA
Cure Profile			
Cure at 25°C	Hour	6 to 8	Durometer
Cure at 125°C	Min	15	Durometer
Pot / Work Life at 25°C (after Mixing A and B part)	Min	30	Viscosity double

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

### Processing Instruction

The adhesive is packed in dual cartridges with mixing ratio of A : B = 10 : 1 in volume.

For some coating or potting applications, it is recommended to warm the applied surface to ~ 105°C, and/or the adhesive to about 50°C, to promote faster flow.

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.

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

SE 1352 is a two component optical clear flexible epoxy adhesive for bonding electronic components, or optical component. It cures at room temperature or elevated temperature to provide strong bonding to glass lens, LED glob-top, optical lens & IR lens, fiber optical, prism, endoscopes or light guides, plastics, metals, etc. The flexibility provides better thermal cycle performances. SE 1352 is dispensable.

### Special Features and Benefits

- Optical clear epoxy-silicone copolymer
- Flexibility for stress reduction
- Strong fracture toughness
- Fast flow and capillary flow
- Strong bonding to various substrates
- Low bleeding, low volatile

### Typical Applications

- Bond opto-electronics parts and components
- Encapsulate parts, cavities
- Bonding of die to LTCC, Al, Cu
- Attach PCBs, base plates, components
- Seal lids, covers, housings, connectors
- Vibration dampening
- Thermal stress coupling
- Aerospace & Automotive electronics
- Semiconductor & Telecommunications

### Storage

SE 1352 has a shelf life of at least 12 months when stored at room temperature 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.