832TC

Thermally Conductive Epoxy, Encapsulating & Potting Compound

832TC is a 2-part, black epoxy that offers extreme environmental, mechanical and physical protection for printed circuit boards and electronic assemblies.

It is designed for applications where thermal management is a concern. Its high thermal conductivity helps protect circuits by reducing the risk of heat buildup. It also provides excellent electrical insulation and protects components from static discharge, vibration, abrasion, thermal shock, environmental humidity, salt water, fungus, and many harsh chemicals.



Features & Benefits

- Low exotherm
- Convenient 1A:1B volume mix ratio
- High compressive and tensile strength
- Excellent adhesion to a wide variety of substrates including metals, composites, glass, ceramics, and many plastics
- Excellent electrical insulating characteristics
- Extreme resistance to water and humidity
- Solvent-free

Available Packaging

Cat. No.	Packaging	Net Vol.	Net Wt.
832TC-450ML	2 Bottle kit	450 mL	751 g
832TC-2L	2 Can kit	1.7 L	2.83 kg
832TC-8L	2 Can kit	7.2 L	12.0 kg
832TC-40L	2 Pail kit	40 L	66.8 kg

Contact Information

MG Chemicals, 1210 Corporate Drive
Burlington, Ontario, Canada L7L 5R6

Email: support@mgchemicals.com

Phone: North America: +(1)800-340-0772
International: +(1) 905-331-1396
Europe: +(44)1663 362888

Cured Properties

Resistivity		8.2 x 10^{12}	Ω·cm
Breakdown Voltage		48 300	V
Dielectric Strength		386	V/mil
Hardness		81	D
Tensile Strength		23	N/mm^2
Compressive Strength		87	N/mm^2
Lap Shear (stainless steel)		13	N/mm^2
(aluminum)		16	N/mm^2
Glass Transition Temperature	(T_g)	50	˚C
CTE Prior T_g		142	ppm/˚C
CTE After T_g		114	ppm/˚C
Thermal Conductivity @ 25 ˚C		0.7	W/(m·K)
Service Temperature Range		-30 – 175	˚C
Intermittent Temperature		200	˚C

Usage Parameters

Working Time	2	h
Mix Ratio by Volume	1:1	
Mix Ratio by Weight	1.1:1	

Uncured Properties

Mixed Density		1.7	g/mL
Density	(A)	1.6	g/mL
	(B)	1.6	g/mL
Viscosity @ 25 ˚C	(A)	33	Pa·s
	(B)	12	Pa·s
	(Mixed)	27	Pa·s

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Application Instructions

Read the product SDS and Application Guide for more detailed instructions before using this product (downloadable at www.mgchemicals.com).

Recommended Preparation

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

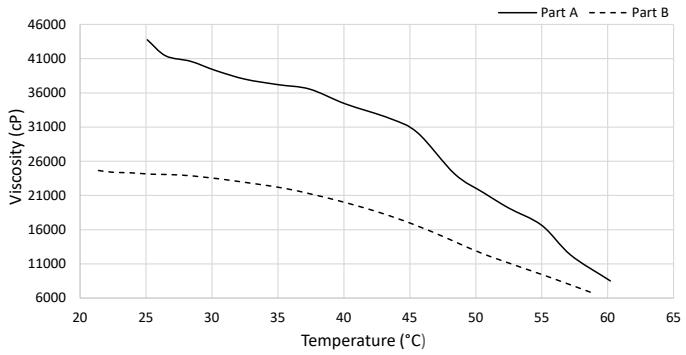
Mixing

1. Scrape settled material free from the bottom and sides of the part A and B container; stir the contents until homogenous. Use a paint shaker if available.
2. Measure 1 part by volume of the part A and pour into the mixing container. Ensure all contents are transferred by scraping the container.
3. Measure 1 part by volume of the part B and pour into the mixing container. Ensure all contents are transferred by scraping the container.
4. Thoroughly and gently mix parts A and B together. Avoid introducing air bubbles.
5. To de-air, let sit for 15 minutes or put in a vacuum chamber at 25 inHg for 2 minutes.
6. If bubbles are present at the top, break them gently with the mixing paddle.
7. Pour the mixture into a container holding the components to be protected.
8. Close the part A and B containers tightly between uses to prevent skinning.

If crystallization/solidification occurs, reconstitute the product by warming to between 55 and 65 °C until it becomes fully re-liquified. Let the material cool to room temperature before mixing, to prevent flash cure.

Mixing >3 kg at a time decreases working time and can lead to a flash cure. Limit the size of hand-mixed batches. For large production volumes, contact MG Chemicals Technical Support for assistance.

Viscosity vs. Temperature



Cure Instructions

Allow to cure at room temperature for 96 hours, or cure in an oven at one of these time/temperature options:

Temperature	65 °C	80 °C	100 °C
Time	2 h	1 h	45 min

Storage and Handling

Store between 16 and 27 ˚C in a dry area, away from sunlight (see SDS). Storage below 16 °C can result in crystallization. This product has a 5 year shelf life.

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.