

EpoPro 103FR- A/B

FLAME RETARDANT, RAPID SETTING EPOXY ADHESIVE

EpoPro 103FR- A/B is a rapid-setting, self-extinguishing epoxy adhesive paste. It is designed to adhere to many different materials and will cure at temperatures as low as 40° – 50°F (5°C– 10°C). Handling strength is developed in as little as 10 minutes with high strength developing within 1 hour at room temperature. EpoPro 103FR-A/B has a convenient 1:1 by weight and volume mix ratio and is easy to apply with a spatula, brush or squeegee. EpoPro 103FR-A/B is bromine and Antimony Trioxide free and complies with RoHS and REACH requirements.

TYPICAL APPLICATIONS

- Meets UL 94VO & FAR 25.853 requirements
- Excellent for bonding small parts & for rapid repairs
- Bonds metals, ceramics, wood, cardboard, glass, plastics and many other materials.

HANDLING PROPERTIES

<u>EpoPro 103FR-A/B</u>	<u>VALUE</u>	<u>TEST METHOD</u>
Density Mixed, g/cm ³	1.20	ASTM E-201
Viscosity Mixed @ 25°C, cps	75,000	ASTM D-2393
Mix Ratio By Weight	1A:1B	Calculated
Mix Ratio By Volume	1A:1B	Calculated
Gel Time @ 25°C, 100g mass	6 minutes	ASTM D-2471
Gel Time @ 25°C, 1/16" thick film	8-10 minutes	ASTM D-2471
Time to achieve Handling Strength	10-15 minutes	
Lap Shear Strength Development @ 25C		ASTM D-1002
<u>Cure time</u>	<u>Shear Strength@ 25C</u>	
30 minutes	480 psi	
1 hour	900 psi	
24 hours	2150 psi	
Recommended Cure Schedule:	Functional cures are achieved in as little as 60 - 90 minutes and full strength is developed within 24 hours @ 25°C. Alternate cure – 30 minutes at 70°C	

PHYSICAL PROPERTIES

	<u>VALUE</u>	<u>TEST METHOD</u>
Color	Off-white* (*custom colors available)	
Shore D Hardness	83	ASTM D-2240
Tensile Strength, psi	4,600	ASTM D-638
Tensile Elongation at break	7%	ASTM D-638
Lap Shear Strengths @ various Test Temperatures:		ASTM D-1002
<u>Test Temperature</u>	<u>Shear Strength</u>	
-55°C / -67°F	1050 psi	
-40°C / -40°F	1260 psi	

25°C / 77°F	2150 psi	
40°C / 104°F	1180 psi	
60°C / 140°F	520 psi	
82°C / 180°F	200 psi	
T-Peel Strength	3 pli	
Flammability, 60 second ignition, vertical		FAR 25.853
Self-extinguishing time,	2 seconds	
Burn Length	5 inches	

NOTE : Typical Properties determined using EpoPro 103FR -A/B cured for for 24 hours @ 25°C. Values are based on laboratory or average production results – not for specification purposes.

SUGGESTED PROCESSING GUIDELINES:

EpoPro 103FR-A/B can be applied by stiff brush, roller, squeegee, knife, or spatula. They are also suitable for meter-mix dispensing and can be supplied in dual syringes cartridges for use with static mixing nozzles.

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.

Apply the adhesive to clean, dry surfaces. Allow to cure at room temperature for at least 10 minutes before handling. Allow 60 minutes before subjecting the bond to significant stress and if possible allow 4-8 hours for a functional cure to be achieved before applying significant stress to the bond. After the EpoPro 103FR-A/B has cured at least 10 minutes @ 25°C, it may be post cured for 30 minutes at 70°C to yield even higher bond strengths and increased thermal and chemical resistance.

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 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 103FR-A

CAUTION! 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 103FR-B

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.

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

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