

## EpoxiLam™ 1780A/B

### EPOXY MARINE LAMINATING SYSTEM

EpoxiLam™ 1780A/B is a versatile, low viscosity, epoxy laminating system that cures at room temperature adhesive. It has a moderate work-life, excellent wet-out characteristics, and cured composites made with this system demonstrate excellent mechanical properties and moisture resistance. EpoxiLam™ 1780 A/B is designed for hand lay-up applications and can be used to build tools, parts, and to do repair work. It is also an excellent binder for epoxy-sand mixtures used for backfilling and other applications. The cured composites have very good mechanical properties and moisture resistance.

Many variations on the standard EpoxiLam™ 1780A/B system are available by request, including colored versions, longer or shorter work-lives, and modified viscosities. Please contact us to discuss your application if you think a modified version would be helpful for your application.

#### APPLICATIONS & BENEFITS

- Low viscosity & excellent wetting properties
- Excellent mechanical properties
- Excellent moisture resistance
- Used to make patterns, jigs, fixtures, keller models, body cubes, draw dies, master models, spotting racks, and for making composite parts of all kinds.

#### HANDLING PROPERTIES

	<u>VALUE</u>	<u>TEST METHOD</u>
Viscosity Mixed @ 25°C, cps	800	ASTM D-2393
Mix Ratio By Weight	100A:25B	Calculated
Gel Time @ 25°C, 4 fl oz mass (~500g)	35 minutes	ASTM D-2471
Gel Time @ 25°C, 1/16" thick film	60 - 90 minutes	ASTM D-2471

Cure Schedules: Can be demolded and handled after 24 hours-48 hours at room temperature (75°F ± 5°F), but full strength may take up to 7 days to develop. Alternately, allow to gel for 2-4 hours or longer at room temperature then heat cure for at least 6 hours at 150°F (65°C). Uniform heat should be applied during curing to prevent warpage.

#### PHYSICAL PROPERTIES

	<u>VALUE</u>	<u>TEST METHOD</u>
Color	Light yellow to amber	Visual
Shore D Hardness	80	ASTM D-2240
Tensile Strength, psi (resin neat)	11,000	ASTM D-638
Tensile Elongation at break (resin neat)	1.8%	ASTM D-638
Contact Laminate, 4oz glass cloth, 90° rotation, cure 7 days at 77°F:		
Ultimate Compressive Strength, psi	26,000	ASTM D-695
Ultimate Flexural Strength, psi	39,000	ASTM D-790
Ultimate Tensile Strength, psi	36,000	ASTM D-638
Coefficient of Thermal Expansion(ppm/°F)	9.3	ASTM D-3386

**NOTE** : Typical Properties determined using EpoxiLam™ 1780A/B cured for 7 days at 77°F(25°C). All testing performed at 77°F(25°C) unless otherwise stated. Values are based on laboratory results – not for specification purposes.

## SUGGESTED PROCESSING GUIDELINES

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 2-3 minutes using a kneading motion. Scrape the bottom and sides of the mixing container carefully and frequently to produce a uniform mixture.

EpoxiLam™1780A/B can be applied by stiff brush, roller, squeegee, knife, or spatula. Apply to clean, dry surfaces. Allow parts to cure for at least 24 – 48 hours at room temperature before handling to prevent accidental deformation.

## 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

### EpoxiLam™1780A

**CAUTION!** May cause eye or skin irritation. Prolonged or repeated skin contact may cause irritation, 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.

### EpoxiLam™1780B

**WARNING!** Causes skin and eye irritation. May cause allergic skin and respiratory reactions. Harmful if inhaled or 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** – 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.

# Product Datasheet



**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 supersedes 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)**