

EpoPro® 153A/B

Carvable Epoxy Paste Adhesive For Wood

EpoPro® 153A/B is a two-part, filled epoxy paste adhesive that produces a hard surface with a density similar to oak. The adhesive is easily carveable and can easily be sanded, sawed, drilled, tapped, or otherwise worked like wood. EpoPro® 153A/B has a convenient 1:1 mix ratio by weight and volume and a creamy consistency that is easy to apply. The mixed adhesive is sag resistant on vertical surfaces in thicknesses of at least 1/2" (1.25 cm). The mixed EpoPro® 153A/B has a work-life of about 20 minutes and rapidly develops its bond strength. Bonded parts can be handled within 4 hours at room temperature and will develop ~90% of full strength within 8 hours at room temperature. Once cured, the adhesive is temperature, chemical, and environmental resistant to at least 140°F (60°C.)

The EpoPro® 153A/B system is designed for bonding and repairing wood products and for many art projects, but it is also used to bond metal, composites, and other materials where its low density or easy of machining is desirable.

APPLICATIONS & BENEFITS:

- Easily carveable and machinable
- Useful to build and repair wood products
- Use to Fill, seal, and repairing cracks, holes, etc.
- Bonds wood, metals, composites, stones, etc..

HANDLING PROPERTIES	VALUE	TEST METHOD
<u>EpoPro® 153A</u>		
Visual Appearance	Brown Paste	Visual
Density	0.82 g/cm ³	ASTM E-201
Sag resistance at 25°C	Pass at 1", fail at 1.25"	
Flash Point	> 120°C	ASTM D-92
<u>EpoPro® 153B</u>		
Visual Appearance	Light Purple-gray paste	Visual
Density	0.64 g/cm ³	ASTM E-201
Sag resistance at 25°C	Pass at 0.5", fail at 0.75"	
Flash Point	> 120°C	ASTM D-92
<u>Mixed Properties</u>		
Mixed Viscosity	Thixotropic Paste	
Sag resistance at 25°C	Non-sagging at 0.5"	
Mix Ratio	1A:1B by weight and by volume	
Shelf-life	at least 2 years at room temperature (~ 25°C)	
Pot life (120 grams) @ 25°C	20 minutes	
Suggested cure times	12-24 hour at 25°C or 30 minutes at 40°C or 10 minutes at 100°C*	
Achieves handling strength in approximately 4 hours at 25°C and ~90% of final strength in 8 hours at 25°C		
*Note: many other cure schedules are possible. Please contact us for assistance if you'd like to discuss an alternate cure schedule.		

Product Datasheet

PHYSICAL PROPERTIES	<u>VALUE</u>	<u>TEST METHOD</u>
Color	Light Brown*	Visual
Shore Hardness	85D	ASTM D-2240
Tensile Strength	2,130 psi	ASTM D-638
Tensile Modulus	140,000 psi	ASTM D-638
Compressive Strength	4,100 psi	ASTM D-695
Compressive Modulus	161,000 psi	ASTM D-695
Flexural Strength	4,200 psi	ASTM D-790
Flexural Modulus	149,000 psi	ASTM D-790
Glass Transition Temp. (T _g)	166°F (74°C)	ASTM D-648
Heat Deflection Temperature	122°F (50°C)	
Coefficient of Thermal Expansion	44 ppm/ °C	
Lap Shear Strengths		ASTM D-1002
Strength Development:	<u>Cure time</u>	<u>Shear Strength</u>
	4 hours at 25°C (77°F)	1560 psi
	8 hours at 25°C (77°F)	1990 psi
	24 hours at 25°C (77°F)	2200 psi
Effect of Temperature on Lap Shear Strength:	<u>Test Temperature</u>	
	-60°C (-76°F)	1700 psi
	25°C (77°F)	2100 psi
	50°C (140°F)	720 psi
	80°C (176°F)	140 psi
Lap Shear Strength after Tropical Aging at 49°C and in 95% relative humidity:	<u>Aging Period</u>	
	Initial results	2100 psi
	30 days	1920 psi
	90 days	1460 psi

NOTE: Typical Properties determined using EpoPro® 153A/B cured 7 days at 25°C cure - unless otherwise stated. Values are based on laboratory or average production results – not for specification purposes.

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

SUGGESTED PROCESSING GUIDELINES

EpoPro® 153A/B can be applied by stiff brush, roller, squeegee, knife, or spatula. 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 the surface to be bonded with a wire brush, sand-blaster, or other procedure. 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 much larger gaps and thicker bondlines are possible with this adhesive without major loss of mechanical strength.

STORAGE GUIDELINES

Product Datasheet



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® 153A

WARNING! May cause eye 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.

EpoPro® 153B

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 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

Tel: 661-294-1790

Fax: 661-294-0640

info@spolymers.com