

E-Shield 6740

Electrically Conductive Adhesive and Coating

Typical Properties			
Property	Unit	Value	Test Method
Color		Silver / Copper	Visual
Viscosity at 25°C	cP.s	35,000	ASTM D2196
Thixotropic Index		2.5	ASTM D2196
Density	Gram /cc	4.2	ASTM D792
Weight loss in cure	Weight %	< 5%	TGA
Property as Cured			
Color		Silver / Copper	Visual
Volume Resistivity	Ohm-cm	< 0.003	ASTM D257
Thermal Conductivity	W/m-K	> 5	ASTM D5470
Hardness	Shore D	40	ASTM D2240
Temperature Usage	Degree °C	-80 to 180	TGA
Shelf Life (< -40°C)	Month	6	Viscosity double
Cure Profile			
At 25°C (Dry to tack-free)	Day	3 to 4	UAITM *
Cure at 125°C	Minute	60	DSC
Cure at 150°C	Minute	20	DSC
Pot Life at 25°C	Hour	24	Viscosity double

These figures are only intended as a guide and should not be used in preparing specifications.
 UAITM – United Adhesives' Internal Test Method

Characteristics

E-Shield 6740 is a high electrically conductive adhesive and surface coating material. It is a one-component epoxy filled with silver-coated copper. It cures at elevated temperature to form a thin solid coating layer on various plastic substrates with superior adhesion. The cured material has excellent electrical conductivity to provide EMI / RF shielding. E-Shield 6740 is both dispensable and printable.

Special Features and Benefits

- High electrical conductivity
- Strong bonding to various plastics
- Flexible cure profiles & room temp curable
- High thermal conductivity
- High temperature stability
- Strong oil and chemical resistance

Typical Applications

- Aerospace
- Automotive electronics
- Semiconductor and Telecommunications
- Coated on backside of plastic housing
- EMI / RF Shielding
- Conductive coating

E-Shield 6740 has a shelf life of at least 6 months when stored below – 40 °C freezer in the originally sealed containers.

Processing Instruction

At room temperature, E-Shield 6740 can dry to tack-free in ~24 hour and reaches a full cure after 4 days. The best properties, however, are typically achieved by curing at elevated temperatures.

For the package in a container, to ensure homogeneity of the material, the components must be stirred thoroughly before they are removed or processed in order to uniformly disperse any filler 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

E-Shield 6740 has a shelf life of at least 6 months when stored below – 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.

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.