

EpoPro[®] 627A/B

HIGH TEMPERATURE EPOXY SYSTEM

EpoPro[®] 627A/B is an advanced, multifunctional, epoxy system designed for impregnating and laminating applications. The mixed system provides a long work-life and the cured polymer demonstrate excellent retention of electrical and mechanical properties at elevated temperatures as well as outstanding chemical resistance. The cured polymer is clear yellow and provides very good electrical insulating properties.

BENEFITS

- Low viscosity and long pot life
- Excellent wetting of most wire, paper, cloth, fibers, insulating materials, & filaments
- Excellent Chemical Resistance
- Very Good Electrical Properties

TYPICAL PROPERTIES	VALUE	TEST METHOD
EpoPro[®] 627A		
Visual Appearance	Clear yellow liquid	Visual
Density	1.20 – 1.22 g/cm ³	ASTM E-201
Viscosity, Part A, @ 25°C	500 - 750 cP	ASTM D-2393
EpoPro[®] 627B		
Visual Appearance	Clear yellow liquid	Visual
Density	1.22 – 1.24 g/cm ³	ASTM E-201
Viscosity, Part B, @ 25°C	200 - 300 cP	ASTM D-2393
Mixed Properties		
Mixed Viscosity	250 cps	
Mix Ratio	100A: 85B by weight	Calculated
Shelf-life	at least 6 months at 18°C - 25°C	
Pot Life (100 grams) at 25°C	28 days	ASTM D-2471
Suggested cure times:	2-4 hours at 125°C or 1-2 hours at 150°C then post cure for 4 - 16 hours at 175°C – 180°C.*	
*Note: (Longer cure times will provide the best heat and chemical resistance and are also highly suggested for large parts to ensure that the entire part has reached the suggested temperature and had enough time at temperature to achieve a full cure.) many other cure schedules are possible. Please contact us for assistance if you'd like to use an alternate cure schedule.		

PHYSICAL PROPERTIES

	<u>VALUE</u>	<u>TEST METHOD</u>
Color	transparent yellow to amber*	Visual
Shore D Hardness	87	ASTM D-2240
Ultimate Flexural Strength	17,100 psi	ASTM D-790
Ultimate Tensile Strength	10,500 psi	ASTM D-638
Ultimate Tensile Elongation	1.8%	ASTM D-638
Tg by DMA, onset dry	>235°C	ASTM D-4065
Dielectric Constant at 1 MHz	3.2	ASTM D-150
Dissipation Factor at 1 MHz	0.05	ASTM D-150
Dielectric Strength at 25°C	>17.5 kV / mm	ASTM D-149

*Black and other custom colors available by request

NOTE: Typical Properties determined using EpoPro® 627A/B cured 2 hours at 150°C + 16 hours at 175°C - unless otherwise stated. Values are based on laboratory or average production results – not for specification purposes.

SUGGESTED PROCESSING GUIDELINES

EpoPro® 627A/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 composite parts manufacturing.

Accurately weight out the components using a scale and then blend together for at least two minutes, scraping the sides and bottom of the container to ensure a complete mix. To obtain clear castings and for best mechanical & electrical properties, vacuum de-gas the mixture once thoroughly mixed.

If impregnating parts, heat the parts to 100 – 120C to eliminate moisture absorbed I the coils, paper and other insulating materials, dry at this temperature for at least an hour prior to impregnating. For coil molding, heat the coil and the mold to 70C to 90C prior to potting with the 627 system. When ready. Submerge the components in the reserver containing the impregnating resin and allow the components to stand until the assembly is completely penetrated by the resin mixture. For tightly wound coild or other difficult to impregnate parts pulling a vacuum will help to remove air and assist the resin in penetrate fully into the parts. After the vacuum is released, the parts can be removed from the reservoir and allowed to drain of excess resin.

STORAGE GUIDELINES

Store this material in a clean, cool and dry environment in its tightly closed original container. The EpoPro® 627A, will increase in viscosity if stored above 18°C – 25°C. Refrigerated Storage is suggested for best shelf-life. Shelf-life can be extended by storing refrigerated at 2°C – 8°C, at this temperature the EpoPro® 627A will provide a shelf-life of at least 12 month from the date of shipment. The EpoPro 627B will have a 12 month year shelf-life from date of shipment when

Product Datasheet



stored between 15°C and 25°C. both products should be protected from exposure to direct sunlight.

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® 627A

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

EpoPro® 627B

WARNING! May causes eye and skin irritation, or 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. Do not take internally

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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