

ET1658

High Thermally Conductive Epoxy Adhesive

Typical Properties			
Property	Unit	Value	Test Method
Color / Component A		White	Visual
Color / Component B		White or Blue	Visual
Mixing Ratio	By weight	1:1	
Density (as mixed)	Gram /cc	1.5	ASTM D792
Viscosity as Mixed at 25°C	CPs	110,000	ASTM D2196
Property as Cured			
Color		White or Light Blue	Visual
Young's modulus	GPa	7.8	DMA
Thermal Conductivity	W/m-K	2.7	ASTM D5470
Dielectric Strength	Volt/mil AC	> 700	ASTM D149
Volume Resistivity	Ohm-cm	> 10E+12	ASTM D257
Coefficient of Thermal Expansion	ppm/C	160 (@ > Tg) 48 (@ < Tg)	IPC-TM-650
Adhesion (Al/Al lap shear)	Psi	> 1800	ASTM D1002
Tg	°C	120	DMA
Temperature Usage	°C	-80 to 200	TGA
Cure Profile			
Cure at 85°C	Min	90	DSC
Cure at 125°C	Min	20	DSC
Pot / Work Life at 25°C	Hr	16	Viscosity double

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

Processing Instruction

Important! Only components A and B with the same lot number may be processed together.

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

ET1658 has a shelf life of at least 12 months when stored below 35°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

ET1658 is a boron nitride filled high thermally conductive structural bonding adhesive for electronic applications. It is a two-component paste, addition-curing system that cures at elevated temperature to provide strong bonding to metals such as aluminum, copper, and FR4 based printed circuit board with superior thermal conductivity. The material also has low ionic content and high dielectric insulation property. ET1658 is printable.

Special Features and Benefits

- High thermal conductivity
- High temperature stability
- High dielectric property
- Low bleeding, low volatile
- Low ionic content

Typical Applications

- Aerospace electronics
- Automotive electronics
- Semiconductor and Telecommunications
- Thermally conductive bonding
- Bonding of power devices to heat sinks
- Dielectric insulation
- Thermally conductive vibration

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