

## EpoPro® 155A/B

### Epoxy Laminating, Impregnation & filament Winding System

EpoPro® 155A/B is a two-part epoxy system designed for the production of advanced composite parts. It provides a low viscosity, exceptional fiber and filament wetting properties and a high glass transition temperature after a post cure. The resin system cures to a transparent solid and has a blue tint to improve visibility on glass fibers during processing and handling. The system is solvent and VOC free and is 100% solids. Cured Composites have excellent resistance to UV exposure

#### BENEFITS

- Low Viscosity
- Exceptional wetting of most clothes, fibers, & filaments
- 300°F / 149°C Glass transition temperature with post cure

TYPICAL PROPERTIES	VALUE	TEST METHOD
<u>EpoPro® 155A</u>		
Visual Appearance	Clear blue	Visual
Density	1.1 g/cm <sup>3</sup>	ASTM E-201
Viscosity, Part A, @ 25°C	1,200 cP	ASTM D-2393
Flash Point	>120°C	ASTM D-92
<u>EpoPro® 155B</u>		
Visual Appearance	Clear to very light yellow	Visual
Density	0.94 g/cm <sup>3</sup>	ASTM E-201
Viscosity, Part B, @ 25°C	100 cP	ASTM D-2393
Flash Point	> 100°C	ASTM D-92
<u>Mixed Properties</u>		
Mixed Viscosity	700 cps	
Mix Ratio	100A: 35B by weight or 100A : 41B by volume	Calculated
Shelf-life	at least 2 years @ room temperature (~ 25°C)	
Gel Time (100 grams) @ 25°C	480 - 580 minutes	ASTM D-2471
Suggested cure times	24 hour @ 25°C + 2 hours @ 250°F(121°C) + 3 hours @ 350°F (177°C)	
*Note: many other cure schedules are possible. Please contact us for assistance if you'd like to use an alternate cure schedule.		

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

PHYSICAL PROPERTIES	VALUE	TEST METHOD
Color	transparent, light blue color*	Visual
Shore D Hardness	89	ASTM D-2240
Ultimate Flexural Strength	12,200 psi	ASTM D-790

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Ultimate Flexural Modulus	380,000 psi	ASTM D-790
Ultimate Tensile Strength	6,950 psi	ASTM D-638
Ultimate Tensile Modulus	366,500 psi	ASTM D-638
Ultimate Tensile Elongation	2.5%	ASTM D-638
Tg by DMA, onset, dry	307°F (153°C)	ASTM D-4065
Tg by DMA, onset, wet	270°F (132°C)	ASTM D-4065

**NOTE:** Typical Properties determined using EpoPro® 154A/B cured 7 days @ 25°C cure - unless otherwise stated. Values are based on laboratory or average production results – not for specification purposes.

\*Customer colors available by request. Custom viscosity, pot life and cure speeds are also available by request.

## SUGGESTED PROCESSING GUIDELINES

EpoPro® 155A/B can be processed using vacuum-assisted resin transfer molding (VARTM), resin transfer molding (RTM), Seemans Composite Resin Injection Molding Process (SCRIMP), hand-lay up, and conventional filament winding procedures.

For manual mixing, weigh Part A and Part B in the recommended ratio as accurately as possible into a clean mixing container. Always use weighing equipment having accuracy in proportion to the amounts being weighted. Blend by using a spatula or stirring stick for 1-2 minutes using a kneading motion. Scrape the bottom and sides of the mixing container carefully and frequently to produce a uniform mixture. Always apply the adhesive to clean, dry surfaces.

## STORAGE GUIDELINES

Store this material in a clean, cool and dry environment in its tightly closed original container. Products may settle during storage and should be thoroughly re-mixed prior to use. Avoid extended exposure to high humidity. Tightly re-seal after use. If the recommended storage conditions are observed the products will have a minimum shelf-life of 24 months from the date of shipment.

## 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® 155A

**WARNING!** Causes eye & skin irritation. Prolonged or repeated skin contact may cause allergic skin reaction. Harmful if inhaled or swallowed. Avoid contact with eyes, skin, or clothing. Wear eye protection and impervious gloves when handling. Wash thoroughly after

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handling. Avoid breathing vapor or mist. Keep containers closed when not in use. Use only with adequate ventilation. Do not take internally.

## **EpoPro® 155B**

**DANGER!** Corrosive - causes eye burns and skin irritation. May cause skin burns. Causes respiratory irritation. Do not get in eyes. Avoid contact with skin and clothing. Avoid breathing vapor or mist. Keep container closed when not in use. Use with adequate ventilation. Wash thoroughly after handling

## **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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