T-mate™ 2900 Series

global solutions :
local support™

T-mate™ 2900 Series

T-mate™ 2900 is a reusable phase change material designed for ease of testing and rework ability. T-mate™ 2900 has a composite construction of a special malleable metal alloy and a high performance phase change material.

At 50°C, T-mate™ 2900 begins to soften and flow, filling the microscopic irregularities of the thermal solution, thus reducing thermal resistance.

T-mate™ 2900 shows no thermal performance degradation after 1,000 hours @130°C, or after 500 cycles, from -25°C to 125°C. The phase change material softens and does not fully change state resulting in minimal migration (pump out) at operating temperatures (see viscosity curve). T-mate™ 2900 is available in three thicknesses, 0.005" (0.125mm), 0.010" (0.25mm) and 0.020" (0.5mm).

Features and Benefits:

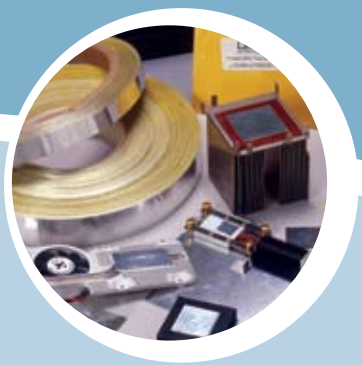
- Low thermal resistance at low pressures
- Reusable: make and break thermal interface connection many times
- Naturally tacky at room temperature, no adhesive required
- No heatsink preheating required

Applications:

- High frequency microprocessors
- Notebook and desktop PCs
- Computer servers
- Thermal test stands

For sales information:
In Asia, please telephone +886-3-3129292
In Europe, please telephone +44-1342-315044
In the USA please telephone 1-800-246-9050

or visit: www.lairdtech.com



T-mate™ 2900 Series

	T-mate™ 2905c	T-mate™ 2910c	T-mate™ 2920	Test Method
Construction & Composition	Foil reinforced boron nitride filled film	Foil reinforced boron nitride filled film	Foil reinforced boron nitride filled film	
Color	Yellow/Silver	Yellow/Silver	Yellow/Silver	Visual
Thickness	0.005" (0.13mm)	0.010" (0.25mm)	0.020" (0.51mm)	
Thickness Tolerance	± 0.001" (± 0.03mm)	± 0.001" (± 0.03mm)	± 0.002" (± 0.05mm)	
Density	1.86 g/cc	1.64 g/cc	1.52 g/cc	Helium Pycnometer
Shelf Life	1 Year	1 Year	1 Year	
Temperature Range	-25°C to 125°C	-25°C to 125°C	-25°C to 125°C	
Phase Change Softening Temperature	50°C to 70°C	50°C to 70°C	50°C to 70°C	
"Burn In" Temperature	70°C for 5 min.	70°C for 5 min.	70°C for 5 min.	
Thermal Impedance @ 20 psi @ 138 KPa	0.07°C-in^2/W 0.45°C-cm^2/W	0.09°C-in^2/W 0.61°C-cm^2/W	0.27°C-in^2/W 1.74°C-cm^2/W	ASTM D5470 (modified)
Volume Resistivity	5 x 10^{12} ohm-cm	5 x 10^{12} ohm-cm	5 x 10^{12} ohm-cm ASTM D257	
Dielectric Constant @ 1MHz	4.2	4.2	4.2	ASTM D150

Standard Thicknesses: 0.005" (0.13mm) 0.010" (0.25mm) 0.020" (0.51mm)
Consult the factory for alternate thicknesses
Standard Sheet Sizes: 9" x 9" (229mm x 229mm)
T-mate™ 2900 sheets are supplied with a clear polyester top liner to protect phase change material.
T-mate™ 2900 is available in individual die cut shapes.
Adhesive: Pressure sensitive adhesive is not applicable for T-mate™ products.