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

Thermally Conductive Epoxy Encapsulating and Potting Compound

Cat. No. 832TC

Product Description and Features

100% solids. Formulated with undiluted Bis F resin for superior physical properties, and pigmented with high purity aluminum oxide pigment to provide excellent thermal conductivity at reasonable cost. Pigmented black for excellent thermal absorption and emission.

- Provides superior protection from impact, shock, conductivity, moisture, abuse, chemicals, and analysis
- Two part epoxy, with a 1 to 1 mixing ratio by volume.
- Two hour working time
- Suitable for large production runs
- Cures in 2 days at room temperature or one hour at 65

Specifications

Uncured Properties - Resin [Part A]		
Viscosity at 25 ºC (77 ºF), 30 RPM		17,920 cps
Specific Gravity		1.8019
Color		Black
Uncured Properties - Hardener [Part B]		
Viscosity at 25 ºC (77 ºF), 20 RPM		23,070 cps
Specific Gravity		1.5036
Color		Black
Cured Properties - PHYSICAL	**Test Method**	
Mixed Viscosity at 25 ºC (77 ºF), 10 RPM		38,000 - 40,000 cps
Mixed Specific Gravity		1.6156
Volume Mix Ratio (resin:hardener)		1:1
Working time (100 g)		120 min.
Cure Time (150 g)	at 20 °C	96 hours
	at 45 °C	8 hours
	at 55 °C	4 hours
	at 65 °C	2 hours
Shore Hardness		82 Shore D
Tensile strength	ASTM-D-638-02A	2734 psi
Elongation	ASTM-D-638-02A	1.87 %

Compressive Strength	ASTM-D-695-02A	4,088 psi
Flexural Strength	ASTM-D-790-03	5,352 psi
Cantilever Beam (IZOD) Impact	ASTM-D-256-02 E1	0.80 ft lb ft / in
Shear Strength	ASTM-E-831-03	3.224 psi
Cured Properties - TEMPERATURE	**Test Method**	
Constant Service Temperature		200 - 225 °C (392 - 437 °F)
Heat Deflection Temperature	ASTM-D-648-01	35.35 °C (95.6 °F)
Maximum Withstand Temperature		250 °C (482°F)
Cured Properties - ELECTRICAL	**Test Method**	
Dielectric Constant	ASTM-D-150-98	4.41
Dissipation Factor	ASTM-D-150-98	0.0113
Volume Resistivity	ASTM-D-257-99	2.58 x 10^{15} ohm · cm
Surface Resistivity	ASTM-D-257-99	3.16 x 10^{16} ohm · cm
Cured Properties - THERMAL	**Test Method**	
Thermal Conductivity		0.682 W/m*K
Thermal Diffusivity		0.38 mm^2/s
Volumetric Specific Heat		1.9MJ/m^3*K
Thermal Expansion	ASTM-E-831-03	148.3x10^{-6} mm/mm°C
Chemical and Solvent Resistance		**Change after 3 days:**
Hydrocloric Acid		< 0.50%
Isopropyl Alcohol		~ 0%
Ethyl Lactate		< 1 %
Acetone		< 3%
Xylene		< 2%
Iso hexanes		~ 0%
Mineral spirits		~ 0%

Usage Instructions

1. Individually stir Part A and Part B
2. Thoroughly mix 1 parts of A to 1 part of B by volume. Never mix more than 500 grams at one time or flash curing may occur.
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 96 hours or for best results heat cure at 65°C / 149 °F for 2 hours.

Availability

Catalog Number	Sizes Available	Description
832TC-450ML	450 mL kit (16 oz)	Liquid
832TC-2L	2 L kit (0.5 gal)	Liquid
832TC-40L	40 L kit (10 gal)	Liq

Note:
This information is believed to be accurate. It is intended for professional end users having the skills 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.