



HIGH PERFORMANCE PHASE CHANGE MATERIAL

Tpcm™ 580S are high performance thermal phase change materials designed to meet the thermal, reliability, and price requirements of high end thermal applications. Tpcm™ 580S is inherently tacky, flexible and exceptionally easy to use.

At temperatures above its transition temperature of 50°C (122°F), Tpcm™ 580S begins to soften and flow, filling the microscopic irregularities of the components it contacts. The result is an interface with minimal thermal contact resistance. Due to the gradual change in viscosity (softening), Tpcm™ 580S minimizes migration (pump out).

Tpcm™ 580S can be supplied as cut parts in strips and rolls with top tabbed liners for easy application. The top tabbed liner can be removed immediately or provide a protective cover during shipping and removed at assembly. Tpcm™ 580S can also be supplied in sheets and custom die cut configurations. Tpcm™ 580S meets all environmental requirements including RoHS.

FEATURES AND BENEFITS

- Low total thermal resistance
(0.013°C-in²/W at 50 psi)
- Inherently tacky and easy to use
- No adhesive required
- High reliability
- Meets all environmental requirements
including RoHS
- Provides high value price / performance point

APPLICATIONS

- Microprocessors
- Memory chipsets
- Graphic processing chips
- Custom ASICs

	Tpcm™ 588S	Tpcm™ 5810S
Construction and Composition	Non-reinforced film	Non-reinforced film
Color	Gray	Gray
Thickness	0.008" (0.2 mm)	0.010" (0.25 mm)
Density	2.87 g/cc	2.87 g/cc
Operating Temperature Range	-40 to 125°C (-40 to 257°F)	-40 to 125°C (-40 to 257°F)
Transition Temperature	50°C (122°F)	50°C (122°F)
Thermal Resistance Modified ASTM D5470		
10 psi	0.015°C-in²/W (0.097°C-cm²/W)	0.015°C-in²/W (0.13°C-cm²/W)
20 psi	0.011°C-in²/W (0.071°C-cm²/W)	0.011°C-in²/W (0.10°C-cm²/W)
50 psi	0.010°C-in²/W (0.064°C-cm²/W)	0.010°C-in²/W (0.08°C-cm²/W)
Thermal Conductivity	4.0 W/mK	4.0 W/mK
Volume Resistivity	1.4 x 10¹²ohm-cm	1.4 x 10¹²ohm-cm
Hardness	50 (Shore 00)	50 (Shore 00)
Approximate Bondline Thickness	@ 10 psi = 0.0015 in @ 50 psi = 0.001 in	@ 10 psi = 0.0015 in @ 50 psi = 0.001 in

STANDARD PACKAGING

Sheets:	9" x 9" (228.6 mm x 228.6 mm) 18" x 18" (457.2 mm x 457.2 mm)
Cut Parts:	On strip with top tabbed liner Individual cut through

global solutions: local support™

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