

Product Description

DM-TIM-15323 is a high thermal conductivity single part epoxy adhesive. It is designed to provide superior heat transfer between a heat generating component eg power device and heat sink, heat spreader or other cooling device eg fans, heat pipes whilst ensuring high voltage isolation. The material acts as both a thermal interface material and an adhesive reducing the amount of assembly components needed in a device.

Product Benefits

- Excellent thermal conductivity (2.3 W/m.K)
- High bond strength
- High breakdown voltage >14 kV/mm
- Single part system
- Excellent thermal stability with high operating temperatures
- Low water absorption

Applications

- Heat sink bonding
- Potting/encapsulating sensors
- Semiconductor use eg chip-scale packages, power semiconductors
- Battery systems - modules and packs
- LED and Automotive lighting
- Power supplies
- Industrial appliances

Physical Properties

Test	Properties
Viscosity before Phase Change (Pa.s) (Lamy Cone & Plate, 50s ⁻¹ , 25°C)	35 - 55
Density (ASTM D792)	2.5 g/cm ³
Colour	Grey

Deposition/Cure Properties

Syringe	Properties
Recommended Curing Conditions	150°C (30 mins)
Substrates	Plastics, ceramics, aluminium, copper, glass
Dispense Method	Pressure-time dispense from syringe

Thermal/Electrical Properties

Parameter	Properties
Thermal Conductivity (ASTM D5470)	2.3 W/m.K
Hardness (ASTM D5470)	90 (Shore D)
Glass Transition Temperature (T _g)	130°C
Lap Shear Strength (Aluminium)	>2500 psi
Thermal Contact Resistance (ASTM D5470)	7 x 10 ⁻⁵ m ² .K/W
Volume Resistivity (ASTM D257)	>1 x 10 ¹⁴ Ω.cm
Dielectric Constant (1 KHz) (ASTM D149)	3.0
Dielectric Strength (ASTM D149 MOD)	>14 kV/mm
Weight Loss (TGA)	0.06% (250°C), 0.4% (300°C)
Water Absorption (ASTM D570-98)	0.1%

Durability Performance

Parameter	Properties
Thermal Stability (150°C, bake test)	1000 hours
Highly Accelerated Lifetime Testing	1000 hours (85°C, 85% RH)
Operating Temperature Range	-55 to 200°C

The product is RoSH compliant.

Storage and shelf-life

The paste shelf-life is 6 months from date of shipment. Please store pastes at refrigerated temperatures (4-7°C).

Safety and Handling

For safe use of this product, please review relevant material and safety datasheet (MSDS).

Packaging

Available for manual use with plunger (DM-TIM-15323-SYP), automatic syringe dispense (DM-TIM-15323-SY) or pots (DM-TIM-15323-P).

For more information, please contact:

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