9460

One-part Epoxy, thermally Conductive Adhesive, High Tg

9460 is a thermally conductive, one-part epoxy adhesive. It is smooth, thixotropic, non-sagging, and bonds well to a wide variety of substances. It has an unlimited working time at room temperature and does not require frozen storage.

This product is used to bond het sinks, LEDs, and other heat-generating components in electronic assemblies. It does not require mixing and can be readily used in manual, pneumatic and robotic dispensing processes.

Features & Benefits

Thermal conductivity of 0.76 W/(m·K)

Minimum cure temperature of 100 °C

Unlimited working time

Shelf life: 9 months at room temperature

Provides strong electrical insulation

T_g of 117 °C

Strong resistance to humidity, salt water, acids, bases, and aliphatic hydrocarbons

Cure Instructions

The product will not cure at room temperature. Cure the adhesive in an oven at one of these time/temperature options:

Temperature	100 °C	130 °C
Time	45 min	20 min

Available Packaging

Part #	Packaging	Net Wt.
9460-10ML	Syringe	21.5 g

Storage and Handling

Store between -10 and 27 ˚C in a dry area, away from sunlight (see SDS). To maximize shelf life, recap product firmly when not in use.

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Liquid Properties

Density	2.2 g/mL	ASTM D1475
Viscosity @ 25 ˚C	2 300 000 cP	Brookfield Engineering labs Inc. IPCTM-65- Method 2.4.24.4
Working Time	Unlimited	—
Shelf Life @ 22 °C	9 months	—

Cured Properties

Color	Black	—
Density	1.8 g/mL	Hydrostatic Weighing
Service Temperature Range	-55–140 ˚C	—
Resistivity	8.1 x 10^{12} Ω·cm	ASTM D257
Hardness	90 D	ASTM D2240
Breakdown Voltage @ 3.175 mm	25 800 V	ASTM D149
Dielectric Strength @ 3.175 mm	200 V/mil	ASTM D149
Tensile Strength	5.8 N/mm^2	ASTM D638
Compressive Strength	64 N/mm^2	ASTM D695
Lap Shear	11 N/mm^2 (Stainless steel) 4.2 N/mm^2 (Aluminum) 7.6 N/mm^2 (Copper) 6.9 N/mm^2 (Brass) 0.9 N/mm^2 (Polycarbonate)	ASTM D1002
Glass Transition Temperature (T_g)	117 ˚C	ASTM E1545
Coefficient of Thermal Expansion (CTE)	57 ppm/˚C (Prior T_g) 134 ppm/˚C (After T_g)	ASTM E831
Thermal Conductivity @ 25 ˚C Specfic Heat Capacity @ 25 ˚C Thermal Diffusivity @ 25 ˚C	0.8 W/(m·K) 0.7 J/(g·K) 0.4 mm^2/s	ASTM E1461

Application Instructions

Read the product SDS for more detailed instructions before using this product.

Recommended Preparation

Clean the substrate with Isopropyl Alcohol, MG #824, so the surface is free of oils, dust, and other residues.

Syringe

1. For the 10 mL size, twist and remove the cap from the syringe. Do not discard the cap.
2. Dispense the adhesive evenly to both surfaces.
3. To stop the flow, pull back on the plunger.
4. Clean nozzle to prevent contamination and material buildup.
5. Replace the cap on the syringe.