

HIGH THERMAL CONDUCTIVE  
PHASE CHANGE MATERIAL IN  
A NEW PRINTABLE FORMAT

**Honeywell PCM45F-SP  
Printable Thermal Interface  
Material**

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## BENEFITS

- First printable phase change material
- Ease of application
- Superior handling and reworkability
- Applies like grease without the pump out
- More applications per kilogram due to lower specific gravity
- Excellent thermal reliability after thermal cycling and HAST

## FEATURES

## OVERVIEW

The PCM45F-SP phase change thermal interface consists of a sophisticated thermally conductive material. It has optimum filler size distribution to achieve maximum packing density compared to conventional phase change materials. PCM45F-SP changes phase at 45°C to assure maximum surface conformance. PCM45F-SP



may be applied to a component, heat sink or thermal spreader, providing

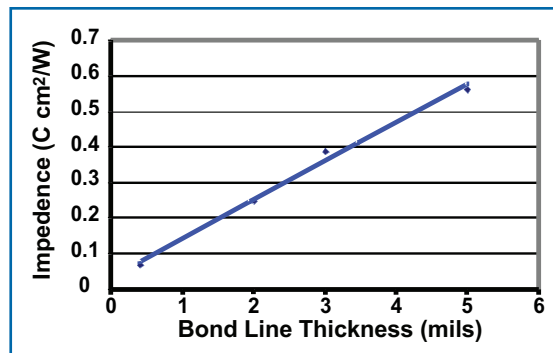
**PCM45F-SP is available in paste form in various size containers.**

the same industry leading performance as Honeywell PCM45F tape and roll format phase change materials.

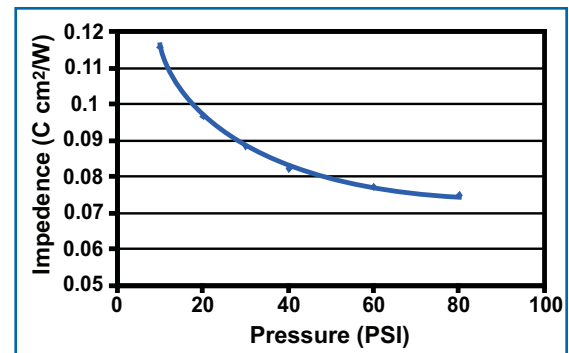


**Application of PCM45F-SP is not limited to heat sink design; different shapes are possible depending on the screen print design.**

**Thermal Impedance vs. Bond Line Thickness**



**Thermal Impedance vs. Pressure**



## MATERIAL CHARACTERISTICS

### Physical Properties

(no shim 40 PSI)	PCM45F	PCM45F SP
Thermal Conductivity	2.35 W/m°C	2.35 W/m°C
Thermal Impedance	0.08°C cm²/W	0.08°C cm²/W
Volume Resistivity	3.0x10 <sup>15</sup> Ωcm	3.0x10 <sup>15</sup> Ωcm
Specific Gravity	2.2 g/cm³	2.0g/cm³
Typical Bond Line	0.50 mil	0.50 mil
No Shim @ 40 PSI		

### Thermal Impedance Post Reliability

(no shim 40 PSI)	PCM45F	PCM45F SP
End of Line	0.08°C cm²/W	0.08°C cm²/W
1000 hrs T/C "B"	0.07°C cm²/W	0.07°C cm²/W
300 hrs 85°C/85%RH	0.06°C cm²/W	0.07°C cm²/W
96 hrs HAST	0.06°C cm²/W	0.07°C cm²/W
500 hrs @ 150°C	0.07°C cm²/W	0.05°C cm²/W

### For more information

[www.electronicmaterials.com](http://www.electronicmaterials.com)

### Specialty Materials

Electronic Materials

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