

8329TCS



High Thermal Conductivity Adhesive

8329TCS is a 2-part epoxy with a long 4-hour working time. It is dark grey, smooth, viscous, thixotropic, and bonds well to a wide variety of substrates. It is a dark grey, smooth, thixotropic paste that cures to form a hard, durable polymer that is thermally conductive, yet electrically insulating.

Use this thermal adhesive paste to glue heat sinks to LEDs, CPUs, and other heat-generating components.

8329TCS has been designed for maximum thermal conductivity. It is highly viscous and must be mixed by hand prior to application. For a lower viscosity, use 8329TFS. For a shorter working time, use 8329TCM.



Features & Benefits

High thermal conductivity

1:1 mix ratio

Provides strong electrical insulation

High tensile strength

Bonds well to a wide variety of substances

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

Meets NASA's low outgassing standard

Cure Instructions

Allow to cure at room temperature for 3 days, or cure in an oven at one of these time/temperature options:

Temperature	65 °C	80 °C	100°C
Time	2 hours	1 hour	20 minutes

Available Packaging

Part #	Packaging	Net Vol.	Net Wt.
8329TCS-6ML	2 Syringe Kit	6 mL	13.8 g
8329TCS-50ML	2 Jar Kit	50 mL	116 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.

Liquid Properties

Density	2.4 g/mL (Mixed) 2.4 g/mL (A) 2.3 g/mL (B)	ASTM D1475
Viscosity @ 25 °C	970 000 cP (A) 2 000 000 cP (B)	Brookfield Engineering labs Inc. IPCTM-65- Method 2.4.24.4
Mix Ratio	1:1 (Volume) 0.95:1 (Weight)	—
Working Time ^a	4 h	—
Set Time ^a	5 h 45 min	—
Peak Exotherm ^b	24 °C	ASTM D2471
Shelf Life	3 y	—

^a Ambient temperature of 22 °C

^b Based on a 20 mL sample in a fixed container geometry

Cured Properties

Color	Dark grey	—
Service Temperature Range	-80–150 °C	—
Resistivity	2 x 10 ¹³ Ω·cm	ASTM D257
Hardness	62 D	ASTM D2240
Tensile Strength	11 N/mm ²	ASTM D638
Compressive Strength	43 N/mm ²	ASTM D695
Lap Shear	4.7 N/mm ² (Stainless steel) 4.4 N/mm ² (Aluminum)	ASTM D1002
Glass Transition Temperature (T _g)	8.8 °C	ASTM E1545
Coefficient of Thermal Expansion (CTE)	36 ppm/°C (Prior T _g) 173 ppm/°C (After T _g)	ASTM E831
Thermal Conductivity @ 25 °C	1.4 W/(m·K)	ASTM E1461
Specific Heat Capacity @ 25 °C	0.9 J/(g·K)	
Thermal Diffusivity @ 25 °C	0.7 mm ² /s	
Weight Loss @ 155 °C (600 hrs)	1.3 %	—

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. Twist and remove the cap from the syringe. Do not discard cap.
2. Measure 1 part by volume of A.
3. Measure 1 part by volume of B.
4. Dispense material on a mixing surface or container, and thoroughly mix parts A and B together.
5. To stop the flow, pull back on the plunger.
6. Clean nozzle to prevent contamination and material buildup.
8. Re-place the cap on the syringe.

Can or Jar

1. Stir each part individually to re-incorporate material that may have separated during storage.
2. Measure 0.95 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.

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