

## EpoPro 226A/B

### FILLED, ELECTRICALLY INSULATING EPOXY ADHESIVE AND POTTING SYSTEM

EpoPro® 226A/B is a mineral filled epoxy system designed to provide outstanding adhesion and exceptional thermal shock, impact, and crack resistance. The cured polymer composite withstands temperature cycling over an operating range from -75°C to 175°C. The cured polymer is machinable and meets the Mil-I-16923 requirements.

Alternate hardeners are available to achieve faster or slower cures than the standard EpoPro 226A/B system. Custom colored versions are also available on request. Please contact us to discuss your application if you think a modified version might be needed for your application.

#### TYPICAL APPLICATIONS

- Bonds subject to impact or thermal shock
- Crack resistant encapsulating compound
- Moisture, heat, & chemical resistant potting

#### **HANDLING PROPERTIES**

	<u>VALUES</u>	<u>TEST METHOD</u>
<u>EpoPro 226A / resin:</u>		
Density, g/cm <sup>3</sup>	1.50	ASTM E-201
Viscosity @ 25°C, cps	50,000	ASTM D-2393
<u>EpoPro 226B / Hardener</u>		
Density, g/cm <sup>3</sup>	1.11	ASTM E-201
Viscosity @ 25°C, cps	80	ASTM D-2393
Mix Ratio by Weight	100A:10B	Calculated
Viscosity Mixed @ 25°C, cps	4800	ASTM D-2393
Gel Time @ 25°C, 100g mass	> 4 hours	ASTM D-2471
Recommended Cure Schedules:	Allow to gel @ 25°C then cure for 2-4 hrs @ 100°C. <u>For best chemical &amp; heat resistance</u> , heat cure for 2 hrs @ 100C then post-cure for either 6-8 hours @ 120°C or 3-4 hours @ 150°C.	

#### **PHYSICAL PROPERTIES**

	<u>VALUE</u>	<u>TEST METHOD</u>
Color	Black	ASTM E-201
Shore Hardness	87D	ASTM D-2240
Tensile Strength at break	9,100 psi	ASTM D-638
Tensile Elongation	1.7%	ASTM D-638
Compressive Strength, psi	15,200	ASTM D-638
Flexural Strength, psi	12,400	ASTM D-790
Water Absorption, % by weight 24 hours @ 25°C	0.08%	ASTM D-570

# Product Datasheet



Glass Transition Temp. (Tg)	132°C	
Coefficient of Thermal Exp. (CTE)	74 ppm/°C	ASTM E -381
Curing Shrinkage	0.3%	ASTM D-792
Thermal Conductivity	$8 \times 10^{-4}$ cal/cm-sec-°C	ASTM D-2214

## **ELECTRICAL PROPERTIES**

	<u>VALUE</u>	<u>TEST METHOD</u>
Dielectric Strength, V/mil	>500	ASTM D-149
Volume Resistivity, ohm-cm	$1.4 \times 10^{15}$	ASTM D-257
Dielectric Constant, 60 Hz	4.68	ASTM D-150
Dielectric Constant, 1 MHz	4.28	ASTM D-150
Dissipation Factor, 60 Hz	0.02	ASTM D-150
Dissipation Factor, 1 MHz	0.03	ASTM D-150

**NOTE** : Typical Properties determined using EpoPro 226A/B cured for hours 4 hours @ 100C° + 4 horus @ 150°C. Values are based on laboratory or average production results – not for specification purposes.

## **SUGGESTED PROCESSING GUIDELINES:**

EpoPro 226A/B can be applied by pouring, brushing, roller, squeegee, knife, spatula, or by spraying or dipping. It is also suitable for meter-mix dispensing and can be supplied in premixed and frozen syringes for small volume applications.

Weigh resin and hardener 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 – ideally the accuracy of the scale should be less than 1% of the mass being weighed. Blend by using a spatula or stirring stick for 2-3 minutes using a kneading motion. Scrape the bottom and sides of the mixing container carefully and frequently to produce a uniform mixture.

For best adhesion apply to clean, dry surfaces. Allow to set overnight and then heat cure as recommended. For small volume applications, such as less than 100 grams, immediate heat cures may be possible, but a slight increase in shrinkage may occur. If you would like recommendation on alternate cures please contact us. Always evaluate a suggested cure schedule in your application prior to implementing it for full scale production as each application unique conditions can effect the results.

## **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 12 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 226A**

**CAUTION!** May cause eye irritation. Prolonged or repeated skin contact may cause irritation, may cause allergic skin reaction. 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 226B**

**WARNING!** Causes eye & skin irritation and possible allergic skin reaction. Harmful if inhaled. Harmful if swallowed. Substance is harmful to liver or kidney if inhaled, swallowed, or absorbed through skin. Prolonged or repeated exposure can cause allergic reaction. 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.

## **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.

**Specialty Polymers & Services, Inc. (SP&S)**

**27822 Fremont Court**

**Valencia, CA 91355**

**[www.spolymers.com](http://www.spolymers.com)**

**Tel - 661-294-1790**

**Fax - 661-294-0640**

**[info@spolymers.com](mailto:info@spolymers.com)**