

**Thermalbond™**

Thermalbond™ is a thermally conductive, high strength epoxy adhesive. It provides exceptional adhesion to copper, aluminum, steel, glass, ceramics, and most plastics. Thermalbond™ also has a coefficient of thermal expansion compatible with aluminum, copper, and brass, making it particularly well suited for thermally bonding semiconductors and other components to chassis or heat sinks.

**ORDERING INFORMATION**

Part number	Net weight
4949G	0.8 oz (25 gram kit)
4950G	1.7 oz (50 gram kit)
4951G	3.5 oz (100 gram kit)
4952G	7.0 oz (200 gram kit)
4953G	4 lbs (1814 grams)

**MIXING INSTRUCTIONS**

Mix resin thoroughly before removing material. Add 7.1 parts of RT-7 hardener to 100 parts of resin by weight, or 17 parts of RT-7 hardener to 100 parts of resin by volume. Adhesive will set up in:

24 hrs at 25°C (77°F)	1 hr. at 100°C (212°F)
2 hrs. at 65°C (149°F)	30min. at 130°C (266°F)

Note: For maximum electrical and physical properties, a post cure is necessary. Post cure at room temperature for 4 days or for 4 hours at 93°C (200°F).

**HANDLING CHARACTERISTICS**

Typical electrical and physical properties at room temperature with RT-7 hardener

<b>Color</b>	Green
<b>Specific gravity</b>	2.35
<b>Working viscosity</b>	25,000 cps
<b>Thermal conductivity</b>	1.34W/(m °C) (0.77 Btu/hr ·ft· °F)
<b>Thermal resistivity</b>	29.4°C in/watt
<b>Tensile strength</b>	6.34 x 10 <sup>7</sup> Pa (9,2000 psi)
<b>Compressive strength</b>	1.44 x 10 <sup>8</sup> Pa (20,9000 psi)
<b>Bond shear strength aluminum to aluminum, 25.4mm (1") overlap @ 25°C, (77°F)</b>	3.17 x 10 <sup>7</sup> Pa (4,60000 psi)
<b>Thermal coefficient of expansion</b>	24 x 10 <sup>-6</sup> /°C (1.32 x 10 <sup>-6</sup> /°F)
<b>Water absorption, % after 10 days@ 25°C (77°F)</b>	0.20
<b>Hardness, Shore D</b>	86
<b>Volume resistivity</b>	1.0 x 10 <sup>16</sup>
<b>Dielectric strength</b>	59.1 x 10 <sup>3</sup> volts/mm (1500 volts/mil)
<b>Dielectric constant@25°C (77°F) 100KHz</b>	6.1
<b>Dielectric factor@25°C (77°F) 100KHz</b>	0.020
<b>Operating temperatures</b>	-65°C to 155°C (-85°F to 311°F)
<b>Linear shrinkage</b>	0.002 in/in
<b>Shelf life</b>	12 months*
<b>Pot life@25°C (77°F)</b>	2-3 hours
<b>Suggested stripping agent</b>	Miller-Stephenson MS 111
<b>Cleaning solvent</b>	Acetone

\* Stated shelf life is from date of manufacture. To allow for inventory cycle, product shipped from Aavid will have less than 12 months remaining shelf life. Aavid guarantees a minimum of 3 months remaining shelf life. Please adjust order quantity so all product will be consumed within 3 months of date of shipment.