APPLI-TEC
THERMOSET ADHESIVE SOLUTIONS
ISO 9001 / AS9100 CERTIFIED

0709 Polyurethane Adhesive

Ideal for advanced electronic assembly

0709 is a dark gray, thermally conductive, precision mixed, degassed, and frozen polyurethane adhesive compound for advanced electronic assembly. 0709 (Hacthane 121 B-1) is HMS-2353, Type IV certified. This thixotropic compound is suitable for electronic bonding, staking, and may be used as a fillet as well. 0709 has a thermal conductivity of 0.9 W/mK, ideal for heat dissipation of components. 0709 cures to a tough and flexible material with low modulus and a very low Glass Transition Temperature (Tg). The cured material's ability to not crack or harm bonded rigid components during thermal cycling provides a major advantage, as it will not compromise the integrity of the component. The CTE of 0709 is lower than conventional polyurethane elastomers, while retaining relatively low modulus. 0709 provides thermal conductivity and strain relief for many staking applications.

UNCURED	
Pot Life @ 25°C	1.5 hours
Viscosity @ 25°C	Paste
Shelf Life @ -40°C	3 months
CURE OPTIONS	1.5 hours @ 74°C 24 hours @ 25°C (Handling) 72 hours @ 25°C (Full Cure)
CURED PROPERTIES	Based on cure of 1.5 hours @ 74°C
Color	Dark Gray
Shore A Hardness	88
Glass Transition Temp (°C)	-65
Density (g/cc)	2.3
Lap Shear 2024T3 Clad (psi)	750
Elongation (%)	40
ELECTRICAL PROPERTIES	Based on cure of 1.5 hours @ 74°C
Dielectric Constant	4.6 @ 1 MHz
Volume Resistivity (ohm-cm)	1.0E 14 @ 500 VDC
THERMAL PROPERTIES	Based on cure of 1.5 hours @ 74°C
CTE below Tg (ppm/°C)	55
CTE above Tg (ppm/°C)	140
Glass Transition Temp (°C)	-65
Operating Temp. Range (°C)	-100 to 125
Thermal Conductivity (W/mK)	0.9
ACOUSTIC PROPERTIES	
Velocity (m/s)	1,434
Impedance (MRayles)	3.275
Loss (dB/cm-MHz)	-12.4
Density (g/cc)	2.28

KEY FEATURES

- Hacthane 121 B-1
- HMS-2353, Type IV
- Thixotropic
- Thermally Conductive
- Electrically Insulative
- Semi-flexible
- Long Pot Life
- Low Glass Transition Temperature
- Bonds Well to Most Substrates
- Solvent Resistant
- Hydrolytic Stability

Talk to an engineer:

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