TCLAD

Technical Data

Phase Change Material — PCM 3.5P

Features & Benefits

- 3.5 W/mK (Thermal Conductivity) Phase Change Material Paste
- Screen Printing application in Paste Form
- 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 paste 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 3.5P consists of a thermally conductive 50 °C wax based organic of thermal filler, which allows it to transform at 50 °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: Clean surfaces and apply the material onto surfaces. Ensure both mating surface have 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 it is 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.

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.

Item	Condition	Unit	Value	Method
General				
Color	Visual	-	Gray	-
Continuous Use Temp	-	°C	-40 ~ 125	-
Min Thickness (at 50 psi)	Mitutoyo	Mm (mil)	0.02 (0.79)	
Density	25°C	g/cc	2.3	ASTM D792
PCM Transition Temperature	-	°C	50	DSC
Electrical				
Volume Resistivity	-	Ω·cm	>1x10^8	ASTM D257
Thermal				
Thermal Conductivity	-	W/m-K	3.5	ASTM D5470
Thermal Resistance				
0.02 mm	50 psi	°C·cm^2/W	0.05	-
RoHS	-	-	Compliant	

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

RoHS compliant

Rev 2025-D106-001