

ACURA E8074

SILVER EPOXY ADHESIVE FOR AEROSOL JET® DISPENSE

TECHNICAL DATA

February 2013

Product Description

ACURA E8074 is a silver nanoparticle filled epoxy designed for dispensing through an Optomec Aerosol Jet® system. Primary applications would be small die attach, power die attach, and bonding of other small components. ACURA E8074 can be dispensed in an Aerosol Jet system to make highly reproducible dots or traces. Bond strength and electrical conductivity are excellent. Additional properties will be reported on future updates of this data sheet.

APPLICATIONS	FEATURES	RECOMMENDED SUBSTRATES	BENEFITS
Small Die Attach Power Die Attach Small Component Bonding	Dispensable in Aerosol Jet System High electrical conductivity	Gold Ceramic Aluminum	High resolution deposition Bond smaller components Reduced material usage

PROPERTIES OF UNCURED MATERIAL		
Property	Value	Test Method
Appearance	Silver Liquid	n/a
Chemical Class	Epoxy / Silver	n/a
Viscosity @ 25°C, spindle 7 @ 20 RPM	250 cps	ASTM D2556
Thixotropic Index, 10/100 RPM	1.4	ASTM D2196

PROPERTIES OF CURED MATERIAL		
Property	Typical Value	Test Method
T _g , Glass Transition Temperature, °C	86	ASTM E1356 (DSC)
Lap Shear Strength, Al to Al, 25°C, PSI	2150	ASTM D1002
Die Shear Strength, 25°C	TBD	MIL-STD-883, Method 2019
Volume Resistivity, 25°C, ohm-cm	5 x 10 ⁻⁵	MIL-STD-883, Method 5011
Thermal Conductivity, 25°C, W/mK	1.5	ASTM E1461
Weight Loss @ 200°C	<0.5%	ASTM D3850
Ionic Impurities	TBD	MIL-STD-883, Method 5011
Specific Electrical Conductance	TBD	MIL-STD-883, Method 5011
pH	TBD	MIL-STD-883, Method 5011
Outgassing	TBD	ASTM E595

PROCESSING PROPERTIES		
Property	Value	Test Method
Cure Schedule	60 minutes @ 150°C	n/a
Pot Life @ 25°C	2 weeks (with stirring)	n/a

Storage: 6 months @ -10°C

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