

Features & Benefits

- 9.6 W/mK (Thermal Conductivity) Phase Change Material Pad
- Electrically Isolating
- Low Interfacial Resistance
- Superior Thermal Performance

Applications

- Power Electronics
- PCBA to heatsink
- Discrete components to heat spreader
- Fiber optics and Telecom equipment

Introduction

TCLAD PCM is a thermally conductive gap filling phase change material (PCM) that is offered in a solid form. The purpose of the material is to minimize thermal resistance between the heat source and the heat sink or heat spreader.

Typical properties PCM 9.6 consists of a thermally conductive 45 °C wax based organic of thermal filler, which allows it to transform at 45 °C from solid form to a soften “wax” like material. This will allow the application to achieve minimum bond line. It is recommended to use spring clips or screws to assure constant pressure between interface and power source. It is highly recommended to retighten the screws after several power cycling in the application.

How to use: Remove the liner on one side and place the pad onto the first surface, PCB, component or heatsink. Remove the second liner and apply the mating surface with the required pressure as needed in the application.

Useable life and storage: PCM products perform best if stored in a cool and dry / non-humid environment, especially where they are not exposed to any sunlight. Typical shelf life is up to 12 months when properly stored.

Package Information: Typical package can be individual, or bulk packed or can be in trays or tape and reel.

Precautions: Please review the technical data sheet of the material before use of the product in terms of the material characteristics to fit one’s application. All values stated here are typical values.

We provide custom solutions for your applications. For further inquiries, please contact your local sales agent or directly to TCLAD sales in your region.

Phase Change Material

PCM 9.6

Item	Condition	Unit	Value	Method
General				
Color	Visual	-	Gray	-
Continuous Use Temp	-	°C	-40 ~ 130	-
Thickness	Mitutoyo	Mm (mil)	0.254 (10) 0.381 (15)	-
Density	25°C	g/cc	2.85	ASTM D792
PCM Transition Temperature	-	°C	45	DSC
Electrical				
Flame Rating	Vertical Burn Test	-	V-0	UL94
Breakdown Voltage	AC	KV/mm	6	ASTM D149
Volume Resistivity	-	Ω cm	>1×10 ¹⁴	ASTM D257
Thermal				
Thermal Conductivity	-	W/m-K	9.6	ASTM D5470
Thermal Resistance				
0.205 mm	50 psi	°C cm ² /W	0.03	-
0.254 mm	50 psi	°C cm ² /W	0.035	-
0.381 mm	50 psi	°C cm ² /W	0.045	-
RoHS	-	-	Compliant	

TCLAD

US Sales.us@tclad.com
 APAC Sales.asia@tclad.com
 Europe Sales.eu@tclad.com
www.tclad.com



All statements, technical information and recommendations herein are based on tests we believe to be reliable, and THE FOLLOWING IS MADE IN LIEU OF ALL WARRANTIES OR IMPLIED, INCLUDING THE IMPLIED WARRANTIES OF MARKET ABILITY AND FITNESS FOR PURPOSE. Sellers' and manufacturers' only obligation shall be to replace such quantity of the product proved to be defective. Before use, user shall determine the suitability of the product for its intended use, and the user assumes all risk and liability whatsoever in connection therewith. NEITHER SELLER NOR MANUFACTURER SHALL BE LIABLE EITHER IN TORT OR IN CONTRACT FOR ANY LOSS OR DAMAGE DIRECT, INCIDENTAL, OR CONSEQUENTIAL, INCLUDING LOSS OF PROFITS OR REVENUE ARISING OUT OF THE USE OR THE INABILITY TO USE THE PRODUCT. No statement, purchase order or recommendation by seller or purchaser not contained herein shall have any force or effect unless in an agreement signed by the officers of the seller and manufacturer. All marks used above are trademarks and/or registered trademarks of TCLAD Inc and its affiliates in the U.S., Germany and elsewhere. © 2021 TCLAD Inc. All rights reserved. US

