8349TFM

Thermal Adhesive

8349TFM is a 2-part, flame retardant, thermally conductive epoxy adhesive. It is a dark grey, smooth, thixotropic paste that cures to form a hard, durable polymer that is thermally conductive, yet electrically insulating.

This thermal adhesive is most often used to bond heatsinks to CPUs, LEDs and other electronics components.

For a shorter working time, use 8329TFF. For a longer working time, use 8329TFS.



Features & Benefits

High thermal conductivity

Flame retardant—meet UL 94V-0

1:1 mix ratio

High dimensional stability

Provides strong electrical insulation

Excellent compressive and tensile strength

Bonds well to a wide variety of substances

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

SVHC-free

Cure Instructions

Allow to cure at room temperature for 16 hours, or cure the adhesive in an oven at one of these time/temperature options:

Temperature	65 °C	80 °C
Time	20 min	10 min

Part #	Packaging	Net Vol.	Net Wt.
8349TFM-45ML	2 Jar Kit	45 mL	73.2 g
8349TFM-200ML	2 Can Kit	200 mL	325 g

Storage and Handling

Store between 16 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	1.6 g/mL (Mixed) 1.6 g/mL (A) 1.6 g/mL (B)	ASTM D1475
Mix Ratio	1:1 (Volume) 1:1 (Weight)	—
Working Time [a]	40 min	—
Set Time [a]	55 min	—
Shelf Life	3 y	—
Peak Exotherm [b]	31 °C	ASTM D2471

[a] Ambient temperature of 22 °C
[b] Based on a 250 g sample in a fixed container geometry

Cured Properties

Color	Dark grey	—
Density	1.7 g/mL	Hydrostatic Weighing
Service Temperature Range	-65–120 ˚C	—
Maximum Intermittent Temperature	200 ˚C	—
Resistivity	6.5 x 10^{12} Ω·cm	ASTM D257
Hardness	92 D	ASTM D2240
Tensile Strength	25 N/mm^2	ASTM D638
Compressive Strength	115 N/mm^2	ASTM D695
Lap Shear	6.7 N/mm^2 (Stainless steel) 4.4 N/mm^2 (Aluminum) 3.0 N/mm^2 (ABS) 0.9 N/mm^2 (Polycarbonate)	ASTM D1002
Glass Transition Temperature (T_g)	80 ˚C	ASTM E1545
Coefficient of Thermal Expansion (CTE)	20 ppm/˚C (Prior T_g) 120 ppm/˚C (After T_g)	ASTM E831
Thermal Conductivity @ 25 ˚C Specfic Heat Capacity @ 25 ˚C Thermal Diffusivity @ 25 ˚C	0.9 W/(m·K) 1.4 J/(g·K) 0.4 mm^2/s	ASTM E1461
Weight Loss @ 155 °C (600 hrs)	11.2 %	–

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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.

Can or Jar

1. Stir each part individually to re-incorporate material that may have separated during storage.
2. Measure 1 part by weight of A.
3. Measure 1 part by weight of B.
4. Thoroughly mix parts A and B together.
5. Apply adhesive to the application area.

Disclaimer: This information is believed to be accurate. It is intended for professional end-users who have the skills required to evaluate and use the data properly. M.G. Chemicals Ltd. does not guarantee the accuracy of the data and assumes no liability in connection with damages incurred while using it.