

DATA SHEET

Thermal Conductive Adhesive

Description

The thermal conductive adhesive used at Trans-Tech, Inc. functions as a heat transfer media, a durable dielectric insulator, a barrier against environmental contaminants, and a stress-relieving shock and vibration absorber over a wide temperature and humidity range.

In addition to sustaining physical and electrical properties over a broad range of operating conditions, the adhesive is resistant to ozone and ultraviolet degradation and has good chemical stability. Typical properties of the 1-4173 thermal conductive adhesive are shown in the following tables.

Property	Value
Product form	One part
Color	Gray
Viscosity/flowability, centipoise or mPa*s	58,000
Durometer (Shore scale)	92 A
Specific gravity	2.7
Working time @ RT	N/A
Cure time @ RT (hours)	–
Heat cure time (minutes):	
@ 100 °C (212 °F)	90
@ 125 °C (257 °F)	30
@ 150 °C (302 °F)	20
Unprimed adhesion, lap shear:	
psi	640
N/cm ²	440
kgf/cm ²	45

Property	Value
Thermal conductivity @ 25 °C (77 °F), Watt/meter-K	1.9
Tensile strength:	
psi	900
MPa	6.2
kgf/cm ²	63.3
Elongation (percent)	20
Compression modulus at 10%, psi	–
Linear CTE, micron/mC	126
Dielectric strength:	
volts/mil	425
kV/mm	16.7
Dielectric constant:	
@ 100 Hz	4.98
@ 100 kHz	4.86
@ 1 MHz	–
Dissipation factor:	
@ 100 Hz	0.008
@ 100 kHz	< 0.003
@ 1 MHz	–
Volume resistivity, ohm-cm	2.20E+14
Shelf life from date of manufacture (months)	6 @ 5 °C

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