

## EpoPro® 154/B

### Self-Extinguishing, Epoxy Paste Adhesive

EpoPro® 154A/B is a two-part epoxy adhesive. It is designed for industrial and aerospace applications and has excellent adhesion to composites, metals, wood, glass, cement, stone, and many other materials. It features a convenient 5:1 mix ratio by weight and 4:1 mix ratio by volume and has a semi-paste consistency that is easy to mix and apply. The mixed adhesive has a work-life of about 30 minutes at room temperature, and bonded parts can be handled within 4 hours at room temperature. The adhesive fully cures within 24 hours at room temperature and develops about 75% of full strength within 12 hours at room temperature.

Once cured, the adhesive is temperature, chemical, and environmentally resistant up to at least 200°F/93°C. Cured EpoPro® 154A/B exhibits excellent flame retardance – meeting the requirements of UL 94V0, FAR 25.853 and OSU requirements. The cured epoxy is quite machinable and can be sawn, ground, tapped, drilled, and sanded with conventional tools.

#### BENEFITS

- Self-Extinguishing
- 
- 

<u>TYPICAL PROPERTIES</u>	<u>VALUE</u>	<u>TEST METHOD</u>
<u>EpoPro® 154A</u>		
Visual Appearance	Off-White	Visual
Density	1.23 g/cm <sup>3</sup>	ASTM E-201
Viscosity, Part A, @ 25°C	125,000 cP	ASTM D-2393
Flash Point	> 120°C	ASTM D-92
<u>EpoPro® 154B</u>		
Visual Appearance	Tan Paste	Visual
Density	1.00 g/cm <sup>3</sup>	ASTM E-201
Viscosity, Part B, @ 25°C	400,000 cP	ASTM D-2393
Flash Point	> 120°C	ASTM D-92
<u>Mixed Properties</u>		
Mixed Viscosity	Semi-Paste	
Mix Ratio	5A: 1B by weight or 4A : 1B by volume	Calculated
Shelf-life	at least 2 years @ room temperature (~ 25°C)	Calculated
Sag Resistance	No sagging at up to 1/8" in thickness	ASTM D-2730
Pot life (50 grams) @ 25°C	30 minutes	ASTM D-2471
Suggested cure times	18 - 24 hour @ 25C or gel + 60 minutes at 65°C* (Achieves handling strength in approximately 4 hours at 25°C.)	
*Note: many other cure schedules are possible. Please contact us for assistance if you'd like to use an alternate cure schedule.		

Not for specification purposes. All tests run at 25°C unless otherwise noted.

PHYSICAL PROPERTIES		
	<u>VALUE</u>	<u>TEST METHOD</u>
Color	Off-white*	Visual
Shore D Hardness	80	ASTM D-2240
Compressive Strength	8,000 psi	ASTM D-695
Lap Shear Strengths		ASTM D-1002
Development:		
	<u>Cure time</u>	
	4 hrs @ 25°C (77°F)	395 psi
	6 hrs @ 25°C (77°F)	965 psi
	12 hrs @ 25°C (77°F)	1520 psi
	24 hrs @ 25°C (77°F)	2100 psi
Effect of Temperature:		
	<u>Test Temperature</u>	
	-40°C (-40°F)	1810 psi
	25°C (77°F)	2100 psi
	60°C (140°F)	1100 psi
	80°C (176°F)	800 psi
Tropical Aging at 49°C and in 95% relative humidity:		
	<u>Aging Period</u>	
	Initial Results	2100 psi
	30 days	2240 psi
	90 days	2460 psi
Flammability, 12 second ignition		
	Vertical self-extinguishing time	2 seconds FAR 25.853(a)
	Horizontal burn	2 seconds UL 94

**NOTE:** Typical Properties determined using EpoPro® 154A/B cured 7 days @ 25°C cure - unless otherwise stated. Values are based on laboratory or average production results – not for specification purposes.

\*Customer colors available by request. Custom viscosity, pot life and cure speeds are also available by request.

## SUGGESTED PROCESSING GUIDELINES

EpoPro® 154A/B can be applied by stiff 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.

For best bond strength, roughen surface to be bonded with wire brush, sand-blasting, etc. After roughening, clean and dry surface and remove any loose material prior to bonding. 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.

## 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 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® 154A

**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® 154B

**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 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**