



9347 - 193 Street, Surrey, B.C. V4N 4E7 Canada

Phone: (604) 888-3084 Toll Free: 1-800-201-8822

Fax: (604) 888-7754 Toll Free: 1-800-708-9888

ISO 9001 Registered Quality System

QMI Certificate # 004008

Burlington, Ontario, Canada

Optically Clear Epoxy Encapsulating and Potting Compound

M.G. Chemicals has successfully formulated an optically clear epoxy that can be cured with or without heating. It is tough, water and chemical resistant, an electrical insulator, and has excellent machining properties. Excellent for potting LED lights for maximum light transmission and electronic assemblies where component identification is desirable.

- Water clear potting
- Non-porous, water and chemical resistant
- Extremely impact resistant
- Electrically isolative
- RoHS Compliant

Specifications:



Uncured Properties - Resin [Part A]		
Viscosity	@ 25°C Brookfield 30 RPM	900 cps
Specific Gravity		1.14
Color		Optically Clear
Uncured Properties - Hardener [Part B]		
Viscosity	@ 25°C Brookfield 30 RPM	10 cps
Specific Gravity		0.946
Color		Optically Clear
Uncured Properties - Mixed		
Viscosity	@ 25°C Brookfield 30 RPM	10 cps
Specific Gravity		1.09
Color		Optically Clear
Mixing Properties - Uncured		
Volume Mixing Ratio		3.0 (resin): 1 (hardener)
Mass Mixing Ratio		3.6 (resin): 1 (hardener)
Curing Schedule		
Curing Time (100 g)	@ room temperature	48 hours
	@ 80°C / 176 °F	2 hours
Working time		2 - 3 hours
Cured Properties - Physical		
Hardness (shore D)		76-78
Compression Strength	ASTM D695	935 kg/cm ²
<u>Flexural</u> Strength	ASTM D790	871 kg/cm ²



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Lap Shear Strength	ASTM D1002	41.5 kg/cm ²
Cured Properties - Electrical		
Surface Resistivity @ 24°C/30%RH	ASTM D257	> 1 x 10 ¹⁷ Ohms/square
Volume Resistivity @ 24°C/30%RH	ASTM D257	2 x 10 ¹⁶ Ohms-cm
Dielectric Strength	ASTM D149-09	436 V/mil @ 0.139" thickness
Dielectric constant, K/ Dissipation Factor, D	ASTM D150-98	
@ 60 Hz		3.37 / 0.012
@ 1 KHz		3.33 / 0.011
@ 10 KHz		3.27 / 0.014
@ 100 KHz		3.19 / 0.017
@ 1 MHz		3.13 / 0.019
Breakdown Voltage	ASTM D149-09	60.6 kV @ 0.139" thickness
Cured Properties - Thermal		
Glass Transition Temperature (T _g) by DSC	ASTM D3418	41 °C / 105.8 °F
Coefficient of thermal expansion	ASTM E831	
CTE @ 25°C		83.0 um /m/°C
CTE @ 100°C		236 um /m/°C
Cured Properties - Reflectance		
Total Reflectance in the 350-700 nm Range		10%

Available Sizes

Catalog Number	Sizes Available	Description
8321C-320ML	320 ml (10.8 fl. oz.)	Liquid
8321C-4L	4 L (1 gallon)	Liquid

Usage Instructions:

1. Individually stir Part A and Part B.
2. Thoroughly mix 3 parts of A to 1 part of B by volume.
3. Let stand for 30 minutes to allow air that has been mixed in to release. Gently stir once more to remove any foam that has accumulated on top.
4. Pour directly onto the surface to be encapsulated.
5. Let stand for 48 hours or for best results, heat cure at 80°C (176 °F) for 2 hours.

Storage conditions:



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Keep away from sources of ignition. Store in a cool, dry, well-ventilated area, away from incompatible substances.