832WC

Optically Clear, Encapsulating & Potting Compound

832WC is a rigid, 2-part, clear epoxy resin that offers extreme environmental, mechanical and physical protection for printed circuit boards and electronic assemblies.

It is designed for applications where high clarity is required. It does not yellow when exposed to UV light; it maintains clarity in applications with service temperatures of up to 65 °C and intermittent exposures of up to 100 °C. It can be used for underwater applications such as potting swimming pool lights. It is also a good choice for casting resin.



Features & Benefits

- UV light stable (minimal yellowing)
- Very low mixed viscosity of 980 cP
- Excellent electrical insulating characteristics
- Extremely high compressive and tensile strength
- Good adhesion to a wide variety of substrates, including metals, composites, glass, ceramics, and many plastics
- Solvent-free

Available Packaging

Cat. No.	Packaging	Net Vol.	Net Wt.
832WC-375ML	2 Bottle kit	375 mL	401 g
832WC-3L	3 Can kit	2.7 L	2.89 kg
832WC-12L	3 Can kit	10.8 L	11.5 kg
832WC-60L	3 Pail kit	60 L	64.2 kg

Contact Information

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Cured Properties

Resistivity		1.6 x 10^{17}	Ω·cm
Breakdown Voltage		41 000	V
Dielectric Strength		465	V/mil
Dissipation Factor @ 1 MHz		0.03	
Dielectric Constant @ 1 MHz		3.2	
Hardness		82	D
Tensile Strength		10	N/mm^2
Compressive Strength		160	N/mm^2
Lap Shear (stainless steel)		3.3	N/mm^2
(aluminum)		6.8	N/mm^2
Glass Transition Temperature	(T_g)	33	˚C
CTE Prior T_g		80	ppm/˚C
CTE After T_g		192	ppm/˚C
Thermal Conductivity @ 25 ˚C		0.2	W/(m·K)
Service Temperature Range		-40 – 140	˚C
		>65 ˚C may affect clarity	
Intermittent Temperature		-50 – 155	˚C

Usage Parameters

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

Uncured Properties

Mixed Density		1.1	g/mL
Density	(A)	1.1	g/mL
	(B)	1.0	g/mL
Viscosity @ 25 ˚C	(A)	2.9	Pa·s
	(B)	0.3	Pa·s
	(Mixed)	0.1	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.

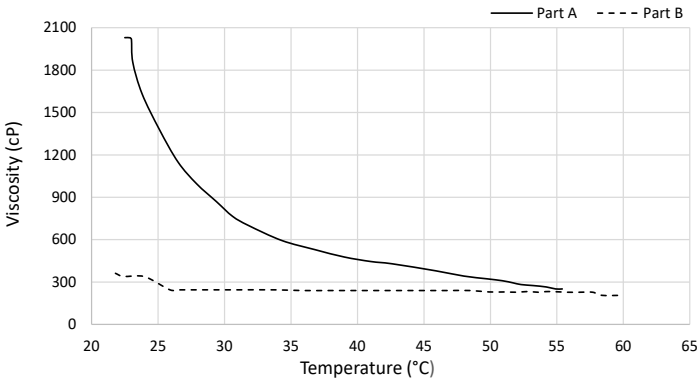
Mixing

1. Measure 2 parts by volume of the part A and pour into the mixing container. Ensure all contents are transferred by scraping the container.
2. Measure 1 part by volume of the part B and pour into the mixing container. Ensure all contents are transferred by scraping the container.
3. Thoroughly and gently mix parts A and B together. Avoid introducing air bubbles.
4. To de-air, let sit for 15 minutes or put in a vacuum chamber at 25 inHg for 2 minutes.
5. If bubbles are present at the top, break them gently with the mixing paddle.
6. Pour the mixture into a container holding the components to be protected.
7. 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 >500 g 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 72 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.