Product Datasheet

EpoPro® 100SF-A/B

2 PART MULTIPURPOSE EPOXY ADHESIVE SYSTEM

EpoPro® 100SF-A/B is a two-part epoxy system that cures at room temperature or with heat into a tough adhesive compound. The EpoPro® 100SF-A/B is a mineral filled version of our standard EpoPro® 100A/B system. This system when cured produces a polymer composite that provides excellent mechanical and electrical properties, and is resistant to moisture and many chemicals. The EpoPro 100SF-A/B is an excellent adhesive and demonstrates excellent bond strengths to most common materials including metals, wood, rubber, glass, and most rigid plastics.

The EpoPro 10SF-A/B system is available in many standard colors including standard Dark Black as well as a neutral tan. For your specific application, we can recommend custom variations of this product to fit your processing or cured property requirements. Please contact us to discuss your application if you'd like to receive samples of a custom color or to discuss the development of a custom variant that would be suitable for your application.

SUGGESTED APPLICATIONS

- Multipurpose adhesive– excellent for many uses
- Excellent for impact resistant bonds and sealing applications

HANDLING PROPERTIES

	VALUE	TEST METHOD
EpoPro 100SF-A (resin)		
Visual Appearance	Black Semi-Paste	Visual
Density, Part A	1.45 g/cm³	ASTM E-201
Viscosity, Part A, @ 25ºC	100,000 cps	ASTM D-2393
Flash Point	>93°C	ASTM D-92
EpoPro 104F-B (hardener)		
Visual Appearance	Tan Semi-Paste	Visual
Density,	1.45 g/cm³	ASTM E-201
Viscosity, Part B, @ 25ºC	90,000 cps	ASTM D-2393
Flash Point	>93°C	ASTM D-92
Mix Ratio:	1:1 by weight or volume	
Viscosity Mixed at 25ºC	100,000 cps	ASTM D-2393
Pot life (100 grams) @ 25ºC	70 - 120 minutes	Gardner
Pot life (100 grams) @ 50ºC	20 minutes	Gardner

Cure Schedules: 24-48 hours at 25ºC **or** 2 hours at 65ºC **or** 15-20 minutes at 95ºC will provide good initial cure. At room temperature full curing may take 3-7 days. Heat cures will achieve full strength within the cure time listed or within 24 hours at room temperature after the heat

cure is complete. In many applications, allowing the adhesive to set for 4 hours or longer prior to curing will reduce curing shrinkage and provide the optimum bond strength.

PHYSICAL PROPERTIES	VALUE	TEST METHOD
Color	Black	Visual
Shore D Hardness	80	ASTM D-2240
Tensile Strength, psi	4,600	ASTM D-638
Tensile Elongation at break	2.4%	ASTM D-638
Lap Shear Strength		ASTM D-1002
Varied Test Temperatures:		
Test Temperature	Shear Strength	
-55ºC / -67ºF)	2350 psi	
-40ºC / -40ºF)	2360 psi	
25ºC / 77ºF	2200 psi	
40ºC / 104ºF	1780 psi	
60ºC / 140ºF	970 psi	
82ºC / 180ºF	520 psi	
Glass Transition Temp. (Tg)	136ºF (58ºC)	ASTM D-648
Coefficient of Thermal Expansion (CTE):	60.4 ppm/ºC	ASTM E-831

NOTE: Typical Properties determined using EpoPro 103A/B or 103C/D cured for 24 hours @ 25ºC, and tested at 25ºC unless otherwise noted. Values based on laboratory or average production results – not for specification purposes.

CHEMICAL RESISTANCE

(Samples cured for 7 days at room temperature then soaked 30 days in the fluids indicated at 23ºC (75ºF)

Ammonia	Excellent
Vinegar (5% Acetic Acid)	Fair - Good
Hydrochloric Acid (10%)	Fair
Sodium Hydroxide (10%)	Good
Sodium Hydroxide (50%)	Fair
Sulfuric Acid (10%)	Poor
Boric Acid	Excellent
Kerosene	Excellent
Transmission Fluid (Type A & F)	Excellent
Power Steering Fluid	Excellent
Brake Fluid	Fair
Simple Green cleaner (undiluted)	Excellent

Rubbing Alcohol (70% Isopropyl Alcohol & 30% Water)	Good
Ethanol	Good
Toluene	Fair
Acetone	Fair
Paint Thinner/Mineral Spirits	Excellent
Turpentine	Good
Chlorinated solvent (carbon tetrachloride)	Fair
Water	Excellent
Mineral Oil	Excellent
Corn Oil	Excellent
Window Washer Fluid	Excellent

Excellent = Recommended for applications requiring long term immersion
Good = Recommended for applications with short term immersion or prolonged minor exposure (such as from spills, vapor, etc.)
Fair = Recommended only for short term spillage or other minor exposure applications
Poor = Not recommend (samples dissolved or dramatically weakened by exposure of more than a few minutes)

PROCESSING AND APPLICATION INSTRUCTIONS

To use, weigh (or proportion by volume) Part A and Part B in the ratio you have selected into a clean mixing container. Mixing containers should preferably be made of polypropylene,

polyethylene, glass, or non-corroding metal. (Stainless steel, aluminum, etc.) Always use weighing equipment having accuracy that is ±1% or less of the smallest quantity that you will be weighing. Blend Part A & B thoroughly by using a spatula or stirring stick for at least 2-3 minutes using a kneading motion. Scrape the bottom and sides of the mixing container carefully and frequently to produce a uniform mixture. Vacuum de-gassing after mixing may be helpful for best electrical and physical properties.

Apply to clean, dry surfaces. For best adhesion, abrade the surface with a wire brush, scouring pad, steel wool or coarse sand paper. After abrasion, clean the surface of any loose material and degrease with solvent or detergent to remove any contaminants. The material may then be applied with any suitable application method include brushes, spatulas, trowels, etc.

PACKAGING AVAILABLE

This product is available in a wide range of kits including pints, quarts, gallons and 5-gallon pails, and 55-gallon drums.

In addition, pre-mixed and frozen syringes and cartridges are available in a wide variety of sizes (1ml, 3ml, 5ml, 10ml, 20ml, 30ml, 50ml and 55ml syringes, as well as 2.5 oz, 6 oz, and 12 oz cartridges) and styles (manual or air operated, EFD, Techcon, Semco, Iwashita, etc.)

Please call use with any special packaging requests, or for information on custom kitting.

STORAGE GUIDELINES

Store these materials in a clean, cool and dry environment in their tightly closed original containers. Protect from extended exposure to temperatures below 15ºC (59ºF). Crystallization may occur if the material is exposed to cold for extend periods. If this occurs, heat the entire container for 4 hours at 60ºC to re-liquefy the material. Allow to cool to ambient temperature prior to using. Please Note: do not heat pre-mixed and frozen syringes prior to use – they will not crystallize and should be stored at -40C or colder until ready to thaw and use.

Also protect the EpoPro® 100SFA&B from exposure to 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® 100SF-A

WARNING! 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® 100SF-B

WARNING! 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.

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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