

EpoPro[®] 131A/B

2 COMPONENT, PEEL RESISTANT EPOXY ADHESIVE

EpoPro[®] 131A/B is 2-part epoxy adhesive system that has a combination of high shear & peel strength, and very good flexibility. It is recommended for bonding Sheet Molding Compound (SMC), composites, and many rigid plastics. It is also excellent for bonding & sealing materials with dissimilar Coefficients of Thermal Expansion or that are subject to thermal shock, vibration, or repeated impacts. EpoPro 131A/B is also suitable for many cryogenic applications, as it retains its strength and toughness even at very low temperatures.

The mixed EpoPro 131A/B is a flowable paste and is black in color, but alternate colors and viscosities are available by request. The adhesive will fully cure at room temperature or can be accelerated with heat, and it can rapidly achieve handling strength at 120°C to allow for rapid production rates.

SUGGESTED APPLICATIONS:

- Tough, peel resistant, bonds to SMC, Composites & many Plastics
- Bonding metals to plastics or composites and other dissimilar CTE bonding applications
- Bonding materials subject to cryogenic temperatures, thermal shock, vibration, or repeated impact

HANDLING PROPERTIES	VALUE	TEST METHOD
<u>EpoPro 131A</u>		
Visual Appearance	Black paste	
Density	1.33 g/cm ³	ASTM E-201
Viscosity, Part A, @ 25°C	120,000	ASTM D-2393
Flash Point	>100°C	ASTM D-92
<u>EpoPro 131B</u>		
Visual Appearance	Cream colored paste	
Density	1.27 g/cm ³	ASTM E-201
Viscosity, Part B, @ 25°C	104,000 cP	ASTM D-2393
Flash Point	>100°C	ASTM D-92
<u>Mixed Properties</u>		
Mixed Viscosity	110,000 cP	
Mix Ratio - part by weight	100A: 187B	
Mix Ratio - part by volume	100A: 200B	
Shelf-life	at least 12 months @ room temperature (~ 25°C)	
Pot life (100 grams) @ 25°C	75 minutes	

Product Datasheet



Time to handling strength (1000 psi):

@ 25°C / 77°F 8 – 12 hours

@ 120°C / 250°F 3 minutes

Cure Schedules: 48 -72 hours @ 25°C **or** 2 hours 120°C **or** @ 30 minutes at @ 120°C*

*Note: many other cure schedules are possible. Please contact us for assistance if you'd like to consider an alternate cure schedule.

PHYSICAL PROPERTIES (Tested at 25°C unless otherwise noted – cured 1 hour @ 120°C)

		<u>TEST METHOD</u>
Appearance	Dark Gary-Black	Visual
Hardness, Shore D At 25°C	64D	ASTM D-2240
Tensile Lap Shear (AL:AL)		ASTM D-1002
@ -55°C / @ 25°C / @ 82°C	2740 psi / 2210 psi / 1280 psi	
Tensile Lap Shear (SMC:SMC)		ASTM D-1002
@ -30°C / @ 25°C / @ 82°C	570 psi / 460 psi / 345 psi	
Ultimate Tensile Strength	2,400 psi	ASTM D-638
Tensile Elongation	60%	ASTM D-638
Young's Modulus	108,000 psi	ASTM D-638
Shear Modulus	52,000 psi	Rheometrics RDA-700
T-Peel strength	22 pli	ASTM D-1876
Coefficient of Thermal Expansion	161 ppm/ °C	ASTM E-831
Glass Transition Temperature	85°C	ASTM
Thermal Conductivity	0.21 W/mK	ASTM D-2214

NOTE : Values are based on laboratory or average production results – not for specification purposes.

PROCESSING AND APPLICATION INSTRUCTIONS :

EpoPro 131A/B can be applied by stiff brush, roller, squeegee, knife, or spatula. It is also suitable for meter-mix dispensing or dispensing from a dual syringe cartridge through a static mixing nozzle.

For hand-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 of +-1% of the amounts being weighted or better. 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 bonding, roughen the surface to be bonded using sandpaper, a wire brush, sand-blasting or similar means. Be sure to clean and degrease the surface after roughening.

For Sheet Molding Compound (SMC) and many composite and plastic surfaces, a dry wipe or a wipe with a solvent such as Isopropyl Alcohol (IPA) or Methyl Ether Ketone (MEK) is often enough surface preparation to achieve a strong bond.

PACKAGING AVAILABLE:

Product Datasheet



This product is available in a wide range of package sizes including 50ml & 200ml Dual Syringes, quart kits, gallon kits, 5-gallons kits, and 55-gallon drums.

STORAGE GUIDELINES:

Store the EpoPro 131A and 131B in a clean, cool and dry environment in its tightly closed original containers. Protect from extended exposure to temperatures below 15°C (59°F) to prevent crystallization. If crystallization occurs, heat the entire container 4 hours at 60°C to re-liquefy the material. Also protect from exposure to extended moisture or high humidity. Tightly re-seal containers 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 131A - CAUTION! May cause eye & skin irritation. Prolonged or repeated skin contact or inhalation of vapors may cause allergic skin or respiratory reactions. 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 131B - 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 with:

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

Tel: 661-294-1790

Fax : 661-294-0640

info@spolymers.com