

Product Datasheet

Note: New formulation as of June 2023.

EpoPro[®] 113A/B HIGH SHEAR EPOXY PASTE ADHESIV

EpoPro[®] 113A/B is a two part epoxy adhesive that provides high shear strength with many surfaces including most metals, woods, glass reinforced plastics, glass, and masonry. The adhesive provides run and sag resistance and good gap filling properties. The cured EpoPro[®] 113A/B also provides excellent environmental, chemical, and impact resistance.

BENEFITS

• High Shear Strength to most materials	• Conforms to Mil-A-52194 rev A
• Easy to use One-to-One Mix ration by weight and by volume	• RoHS Compliant

HANDLING PROPERTIES	VALUE	TEST METHOD
<u>EpoPro[®] 113A</u>		
Visual Appearance	Off-white	Visual
Density	1.44	ASTM E-201
Viscosity, Part A, at 25°C	90,000 cps	ASTM D-2393
Flash Point	>93°C	ASTM D-92
<u>EpoPro[®] 113B</u>		
Visual Appearance	Green	
Density	1.44	ASTM E-201
Viscosity, Part B, at 25°C	85,000 cps	ASTM D-2393
Flash Point	>93°C	ASTM D-92
<u>Mixed Properties</u>		
Mixed Viscosity	95,000 cps	ASTM D-2393
Mix Ratio	1A: 1B by weight and volume	
Mixed Density	1.40	ASTM E-201
Pot life (2 oz) at 25°C	60 -75 minutes	Gardner Gel timer
Shelf Life	1 year from date of shipment, stored as recommended	
Time to Handling Strength	8-12 hours at 25°C or 20 – 30 minutes at 65°C (150°F)	
<u>Cure Schedule:</u>	Minimum suggested cure time is 24 hours at 25C or 1 hour at 65°C. Full cure may require up to 3-7 days at room temperature, 2-3 hours at 65°C, or 30 minutes at 95°C. After heat curing, allowing samples to equilibrate for 8 – 24 hours at room temperature prior to testing will yield the most consistent results.	

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PHYSICAL PROPERTIES

	<u>VALUE</u>	<u>TEST METHOD</u>
Color	Green	Visual
Shore D Hardness	82D	ASTM D-2240
Elongation at break	2 - 3%	ASTM D-638
Dielectric Strength	>500 volts/mil	ASTM D-149
Volume Resistivity at 25°C	$>1 \times 10^{13}$ ohm/cm	ASTM E-150
Coefficient of Thermal Expansion 0°C-30°C	74 ppm/°C	ASTM D-696
T-peel Strength, etched aluminum at 25 °C	3-4 pli	ASTM D-1876
Lap Shear Strength		ASTM D-1002
Effect of Temperature (etched Aluminum to aluminum bonds, except as noted):		
	<u>Test Temperature</u>	
	-55°C (-67°F)	1590 psi
	25°C (77°F)	2480 psi
	82°C (180°F)	510 psi
	(Steel Substrate) 25°C (77°F)	3000 psi

NOTE: Typical Properties determined for EpoPro® 113A/B cured 7 days at 25°C cure and tested at 25°C - unless otherwise stated. Values are based on laboratory or average production results – not for specification purposes. Contact SP&S for support in writing specifications.

SUGGESTED PROCESSING GUIDELINES

EpoPro® 113A/B 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.

For best adhesion, abrade the surface to be bonded with a wire brush, scouring pad, steel wool or coarse sandpaper. After abrasion, clean the surface to remove any loose material and degrease with a solvent or detergent to remove any other contaminants. The adhesive may then be applied with the any suitable application method.

Optimal bond strengths are typically achieved with an adhesive bond-line thickness of 2 – 5 mils, but gaps of up to ¼ inch can be filled with the 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 4oz and 8 oz aluminum squeeze tube kits or in 50ml and larger dual syringe cartridges. Squeeze tube kits are convenient for using small amounts of material at a time and dual syringe cartridges can be dispensed through static mixers to eliminate hand mixing.

STORAGE GUIDELINES

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Store this material in a clean, cool and dry environment in its tightly closed original containers between 15°C (59°F) – 40°C (104°F). Two component kits could settle or separate during storage and should be thoroughly re-mixed prior to use. Avoid extended exposure to high humidity and tightly re-seal 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® 113A&B

Avoid contact with skin and eyes. Avoid contact with hot material. Wash hands thoroughly after handling, especially before eating, drinking, smoking, and using restroom facilities. Wash contaminated goggles, face shields, and gloves. Professionally launder contaminated clothing before re-use. Avoid breathing fumes if this product is used at high temperatures. Use this product with adequate ventilation.

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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