

## EpoPro<sup>®</sup> 140A/B

### WATER CLEAR EPOXY CASTING SYSTEM

EpoPro<sup>®</sup> 140 A/B is a low viscosity epoxy casting system. It provides clear castings and is suitable for casting thickness is up to about 3/4". It has a long pot life and give very good resistance to yellowing for an epoxy system, but still should be kept from UV exposure as much as possible to minimize yellowing over time.

EpoPro<sup>®</sup> 140 is often used for potting and encapsulation applications. It is also suitable for casting many optical and mechanical parts. It can easily be tinted with liquid colorant to make transparent colored parts.

Custom variants of the EpoPro<sup>®</sup> 140 systems are available including custom tints, colors, alternate work-lives and curing speeds, modified viscosities, etc. Please contact us to discuss your needs if you think such a variant might be helpful for your application.

#### APPLICATIONS & BENEFITS

- Casting parts for jewelry, optics, etc.
- Solvent Free, low viscosity, easy to use
- Bonding wood, metal, rubber, and many plastics
- Impregnating fine wires and provide good electrical properties

<b>HANDLING PROPERTIES</b>	<b>VALUE</b>	<b>TEST METHOD</b>
<u>EpoPro<sup>®</sup> 140A</u>		
Visual Appearance	Clear to slightly blue	Visual
Density	1.15 g/cm <sup>3</sup>	ASTM E-201
Viscosity, Part A, @ 25°C	10000 cps	ASTM D-2393
Flash Point	> 100°C	ASTM D-92
<u>EpoPro<sup>®</sup> 101B</u>		
Visual Appearance	Clear	
Density	0.94 g/cm <sup>3</sup>	ASTM E-201
Viscosity, Part B, @ 25°C	300 cps	ASTM D-2393
Flash Point	115°C	ASTM D-92
<u>Mixed Properties</u>		
Mixed Viscosity	1300 cps.	ASTM D-2393
Mix Ratio	100A:25B by weight or volume	
Shelf Life	at least 1 years at room temperature (~ 25°C)	
Pot life (120 grams) at 25°C	40 minutes	
Cure Schedules: Minimum suggested cure times are: 24 hours @ 25°C <b>or</b> 2 hours at 65°C		
Many other cure schedules are possible. Please contact us for assistance if you'd like to use an alternate cure schedule.		

# Product Datasheet



<b>PHYSICAL PROPERTIES</b>	<b>VALUE</b>	<b>TEST METHOD</b>
Color	Clear to very light yellow	Visual
Shore D Hardness	80D	ASTM D-2240
Tensile Strength, psi	9500 psi	ASTM D-638
Tensile Elongation at break	5%	ASTM D-638
Compressive Strength	10,500 psi	ASTM D-695

**NOTE:** Typical Properties determined using EpoPro 140A/B cured 2 hours at 65°C cure and tested at 25°C - unless otherwise stated. Values are based on laboratory or average production results – not for specification purposes.

## SUGGESTED PROCESSING GUIDELINES

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.

Apply to clean, dry surfaces. For best adhesion, abrade the surface with a wire brush, scouring pad, steel wool or coarse sand paper. After abrasion, clean the surface of any loose material and degrease with solvent or detergent to remove any contaminants. The material may then be applied with any suitable application method include brushes, spatulas, trowels, etc.

Although room temperature epoxy will normally set up to a rigid, demoldable state within 24 hours at room temperature (75°F ± 5°F), these systems reach their fully cured properties after seven days at room temperature. A full cure can be accelerated by applying heat after the part has set rigid. We recommend a postcure of 2-4 hours at 65°C. After cure, the part should be cooled at a slow rate so as not shock the part thermally. For best results, parts should be supported during postcure. Uniform heat distribution is also required during postcure; concentrated heat, such as that directed from a lamp, can cause warping. An elevated temperature cure will slightly increase the shrinkage compared to a room temperature cure. Finally please note that castings of EpoPro® 140 which are thinner than 1/8" may require curing at 100-150°F to achieve best results.

## PACKAGING AVAILABLE

This product is available in a wide range of kits including pints, quarts, and gallons. It can also be supplied in 50ml dual syringe cartridges that eliminate the need for hand mixing.

Please call use with any special packaging requests, or for information on custom kitting.

## STORAGE GUIDELINES

Store this material in a clean, cool and dry environment in its tightly closed original containers. 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

# Product Datasheet



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® 140A - WARNING! Cause eye irritation and may cause skin irritation or 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® 140B - DANGER! Causes severe skin and eye damage. 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. 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.

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