

## Printed PCM thermal paste from Quick-Cool: QC-PCM -...

QC-PCM is an innovative TIM (Thermal Interface Material) with phase change properties. It is particularly suitable for the thermal connection of electronic components to heat sinks or other cooling surfaces in series production as a replacement for a manually applied thermal compound. Above the phase change temperature, the printed and dried thermal paste spreads even under low pressure and completely wets the surface. An extremely thin layer thickness is achieved which, together with the excellent thermal conductivity, leads to a low thermal resistance. Surface roughness and slight unevenness are compensated, air pockets are expelled. At no time does the TIM leak or pump out. The parts printed with the QC-PCM are very easy to process in automated processes or by pick-and-place robots.

### Technical specifications:

Material:	printed phase change material
Colour:	Gray
Density:	2,0g/cm <sup>3</sup>
RoHS compliance::	yes, 2011/65/EU
Thermal conductivity:	3,4 W/mK
Thermal resistance at 1MPa:	0,002 °C cm <sup>2</sup> /W
Thermal resistance at 1MPa:	0,0039 °C cm <sup>2</sup> /W
Thermal resistance at 70kPa:	0,2 °C cm <sup>2</sup> /W
Phase change temperature:	45°C
Shelf life in the printed state:	Unlimited in a dust-free environment
Maximum application temperature:	125°C

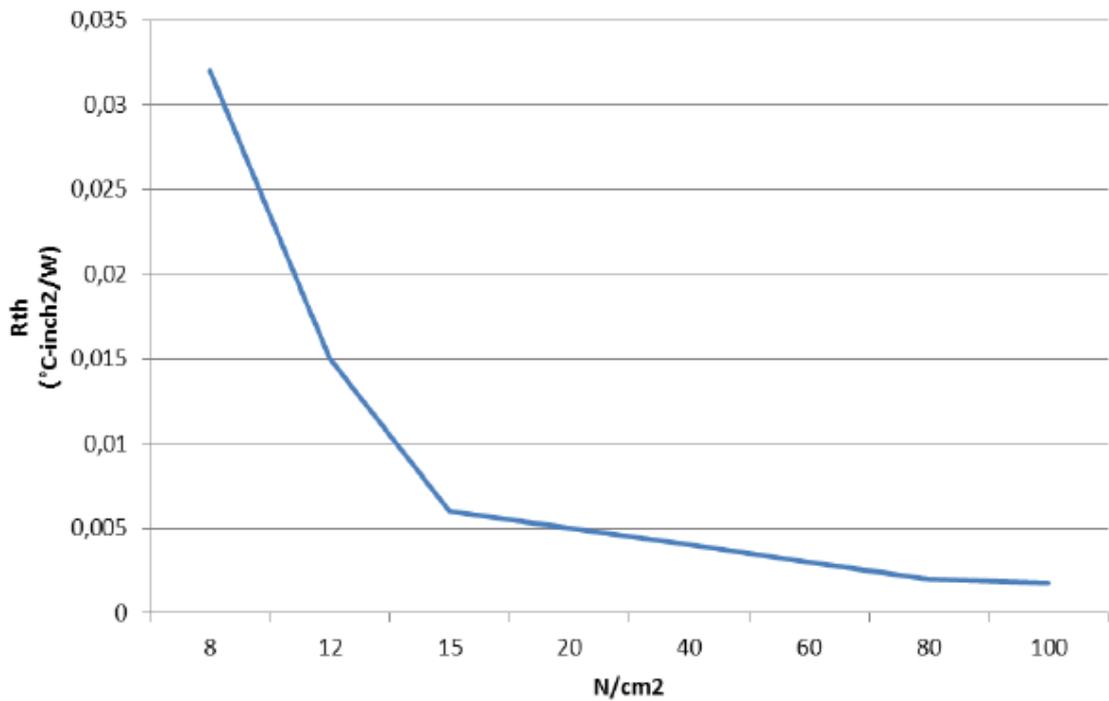
### Characteristics:

- Very good replacement for conventional WLP
- Extremely thin layer due to defined printing
- Thermal conductivity 3.4W / mK
- Silicone free
- Freely selectable print patterns
- Maximum reproducibility, no manual order
- Clean workplaces, dry printing

## Applications:

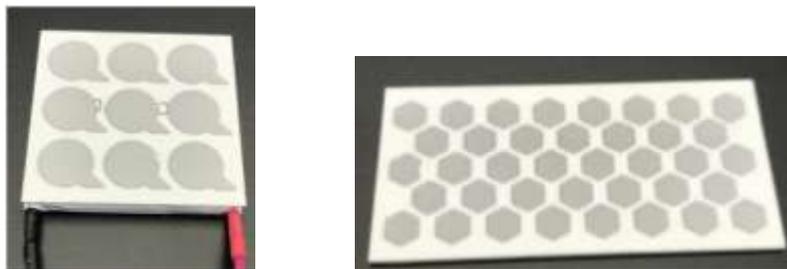
Thermal connection of:

- Thermally conductive washers, heat sinks
- IGBTs or MOSFETs
- Processors
- Components in electronics / microelectronics in series production



The thermal resistance as a function of the contact pressure

Application examples: Peltier element (TEC) printed with QC-PCM and printed Al<sub>2</sub>O<sub>3</sub> heat-conducting washer



The printed surfaces are completely dry and easy to use