

# Secure® 1500KT2

Thermally Conductive, Kapton® Reinforced, Thermoset, Structural Adhesive

## Description:

Secure® 1500KT2 is a structural adhesive film composed of uncured silicone rubber with functional additives formulated to deliver exceptional thermal, physical, and electrical properties. Secure® 1500KT2 is supported on 1 mil DuPont® Kapton® MT film for superior dielectric strength and puncture resistance.

Developed specifically for LED and Power applications where long-term reliability is a top concern. Secure® adhesives form chemical bonds with the substrates they are in contact with during cure to produce robust adhesion. This eliminates the need for mechanical fasteners and concern with screws coming loose, clips retaining clamping force, gap pads taking a compression set, or thermal greases pumping out. Secure® adhesives are electrically insulating to isolate your LED PCB or power transistor from the heat sink. Additionally, Secure® adhesives are RoHS compliant and free of halogenated flame retardants.

Secure® 1500KT2 6 mil is a balanced construction with even rubber add-on on each side of the Kapton® film. Secure® 1500KT2 7.5 mil is an unbalanced construction with uneven rubber on each side of the Kapton® film. The uneven rubber add-on is useful for improving wet out of excessively warped components.

## Benefits:

- Eliminates the mechanical fasteners
- Decouples shear stress
- Can be cured without pressure for small bonding areas  $\leq 5 \text{ cm}^2$

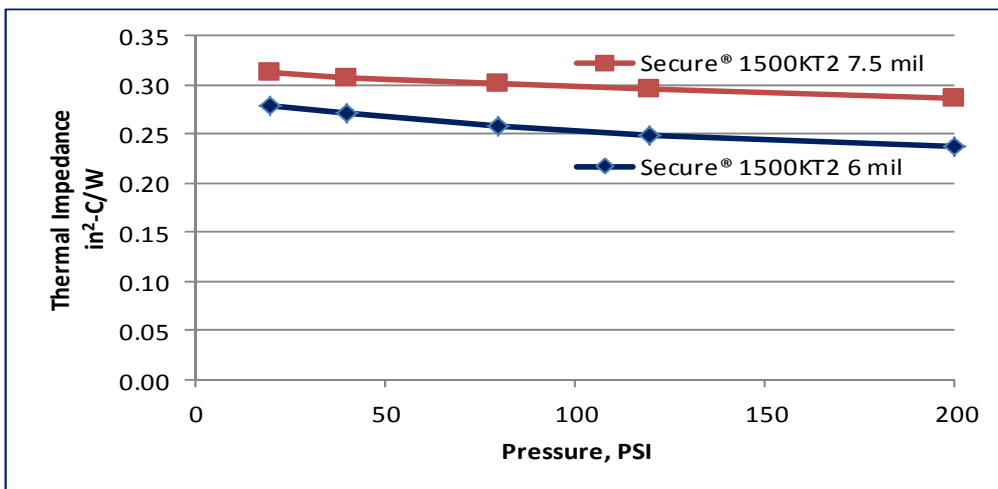
## Recommended Applications:

- Adhering power transistors to heat sinks.
- Adhering LED modules to heat sinks.
- Adhering assemblies to heat sinks.

## Standard Sizes:

- 18 in. x 125 LY rolls
- Slit widths, cut pads, and die cuts
- Other sizes on request

Property	Typical Value		Test Method
	Imperial	Metric	
Color	Mauve		Visual
Thickness	6 & 7.5 mils	0.15 & 0.19 mm	ASTM D374
Construction	Supported		—
Supporting Material	Kapton® MT, 1 mil		—
<b>Mechanical</b>			
Hardness	77 Shore A		ASTM D2240
Shear Strength	500 PSI	3.4 MPa	ASTM D1002
Elastic Modulus ( $\leq 1\%$ strain)	38,900 PSI	268 MPa	Arlon TMS-008
Shear Modulus ( $\leq 25\%$ strain)	145 PSI	1.0 MPa	ASTM D1002
<b>Thermal</b>			
Thermal Conductivity	0.87 Btu/(hr*ft*F)	1.5 W/m-K	ASTM D5470
Thermal Impedance @ 40 PSI	0.27 in <sup>2</sup> *C/W	1.8e <sup>-4</sup> m <sup>2</sup> *K/W	ASTM D5470
Glass Transition Temperature	-180°F	-118°C	ASTM D3418
Operating Range	-150 to 400°F	-100 to 204°C	—
<b>Electrical</b>			
Dielectric Strength, kVac	> 1,000 V/mil	> 39 kV/mm	ASTM D149
<b>UL Certification (QMFZ2.E54153)</b>			
Thickness	6 mils		ASTM D374
Flammability Rating	V-0		UL 94
RTI, Mechanical & Electrical	150°C		UL746
Hot Wire Ignition (HWI)	3		UL746
High Current Arc Ignition (HAI)	2		UL746
Dielectric Strength	66 kV/mm		UL746



Thermal impedance measured per ASTM D5470. Values obtained depend on pressure and surface finish of fixture

Secure® 1500KT2 adhesives are temperature sensitive. Arlon recommends 7 +/- 3C storage. Shelf Life is 6 month from DOM at recommended conditions.

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