834FX

Black Flexible Epoxy, Encapsulating & Potting Compound

834FX is a 2-part, flame-retardant, thermally conductive, fexible epoxy resin that provides extreme environmental, mechanical and physical protection for printed circuit boards and electronic assemblies.

This product is designed for applications where minimizing the physical stress on components is critical. It is good in low temperature and arctic environments, and in applications that involve temperature cycling or rapid temperature changes. It provides the functionality of silicone, but with the durability and cost-effectiveness of epoxy.



Features & Benefits

- Flexible and low modulus
- Flame-retardant—meets UL 94V-0
- Convenient 1A:1B volume mix ratio
- Low exotherm
- Good adhesion to a wide variety of substrates including metals, composites, glass, ceramics, and many plastics
- Excellent electrical insulating characteristics
- Non-halogenated flame-retardant fillers
- Solvent-free

Available Packaging

Cat. No.	Packaging	Net Vol.	Net Wt.
834FX-450ML	2 Bottle kit	450 mL	728 g
834FX-1.7L	2 Can kit	1.7 L	2.75 kg
834FX-7.4L	2 Can kit	7.2 L	11.6 kg
834FX-40L	2 Pail kit	40 L	64.7 kg

Contact Information

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Cured Properties

Resistivity		7.5 x 10^{11}	Ω·cm
Breakdown Voltage		36 300	V
Dielectric Strength		365	V/mil
Dissipation Factor @ 1 MHz		0.04	
Dielectric Constant @ 1 MHz		4.5	
Hardness		88	A
Tensile Strength		5.3	N/mm^2
Compressive Strength		21	N/mm^2
Lap Shear (stainless steel)		3.7	N/mm^2
(aluminum)		2.7	N/mm^2
Glass Transition Temperature	(T_g)	0.7	˚C
CTE Prior T_g		71	ppm/˚C
CTE After T_g		137	ppm/˚C
Thermal Conductivity @ 25 ˚C		0.6	W/(m·K)
Service Temperature Range		-50–125	˚C
Intermittent Temperature		-55–165	˚C

Usage Parameters

Working Time	2.5	h
Mix Ratio by Volume	1:1	
Mix Ratio by Weight	1:1	

Uncured Properties

Mixed Density		1.6	g/mL
Density	(A)	1.6	g/mL
	(B)	1.6	g/mL
Viscosity @ 25 ˚C	(A)	8.0	Pa·s
	(B)	16	Pa·s
	(Mixed)	15	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.

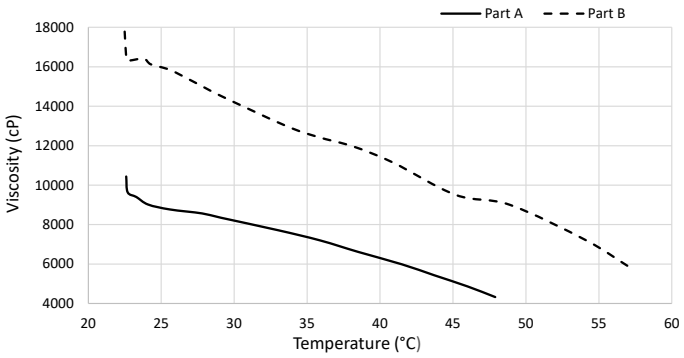
Mixing

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 >1 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 48 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	30 min

Storage and Handling

Store between 16 and 27 ˚C in a dry area, away from sunlight (see SDS). 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.

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