

# Eposolder 6512

## Epoxy Silver Electrically Conductive Adhesive

Typical Properties			
Property	Unit	Value	Test Method
Color / Component A		Silver	Visual
Color / Component B		Silver	Visual
Mixing Ratio (A / B)	By vol. / wt.	1:1	UAITM
Thixotropic Index		3	ASTM D2196
Density (as mixed)	Gram /cc	3.5	ASTM D792
Viscosity as Mixed at 25°C	cps	34,000	ASTM D2196
Property as Cured			
Color		Silver	Visual
Volume Resistivity	Ohm-cm	< 0.0002	ASTM D257
Thermal Conductivity	W/m-K	> 5	ASTM D5470
Hardness	Shore D	75	ASTM D2240
Temperature Usage	Degree °C	- 40 to 150	TGA
Adhesion (Al/Al lap shear)	Psi	> 1200	ASTM D1002
Coefficient of Thermal Expansion	ppm/C	< 140	IPC-TM-650
Shelf Life (< 30°C)	Month	12	UAITM
Cure Profile			
Cure at 65°C	Min	120	DSC
Cure at 85°C	Min	30	DSC
Cure at 125°C	Min	15	DSC
Pot / Work Life at 25°C (After mixing of A, B parts)	Min	15	Viscosity double

These figures are only intended as a guide and should not be used in preparing specifications.  
UAITM – United Adhesives' internal test method

### Processing Instruction

At room temperature, Eposolder 6512 can dry to tack-free in ~1 hour and reach a full cure after 8 hrs. The best properties, however, are typically achieved by curing at elevated temperatures.

For the package in containers, to ensure homogeneity of the material, the components must be stirred thoroughly before they are removed or processed in order to uniformly disperse any fillers that might have settled during storage.

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

Eposolder 6512 has a shelf life of at least 6 months when stored below 30 °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

Eposolder 6512 is a high electrically conductive adhesive. It is a two-part, silver filled, epoxy-based semi-fluid. It cures fast at elevated temperature to form strong bonding to various metals and substrates. The cured material has excellent electrical conductivity to provide circuit conducting, grounding and EMI shielding. Eposolder 6512 is dispensable and printable.

### Special Features and Benefits

- High electrical conductivity
- Flexible cure profiles
- Room temperature curable
- Strong bonding to various substrates
- High thermal conductivity
- High temperature stability

### Typical Applications

- Aerospace
- Automotive electronics
- Semiconductor and Telecommunications
- Circuit conducting and grounding
- EMI Shielding
- Conductive coating
- Thermal dissipation

For one part version electrically conductive adhesive, please select United Adhesives' Eposolder 6520.

The figures listed in this datasheet are in good faith with the present state of our knowledge, but should not be used in substitution for user's tests. We reserve the right to alter product constants within the scope of technical progress or new developments. The suggestions for use in this sheet should be checked by preliminary trials because the user's processing conditions are out of our control. The suggestions for use should not be in substitution of user from the obligation of investigating the possibility of infringement of third parties' patents or rights. This datasheet does 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.