Product Datasheet

EpoPro® 202-A/B

Heat Cured Epoxy Casting System

Typical Properties

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

Resin / A-side Properties:

Appearance	Visual	Amber, liquid
Specific Gravity	ASTM-D-1475	1.10 g/cc
Viscosity	ASTM-D-2393	5000 cP
Flash Point, Closed Cup	ASTM-D-92	>182°C (>360°F)

Hardener/ B-side Properties:

Appearance	Visual	Amber,liquid
Specific Gravity	ASTM-D-1475	1.12 g/cc
Viscosity	ASTM-D-2393	2,500 cP
Flash Point, Closed Cup	ASTM-D-92	>165°C (>329°F)

Mix Ratio:

Parts by weight (volume)	100A : 15B (100A : 15B)

Mixed Properties:

Initial Viscosity at 25°C	ASTM-D-2393	3,500 cP
Pot life (200 g.mass)	FMT-203	16-20 hours

Recommended Cure Schedules:

16 hrs @ 80°C or 6 hours @ 100°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	Amber
Specific Gravity	ASTM-D-1474	1.18 g/cc
Shore Hardness	ASTM-D-2240	84D
Tensile Strength at break	ASTM D-638	6,600 psi
Elongation at break	ASTM-D-638	>10%
Compressive strength	ASTM D-695	20,000 psi
Flexural strength	ASTM-D-790	6,000 psi
Izod impact, ft-lb/in of notch	ASTM D-2566	0.90
Linear shrinkage	ASTM-D-2566	1.11%
Glass Transition Temp (Tg)	DSC	40°C
Coefficient of Thermal Expansion(CTE) (per °C)	ASTM E-381	3.5×10^{-5}
Water absorption	ASTM-D-570	0.40%
Thermal Conductivity	Colora Cond.	4.0×10^{-4} cal/cm-sec-°C
Flame resistance	UL94HB	0.9 in/min
Volume resistivity @ 25°C	ASTM D-527	4.8×10^{14} Ω-cm
@ 95°C		2.0×10^{8} Ω-cm
Dielectric strength, 1/8 in thickness	ASTM D-149	350 V/mil
Dielectric Constant @ 25°C @60Hz / @1MHz	ASTM-D-150	3.40 / 3.00
Dissipitation Factor @ 25°C @60Hz / @1MHz	ASTM-D-150	0.036 / 0.034
Arc resistance	ASTM D-495	120 sec

EpoPro® 202-A/B is a clear amber, unfilled, low viscosity semi-rigid heat-cured epoxy systems, that exhibits excellent thermo-cycling performance. It is a performance proven system that has been used for more than 50 years in hundreds of electronic and bonding applications.

EpoPro 202A/B has a long pot life and very low exotherm during curing which makes it an ideal choice for large casting applications. Castings as large as several hundred pounds have successfully been produced with special precautions and carefully part design.

For applications requiring room temperature curing or other special properties, EpoPro 202A is also available with other hardeners such as Hardener 9615, Hardener 9816, etc. For information on these alternate systems please contact one of our technical service representatives.

Suggested Applications:

Encapsulation or potting of low-voltage and electronic components such as filter circuits, modules, auto sensors, capacitors, iron-core transformers, magnetic heads, coils.

Benefits:

- Excellent thermal cycle performance
- Long pot life
- Low shrinkage
- Low exotherm for mass castings

Storage Guidelines:

Store this material in a clean, dry environment in its tightly closed original container. These products are not considered especially temperature sensitive, but should ideally be stored at temperatures between 18-35°C (64-95°F). Storage at lower temperatures could lead to crystallization and may require the application of heat to reverse. If crystals are noted in either component heat to 60°C (140°F) for 1-2 hours to reliquify the material. Avoid extended exposure to high humidity (>55% relative humidity). If the recommended storage conditions are observed the products will have a minimum shelf-life of 12 months from the date of shipment.

Processing Guidelines:

This system can be mixed manually or by using either dynamic or static mixing systems. Whatever method is chosen, be sure to accurately weigh both the resin and the hardener prior to mixing them and ensure the correct

mix ratio is used.

If mixing manually, mix for at least 2 minutes and be sure to scrape the walls and bottom of the mixing vessel to be sure that all of the material is thoroughly mixed. To ensure a void free casting, vacuum de-air the mixture after thorough mixing. A vacuum of 28 inches of mercury is generally sufficient to remove the vast majority of entrapped air within 5-10 minutes. Large volumes of the mixed system may require longer times under vacuum.

If processing in a humid environment, it may be advisable to fully cure within an oven at 40-60°C in order to prevent vapor absorption that can lead to streaks on the surface of the casting and may reduce the dielectric properties of the cured material.

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:

EpoPro 202A

CAUTION! May cause eye irritation. Prolonged or repeated skin contact may cause irritation, may cause allergic skin reaction. Harmful if inhaled. Harmful 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.

EpoPro 202B

WARNING! Causes severe eye irritation and possible eye damage. Causes severe skin irritation and possible allergic skin reaction. Harmful if inhaled. 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

Disclaimer:

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