

Features & Benefits

- 4.0 W/mK Thermal Conductivity
- Electrically Isolating
- Low Interfacial Resistance
- Superior Thermal Performance

Applications

- Automotive Electronics (HEV, NEV, Batteries)
- PCBA to heatsink
- Discrete components to heat spreader
- Fiber optics and Telecom equipment

Introduction

TCLAD TCGL is a thermally conductive gap filling material that is offered in a one-part material. The purpose of the material is to minimize thermal resistance between the heat source and the heat sink or heat spreader. This is a one-part precure Gel.

Typical properties of gap filling materials have the following characteristics: Thermal conductivity, viscosity, hardness, pot life, volume resistivity etc. It is typically offered in cartridges, or containers and can be dispensed through a static mixing nozzle with a handheld dispensing gun or by automated dispensing equipment.

Mixing is not needed; this liquid form is precure. Once applied, the material should be placed in the interface and put into compression so that it can form around the surrounding surfaces to remove as much air and to wet out to the adjoining surfaces as much as possible.

Useable life and storage: TCGL products are best if stored in a cool and dry / non-humid environment, especially where it is not exposed to any sunlight. Whereas the cartridge containers should be flipped upside down every two weeks to prevent the particle fillers from settling to the bottom. The shelf life can be up to 12 months when properly stored.

Package Information: Typical package size, cartridges: 50cc, and 400 cc. Containers: 20L and 200L or 1Kg and 200Kg. Custom size available.

Precautions: Please review the technical datasheet of the material before use of the products in terms of the material characteristic 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 in your region.

Thermal Conductive Gel

TCGL 4.0

Item	Condition	Unit	Value	Method
General				
Color	Visual	-	Green	-
Continuous Use Temp	-	°C	-50 ~ 200	-
Flow Rate	30 cc tube with 90psi air pressure	g/min	18	-
Density	25°C	g/cc	3.25	ASTM D792
Minimum Bondline	25 °C	mm	0.15	-
Electrical				
Dielectric Constant	1 GHz	-	7.5	ASTM D150
Dielectric Strength	-	kV/mm	8	ASTM D149
Volume Resistivity	-	Ω cm	> 1x10 ¹³	ASTM D257
Thermal				
Thermal Conductivity	-	W/m-K	4.0	ASTM D5470
Durability				
RoHS	-	-	Compliant	
Flame Rating	Vertical Burn Test	-	V-0	UL94

Applications Tips:

- **Surface Preparation:** Thoroughly clean the surfaces before applying the liquid gap filler to ensure proper adhesion and to maximize thermal performance.
- **Proper Storage:** Store any unused materials in a cool, dry location and adhere to the manufacturer's guidelines for shelf life and storage conditions to maintain product integrity.

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