Product Datasheet

EpoPro® 205A/B

LOW VISCOSITY EPOXY SYSTEM WITH HIGH HEAT & CHEMICAL RESISTANCE FOR POTTING & ENCAPSULATION

EpoPro® 205A/B is 2-part epoxy system that will set at room temperature to a solid B-Stage and cures with heat to a produce a polymer with excellent heat and chemical resistance. The 205A resin is a low viscosity, undiluted resin. When mixed with 205B, it produces a system with excellent flow and wetting properties. The system can be mixed with a variety of fillers to reduce shrinkage and modify other properties.

The EpoPro 205A resin is available in a clear/uncolored or pigmented black. Other colors are available by request. Please contact us to discuss your application if you would like to receive samples of a variant that would be suitable for your application.

SUGGESTED APPLICATIONS:

- Potting and encapsulation where heat & chemical resistance is desired
- For use as binder for fillers to make casting, potting, or adhesive systems

HANDLING PROPERTIES	VALUE	TEST METHOD
EpoPro 205A		
Visual Appearance	Clear or Black Liquid	
Density	1.16 g/cm³	ASTM E-201
Viscosity, Part A, at 25ºC	5,400 cps	ASTM D-2393
Flash Point	>121°C	ASTM D-92
EpoPro 205B		
Visual Appearance	Clear yellow to amber liquid	
Density	1.02 g/cm³	ASTM E-201
Viscosity, Part A, at 25ºC	160 cps	ASTM D-2393
Flash Point	>135°C	ASTM D-92
Mix Ratio (part by weight)	100A:24B	
Mix Ratio (part by volume)	100A:27B	
Mixed Viscosity at 25ºC, initial	450 cps	
Pot life (454 grams) at 25ºC	3 - 5 hours	
Peak Exotherm	approximately 150ºC	
Pot life (100 grams) @ 100ºC	10 – 24 minutes	
Cure Schedules:	2 hours at 125ºC **or** Allow to gel and B-stage for 24 – 48 hours at room, temperature and then post cure for 1 hour at 150C*	

*Note: many other cure schedules are possible. Please contact us for assistance if you would like to consider an alternate cure schedule.

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PHYSICAL PROPERTIES (Tested at 25C unless otherwise noted – cured 2 hours @ 150C)		TEST METHOD
Appearance	Amber or Black Solid	Visual
Hardness, Shore D at 25°C	84D	
Tensile Strength at Break	9600 psi	ASTM D-638
Tensile Elongation at break	4.7%	ASTM D-638
Glass Transition Temperature (Tg)	179ºC	ASTM D-648
Coefficient of Thermal Expansion (CTE):		ASTM E-831
below Tg / above Tg (ppm/ºC)	57 / 200	
Thermal Conductivity	0.18 W/mK	ASTM D-2214
Thermal Rating	-55ºC to 180ºC	EIC 216
Surface resistivity (ohms)	1.4×10^{15}	ASTM D-257
Volume Resistivity (ohm-cm) at 25ºC	1.0×10^{15}	Mil-I-46058C
Dielectric Strength (V/mil)	>450	ASTM D-149

NOTE : Values are based on laboratory or average production results – not for specification purposes.

PROCESSING AND APPLICATION INSTRUCTIONS :

Mix using Meter-mix dispensing, or manually, as follows: Weigh the desired amount of Part A into mixing container whose weight has been tared. If material has been heated, allow it to cool to 25 ± 5°C before continuing. (The pot life of mixed material will be shortened considerably if hot material is used.) Then weigh the desired amount of Part B into mixing container with resin. Mix thoroughly by means of mechanical mixer or manual stirring. We suggest mixing for at least 1-2 minutes, with frequent scrapping of the sides and bottom of the mixing container to ensure a complete 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. For best adhesion ensure that the surface to be bonded is clean and dry.

PACKAGING AVAILABLE:

This product is available in a wide range of package sizes including quarts & 5-gallon pails. It can be supplied pre-mixed and frozen in syringes or in custom kit sizes on request. Please contact us to discuss your preferred packaging if a custom packaging solution would be of interest.

STORAGE GUIDELINES:

Store the EpoPro 205A and 205B in clean, cool and dry environments in their tightly closed original containers. Protect from extended exposure to temperatures below 15ºC (59ºF) to prevent crystallization. If crystallization occurs, heat the entire container for 4 hours at 60ºC to re-liquefy the material. Also protect from exposure to extended moisture or high humidity. Tightly re-seal containers after use. If the recommended storage conditions are observed the products will have a minimum shelf-life of 12 months from the date of shipment.

HANDLING PRECAUTIONS:

Follow all mandatory and recommended industrial hygiene procedures whenever these products are being handled and processed. For additional information please consult the corresponding safety data sheets.

FIRST AID

In case of contact:

Skin – Immediately wash skin thoroughly with mild soap and water. Remove contaminated clothing and wash before reuse. Destroy contaminated shoes and other articles made of leather.

Eyes – Immediately flush eyes with plenty of water for 15 minutes and get prompt medical attention.
Inhalation - Remove person to fresh air. Administer oxygen or artificial respiration if necessary. Call a physician.
Ingestion - Do not induce vomiting. Dilute with plenty of water and contact physician immediately. Never give anything by mouth to an unconscious person.

DISCLAIMER:

IMPORTANT: The following supercedes Buyer's documents. **SELLER / MANUFACTURER MAKES NO REPRESENTATION OR WARRANTY, EXPRESS OR IMPLIED, INCLUDING OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE**. No statements herein are to be construed as inducements to infringe any relevant patent. Under no circumstances shall Seller / Manufacturer be liable for incidental, consequential or indirect damages for alleged negligence, breach of warranty, strict liability, tort or contract arising in connection with the product(s). Buyer's sole remedy and Seller's sole liability for any claims shall be Buyer's purchase price. Data and results presented are based on controlled or laboratory work and must be confirmed by Buyer by testing for its intended conditions of use. The product(s) has not been tested for, and is therefore not recommended for, uses for which prolonged contact with mucous membranes, abraded skin, or blood is intended; or for uses for which implantation within the human body is intended

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