

EpoPro[®] 101A/C

WATER CLEAR, UV RESISTANT EPOXY ADHESIVE

EpoPro[®] 101 A/C is a low viscosity epoxy adhesives that is water clear and resistant to yellowing with UV exposure. It provide a rigid, impact resistant bond to many materials including most metals, glass, ceramics, concrete, stone, wood, and rigid plastics. EpoPro[®] 101 A/C has about a 30 minute work-life at room temperature, can be handled within 4 hours at room temperature. It develops 90% of its full strength within 12 hours at room temperature and fully cures within 24 hours. Once cured, the adhesive is temperature, chemical, and environmentally resistant up to at least 150°F (65°C).

The EpoPro[®] 101A/C system is often used for assembling glass, transparent plastics, semi-precious & precious stones, and other applications with is clarity if advantageous. Its low viscosity also makes it desirable for impregnating porous stones and concrete to repair cracks or seal against water or other liquids and gases.

Custom variants of the EpoPro[®] 101A/B system are available on request including custom 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

- Assembled of optically clear materials
- Repairing fine cracks & sealing pores
- Bonding fiber optics, mirrors, and lenses
- Impregnating fine wires or other tight spaces

HANDLING PROPERTIES	VALUE	TEST METHOD
<u>EpoPro[®] 101A</u>		
Visual Appearance	Clear to very light yellow	Visual
Density	1.15 g/cm ³	ASTM E-201
Viscosity, Part A, @ 25°C	1,800 cP	ASTM D-2393
Flash Point	> 100°C	ASTM D-92
<u>EpoPro[®] 101C</u>		
Visual Appearance	Clear to light blue liquid	
Density	1.02 g/cm ³	ASTM E-201
Viscosity, Part B, @ 25°C	230 cP	ASTM D-2393
Flash Point	115°C	ASTM D-92
<u>Mixed Properties</u>		
Mixed Viscosity	600 cP	ASTM D-2393
Mix Ratio	2A:1B by volume or 100A: 43B by weight	
Shelf Life	at least 1 years @ room temperature (~ 25°C)	
Work-life, thin film	25 – 35 minutes	

Product Datasheet

Pot life (250 grams) @ 25°C 15-25 minutes Gardner
Cure Schedules: achieve handling strength within 4 hours at 25°C.
Minimum suggested cure times are: 16 hours @ 25C or 1 hour at 60°C or 30 minutes at 80°C*
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	Water clear	Visual
Shore D Hardness	80D	ASTM D-2240
Tensile Strength, psi	7200 psi	ASTM D-638
Tensile Elongation at break	7%	ASTM D-638
Compressive Strength	14,000 psi	ASTM D-695
Glass Transition Temperature (Tg)	166°F (74.5°C)	ASTM E-1356
Lap Shear Strength,		ASTM D-1002
	<u>Test Temperature</u>	
	-60°C (-76°F)	2600 psi
	25°C (77°F)	2300 psi
	60°C (140°F)	1250 psi
	80°C (176°F)	430 psi

NOTE: Typical Properties determined using EpoPro 101A/C cured 7 days @ 25°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

EpoPro 101A/C can be applied by brush, roller, squeegee, knife, or spatula. It is also suitable for meter-mix dispensing and can be supplied in dual syringes cartridges for use with static mixing nozzles.

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.

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.

Optimal bond strengths are typically achieved with an adhesive bondline thickness of 3 – 5 mils, but larger gaps and thicker bondlines are possible with this adhesive without major loss of mechanical strength.

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

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® 101A - CAUTION! May cause eye irritation. Prolonged or repeated skin contact may cause 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® 101C - WARNING! Corrosive. 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.

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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