

# A3000

## Highly durable, Wear Resistant Thermal Interface Material

**A3000** is designed for repeated, re-use after disassembly of parts. Particularly good for sliding surfaces together whilst making electric isolation and achieving an excellent thermal interface. The material is constructed from a thermally conductive non-silicon structural adhesive and a high dielectric strength thermally conductive polymer in combination. The adhesive is bonded to one surface permanently whilst the polymer is able to connect the other surface thermally maintaining a high level of electrical isolation. The parts can be cleanly dis-assembled with the A3000 staying on one side whilst the polymer side separates cleanly. The A3000 is designed to be re-used.

**A3000** thermally transfers heat across 2 surfaces maintaining high voltage electrical isolation whilst achieving mechanical wear resistance. Ideal for surfaces which slide together or parts which needs to be un-assembled leaving the thermal interface intact on one side whilst the other side is removed cleanly.

### Features

- Constructed from thermal conductive adhesive and a thermally conductive polyimide film on one side
- Conformability fills micro air voids between mating surfaces reducing thermal resistance
- Provides heat exchange between component and cooling mechanism

### Availability

- A3000 series is available in the following thicknesses of adhesive and polyimide
- A3100 is 100micron polyimide / 250micron adhesive
- A3200 is 200micron polyimide / 250micron adhesive
- A3300 is 300micron polyimide / 250micron adhesive
- Supplied on 30m to 50m rolls and to specified widths on request
- Available as custom cut parts

### Benefits

- The adhesive is permanently bonded to a variety of metal surfaces
- Robust and tested in a customer application to withstand 50g loadings in Electric vehicle crash tests without electrical isolation breakdown.
- Simple to handle and apply

### Recommended Uses

- Mounting high & mid-power LED modules to a heatsink
- To provide a fast and consistent method of attaching power components to a heat sink
- Electric vehicle cooling plates, wedge-lock applications
- A3000 adhesive is NOT suitable for painted or powder coated surfaces

#### Typical Physical Properties

Property (Unit)	Test Method	A3000
Colour	Visual	White/brown
Thermal Conductivity (W/mK)	ATSM D5470	1.1
Thermal Resistance (K-cm <sup>2</sup> /W)	ATSM D5470	3
Operating Temp (°C)	In House	-25 to +130

#### Mechanical and Electrical Properties

Property (Unit)	Test Method	A3000
Sheer Adhesion	ATSM D-1002	3.5
Tensile Strength	ATSM 412	0.15
Breakdown Voltage	ATSM D149	>10,000
Shelf Life (months)	Visual	6
Flame Rating	UL94	V2



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This material is often used in these industries:



Industrial



LED



PSU



Automotive