Product Datasheet

EpoPro® 8703A/B

Room Temperature Curing, Flame Retardant Epoxy encapsulant

Typical Properties

(Not for specification purposes. All tests run at 25°C unless otherwise noted)

Resin / A-side Properties:

Appearance	Visual	Black
Specific Gravity	ASTM D-792	1.75 – 1.85 g/cc
Viscosity	ASTM-D-2393	30,000 – 60,000 cP
Flash point, closed cup	ASTM D-92	>252°C (486°F)

Hardener/ B-side Properties:

Appearance	Visual	Amber
Specific Gravity	ASTM-D-792	0.92 – 0.98 g/cc
Viscosity	ASTM-D-2393	600 - 1200 cP
Flash Point, closed cup	ASTM D-92	>98°C (208°F)

Mix Ratio:

Parts by weight (volume)		100A : 30B (100A:55B)

Mixed Properties:

Initial Viscosity at 25°C	ASTM-D-2393,	7500 cP
Gel Time (300 g. mass)	ASTM D-2471	45 minutes

Recommended Cure Schedules:

24 hrs at 25°C **or** 4 hrs at 60°C

Please note: any cure schedule selected for use should be confirmed through testing as being appropriate for your particular processing methods and for your intended application.

Cured Properties (cured 7 days at 25°C)

Appearance	Visual	Black
Specific Gravity	ASTM D-1475	1.47 g/cc
Shore Hardness	ASTM D-2240	80D
Linear Shrinkage	ASTM D-792	0.47%
Tensile Strength at break	ASTM D-638	1800 psi
Elongation at break	ASTM D-638	25%
Water absorption	ASTM D-570	0.14%
Glass Transition Temp (Tg)	Perkin Elmer Appl. Cast #20	50°C
Coefficient of thermal expansion (CTE) (per °C)	ASTM E-381	7.6×10^{-5}
Volume. Resistivity	ASTM D-257	3.7×10^{12} Ω-cm
Surface Resistivity	ASTM D-257	1.1×10^{14} Ω-cm
Dielectric Strength	ASTM D-149	550 volts/mil
Dielectric Constant. 60 Hz/ 1 MHz	ASTM D-150	5.37 / 3.01
Dissipitation Factor, 60 Hz/1 MHz	ASTM D-150	0.010 / 0.030
Thermal Conductivity	ASTM D-2214	7.9×10^{-4} (cal-cm/cm^2-sec-°C)

EpoPro® 8703A/B is a high performance, room temperature curing epoxy system for potting and encapsulation of electrical and electronic components requiring flame retardancy. Targeted applications include ferrites, voltage regulators, relays and toroidal transformers.

Suggested Applications:

- UL94-VO, Yellow Card available
- High thermal conductivity
- Tough, Semi-rigid Material
- Multiple cure schedules possible
- Very low exotherm
- Minimal shrinkage during cure
- Excellent heat resistance
- Excellent overall electrical performance

Benefits:

- User-friendly encapsulating system
- Produce a large mass castings economically
- High reproducible quality
- Resists severe environmental conditions

Storage Guidelines:

Store this material in a clean, dry environment in its tightly closed original container. These products are not considered temperature sensitive, but should ideally be stored at temperatures between 18-30°C (64-86°F). Under these conditions the products will have a minimum shelf-life of 12 months from the date of shipment

Processing Guidelines:

Mix using Meter-mix dispensing equipment, or manually, as follows. Weigh the desired amount of resin into mixing container whose weight has been tared. If material has been heated, allow to cool to 25 ± 5°C or 77 ± 9°F before continuing. The pot life of mixed material will be shortened considerably if warmed material is used.

Weigh the desired amount of hardener into mixing container with resin. Mix thoroughly by means of mechanical mixer or manual stirring. Check for uniform color as a sign of complete mixing. Vacuum deairing is recommended to remove any entrapped air from the mixing procedure. To deair most products, 1-2 minutes under full vacuum is recommended for each quart of volume of mixed material. Quickly dispense potting material into cavity or channel to be sealed; be certain not to trap air bubbles as viscosity builds.

To reduce the cure time, the casting is often allowed to gel at room temperature and then post-cured for 2-6 hours at 60-80°C. Small casting can be cured

immediately at elevated temperatures (40-60°C). In case of a humid working environment (≥75% relative humidity) it is advisable to effect a full cure in an oven at 40-60°C in order to prevent moisture absorption. Such moisture absorption may produce streaks on the surface of the casting and other abnormalities.

Handling Precautions:

Mandatory and recommended industrial hygiene procedures should be followed whenever these products are being handled and processed. For additional information please consult the corresponding material safety data sheets.

Personal Hygiene:

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CAUTION! May cause eye irritation. Prolonged or repeated skin contact may cause irritation, and may cause skin reaction. Harmful if inhaled, if swallowed. Avoid contact with eyes, skin, or clothing. Wear eye protection and impervious gloves when handling. Wash thoroughly after handling. Avoid breathing vapor or mist. Keep containers closed when not in use. Use only with adequate ventilation. Do not take internally.

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CORROSIVE! Causes severe eye and skin burns and possible allergic skin reaction. Vapor irritating to eyes, skin and nasal mucous membranes. Harmful if swallowed. Do NOT get in eyes, on skin, or clothing. Wear chemical splash goggles and impervious gloves when handling. Wash skin and clothing thoroughly after handling. Avoid breathing vapor or mist. Use only with adequate ventilation. Keep containers closed when not in use. Do NOT take internally.

First Aid

In case of contact:

Skin - Wash skin thoroughly with mild soap and water. Remove contaminated clothing and wash before reuse. Discard contaminated shoes and other articles made of leather

Eyes - Flush eyes with plenty of water for 15 minutes and get prompt medical attention.

Inhalation - Remove person to fresh air

Ingestion - Do not induce vomiting. Dilute with plenty of water and contact physician immediately. Never give anything by mouth to an unconscious person.

Other- Referral to a physician is recommended if there is any question about the seriousness of an injury.

Disclaimer:

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