

Black Epoxy Encapsulating and Potting Compound

■ 832B



ATTENTION

Mixing ratio for this product is **2 parts A to 1 part of B**. Please be advised that there is a misprint on our label for one of the production runs.

Protects sensitive electronic components from impact, shock, vibration, heat, conductivity, moisture, chemicals, and visual inspection.

Features

- Non-porous, water and chemical resistant
- Extremely impact resistant (contains a form of nylon)
- Colored black, to prevent visual inspection
- Affords high security, once cured, extremely difficult to remove
- Non-conductive, an electrical insulator
- Low toxicity
- Suitable for explosion proof components (spark arresting)
- Easy and simple to mix
- Long pot life
- Can be cured in one hour at 65°C (150°F)
- This product is RoHS compliant



Encapsulating & Potting
Compound Available
colors:

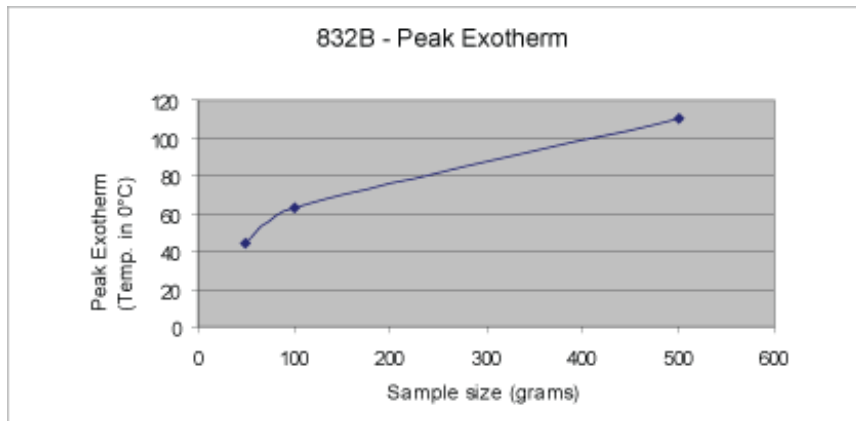
Clear

Black

Specifications

Uncured Properties - Resin [Part A]	
Viscosity	2,500 cps
Specific Gravity	1.1273
Color	Black
Uncured Properties - Hardener [Part B]	
Viscosity	11,000 cps
Specific Gravity	0.9564
Color	Clear, amber tint
Cured Properties - Physical	
Mixed Viscosity	3,300 cps
Mixed Specific Gravity	1.0577
Volume Mix Ratio (resin:hardener)	2.0:1
Mass Mix Ratio (resin:hardener)	2.3:1
Shore Hardness	80 - 82 Shore D

Tensile strength (ASTM D 638)	8475 psi	
Elongation	3.3%	
Compression strength (ASTM D 695)	14,675 psi	
Modulus	375,000 psi	
Flexural strength (ASTM D 790)	16,500 psi	
Modulus	427,000 psi	
Izod impact strength (ASTM D 256)	0.443 ft-lbs / inch notch 0.259" thick	
Lap Shear Strength (ASTM D 732)	957 psi	
Working time (100g)	60 min.	
Curing Time (100g)		
@ room temp.	24 hours	
@ 65°C	60 minutes	
@ 80°C	45 minutes	
@ 100°C	35 minutes	
Cured Properties - Temperature		
Coefficient of Thermal Expansion (ASTM E 831)	0.036" / 10" @ 32°F, 0.013" / 10" @ 72°F	
Constant Service Temperature	140°C (284°F)	
Intermediate Service Temperature	145°C (293°F)	
Heat Deflection Temp. (264 psi) (ASTM D 648)	46.638°C (115.95°F)	
Cured Properties - Electrical		
Surface Resistivity (ASTM D 257)	5.3 x 10 ¹² ohm · cm	
Corrected Dissipation Factor, D (ASTM D150-98)	0.008 @ 1KHz 0.013 @ 10KHz 0.018 @ 100KHz 0.017 @ 1MKHz	
Dielectric Constant (ASTM D150-98)	2.95 @ 1KHz 2.89 @ 10KHz 2.83 @ 100KHz 2.77 @ 1MKHz	
Insulative	Yes	
Conductive	No	
Breakdown Voltage (ASTM D149-97a)	51.9 kV	
Dielectric Strength (ASTM D149-97a)	471 V/mil	
Chemical and Solvent Resistance		
	Change after 3 days	Change after 45 days
Hydrochloric Acid	< 0%	< 1 %
Isopropyl Alcohol	< 0.3 %	< 1 %
Ethyl Lactate	< 3 %	< 7 %
Acetone	< 7%	destroyed
Xylene	< 2%	< 9 %
Iso hexanes	< 5 %	< 8 %
Mineral spirits	< 0.3 %	< 0.3 %



Sample Size (grams)	Peak Exotherm (Temp. in 0°C)	Time in Minutes
50	44	155
100	63	110
500	110	65

Available Sizes

Catalog Number	Sizes Available	Description
832B-375ML	375ml (12 oz)	Liquid
832B-3L	3L (0.8 gal)	Liquid
832B-60L	60L (16 gal)	Liquid

Material Safety Data Sheet

Section 1: Product Identification

MSDS Code: 832B - Part A **Name: Encapsulating Epoxy Kit**

Related Part Numbers: 832B-375ML; 832B-3L; 832B-60L

Use: Encapsulating and potting compound.

Section 2: Hazardous Ingredients

CAS#	Chemical Name	Percentage by weight	ACGIH TWA	Osha Pel	Osha Stel
25068-38-6	reaction product of epichlorohydrin and bisphenol A	80 - 95	n/e	n/e	n/e
68609-97-2	alkyl glycidyl ether	5 - 20	n/e	n/e	n/e

Section 3: Hazards Identification

WHMIS Codes: D2B

NFPA Ratings: Health 1 Flammability 0 Reactivity 0

HMIS Ratings: Health 1 Flammability 0 Reactivity 0

Eyes: Non-irritating.

Skin: Prolonged exposure may cause skin irritation. May cause allergic reaction in some individuals.

Inhalation: At room temperature, exposure to vapors is unlikely due to physical properties. Higher temperatures may generate vapor levels sufficient to cause irritation.

Ingestion: Single dose oral toxicity is low. Amounts ingested incidental to industrial handling are not likely to cause injury; however, ingestion of large amounts may cause injury.

Chronic: No information available.

Section 4: First Aid Measure

Eyes: Remove contact lenses. Flush with water or saline for 20 minutes. Get medical aid if symptoms persist.

Skin: Wash skin with large quantities of soap and water. Get medical aid if symptoms persist.

Inhalation: Immediately remove from exposure to fresh air. Get medical aid if symptoms persist.

Ingestion: Do not induce vomiting. If conscious, give 1-2 glasses of water. Get medical aid.

Section 5: Fire Fighting Measures

Autoignition Temperature: n/e

Flash Point: 190°C

LEL / UEL: n/e

Extinguishing Media: Use water spray, dry chemical, carbon dioxide, or chemical foam.
General Information: n/a

Section 6: Accidental Release Measures

Spill Procedure: Remove all sources of ignition. Provide adequate ventilation. Wear appropriate personal protection. Sprinkle absorbent compound onto spill, then sweep into a plastic or metal container. Wipe up further residue with paper towel and place in container. Wash spill area with soap and water.

Section 7: Handling and Storage

Handling: Wash thoroughly after handling. Avoid contact with eyes, skin, and clothing. Do not ingest or inhale. Do not expose container to heat or flame.

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

Section 8: Exposure Controls

Routes of entry: Eyes, ingestion, inhalation, and skin.

Ventilation: Use adequate general or local exhaust ventilation to keep airborne concentrations below exposure limits.

Personal Protection: Wear appropriate protective eyeglasses or chemical safety goggles. Wear appropriate protective clothing to prevent skin contact. Use a NIOSH approved respirator when necessary.

Section 9: Physical and Chemical Properties

Physical State:	liquid	Odor:	odorless	Solubility:	none	Evaporation Rate:	n/e
Boiling Point:	n/e	Specific Gravity:	1.13	Vapor Pressure:	n/e	Vapor Density:	8.6 (Air=1)
						pH:	n/a

Section 10: Stability and Reactivity

Stability: Stable at normal temperatures and pressures.

Conditions to avoid: n/a

Incompatibilities: n/a

Polymerization: Will not occur.

Decomposition: Carbon dioxide, and carbon monoxide, phenolic compounds.

Section 11: Toxicological Information

Sensitization: (effects of repeated exposure) This product is a skin sensitizer.

Carcinogenicity: (risk of cancer) No

Teratogenicity: (risk of malformation in an unborn fetus) No



Reproductive Toxicity: (risk of sterility) No
Mutagenicity: (risk of heritable genetic effects) No
Lethal Exposure Concentrations: **Ingestion (LD50):** 2000 mg/kg **Inhalation (LC50):** n/e **Skin (LD50):** n/e

Section 12: Ecological Information

General Information: Avoid runoff into storms and sewers which lead into waterways. Water runoff can cause environmental damage.

Environmental Impact Data: (percentage by weight)
CFC: 0 HFC: 0 Cl.Solv.: 0 VOC: 0 HCFC: 0 ODP: 0

Section 13: Disposal Information

General Information: Dispose of in accordance with all local, provincial, state, and federal regulations. Water runoff can cause environmental damage.

Section 14: Transportation Information

Ground:
Non-regulated
Air:
Non-regulated
Sea:
Non-regulated

Section 15: Regulatory Information

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all of the information required by the Controlled Products Regulations.

This Product is RoHS compliant.

SARA (Superfund Amendments and Reauthorization Act of 1986, USA, 40 CFR 372.4)

None of the chemicals in this product have a reportable quantity.

EPCRA (Emergency Planning and Right to Know Act, USA, 40 CFR 372.45)

This product does not contain any chemicals subject to the reporting requirements of section 313 Title III of the SARA of 1986 and 40 CFR part 372.

TSCA (Toxic Substances Control Act of 1976, USA)

All substances are TSCA listed.

Section 15: Regulatory Information cont'd.

CAA (Clean Air Act, USA)

This product does not contain any class 1 ozone depletors.

This product does not contain any class 2 ozone depletors.

This product does not contain any chemicals listed as hazardous air pollutants.

California Proposition 65 (Chemicals know to cause cancer or reproductive toxicity, May 1, 1997 revision, USA)

This product does not contain any chemicals listed.