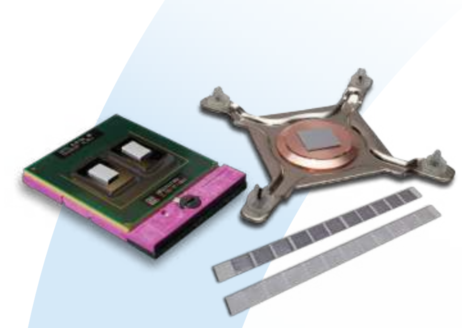
Innovative **Technology**
for a **Connected** World

Tpcm™ 780
Phase Change Material



Tpcm™ 780 is a high performance, inherently tacky, easy to rework phase change thermal interface material. Developed specifically to meet the high thermal conductivity and low thermal resistance requirements of today's demanding processors.

This silicone-free material is so soft that it begins to flow as the temperature is elevated by just a small amount. Also, since no tabs are required, Tpcm™ 780 eliminates the need for expensive converting.

FEATURES AND BENEFITS RoHS

- Minimizes contact thermal resistance by filling the microscopic irregularities of the components it contacts. Begins to soften and flow at approximately 45°C
- Designed to minimize migration (pump out) at CPU operating temperatures using a unique material formulation that softens, but does not fully change phase
- Silicone-free for applications that are silicone sensitive
- Outstanding thermal performance helps to ensure CPU/application reliability
- No mess due to thixotropic characteristics which prevent flow outside of interface
- Very soft at room temperature, therefore less stress on board during assembly
- Tabless parts makes for easier handling in the manufacturing environment
- RoHS Compliant
- Tabless, 0.016 or 0.025 inch thick parts allow for rapid application and handling while eliminating the risk of top tab liner being left in place during assembly
- Available in 8 x 8 mm, 15 x 15 mm, 4 x 6 mm and additional custom cut parts
- Naturally tacky at room temperature, requiring no adhesive
- Heat sink preheating not required
- Exceptionally high reliability during storage and after installation

APPLICATIONS

- Graphics Cards
- Notebooks
- Desktops
- Servers
- Memory Modules
- Automotive
- IGBTs

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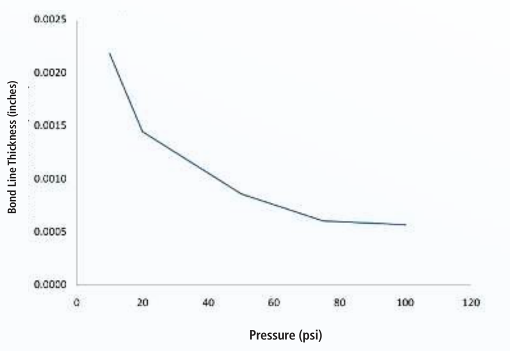
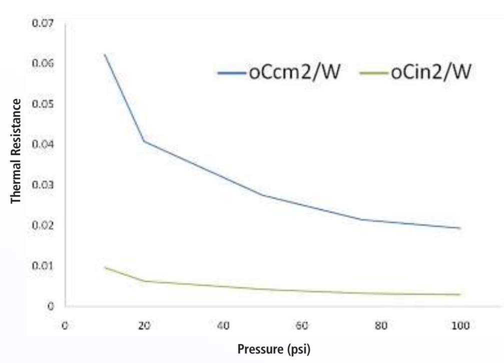
PROPERTIES	Tpcm™ 780	TEST METHOD
Color	Grey	Visual
Thickness, inches (mm)	0.016” (0.406) 0.025” (0.635)	
Thickness Tolerance, inches (mm)	± 0.0016” (0.0406) ± 0.0025 (0.0635)	
Construction & Composition	Non-reinforced Film	
Specific Gravity, g/cc	2.48	Helium Pycnometer
Phase Change Softening Range, °C	~45°C to 70°C	
Thermal Conductivity, W/mK	5.4	Hot Disk Thermal Constants Analyzer
Hardness (Shore 00)	85 3 sec @ 21 C	ASTM D2240
Thermal Resistance 70°C, 345 kPa, °C-cm²/W (50 psi, °C-in²/W)	0.025 (0.004)	ASTM D5470 (modified)
Outgassing TML	0.51%	ASTM E595
Outgassing CVCM	0.20%	ASTM E595

Bond Line Thickness Vs Pressure at 70°C



Thermal Resistance Vs Pressure



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