

EpoPro® 158A/B

FAST SETTING, EPOXY PASTE ADHESIVE



EpoPro® 158 A/B is an aluminum filled, epoxy paste adhesive that produces excellent bonds to many materials including most metals, glass, ceramics, concrete, stone, wood, rubber, and rigid plastics. It has about a 25 minute work-life, can be handled within 2-4 hours at room temperature, and develops 90% of its full strength within 6 hours at room temperature. Once cured, the adhesive is temperature, chemical, and environmentally resistant up to at least 150°F (65°C). The cured adhesive is readily machinable and can be sawn, ground, tapped, drilled, and sanded with conventional tools.

The EpoPro® 158 system is often used for assembling metal, ceramic, glass, & stone items. It is also ideal for maintenance operations such as repairing or rebuilding machinery, sealing and lining tanks, rebuilding stripped screw holes, and repairing plastic and metal tooling. It is excellent for general plugging, sealing, and bonding applications including filling holes in molds and castings, adding fillets to metal patterns, and making jigs and nesting fixtures. It is also used for repairing vacuum forms, air ducts, steam lines, radiators, boiler jackets, concrete and stonework.

Custom variants of the EpoPro® 158A/B system are available on request including custom colors, alternate worklives and curing speeds, modified viscosities, etc. Please contact us to discuss your needs if you think such a variant might be helpful for your application.

APPLICATIONS & BENEFITS

- Maintenance & repair of metal, wood, etc.
- Filling, sealing and repairing leaks, cracks, etc
- Building, repairing and modifying tools, molds, & fixtures
- Conforms to MMM-A-1754

HANDLING PROPERTIES	VALUE	TEST METHOD
<u>EpoPro® 158A</u>		
Visual Appearance	Light gray paste	Visual
Density	1.54 g/cm ³	ASTM E-201
Viscosity, Part A, @ 25°C	800,000 cP	ASTM D-2393
Flash Point	98°C	ASTM D-92
<u>EpoPro® 158B</u>		
Visual Appearance	Blue-gray paste	
Density	1.54 g/cm ³	ASTM E-201
Viscosity, Part B, @ 25°C	350,000 cP	ASTM D-2393
Flash Point	115°C	ASTM D-92
<u>Mixed Properties</u>		
Mixed Viscosity	480,000 cP	ASTM D-2393

Product Datasheet

Mix Ratio	1A: 1B by weight and by volume	
Shelf Life	at least 2 years @ room temperature (~ 25°C)	
Sag Resistance:	No sagging at up to 0.3" in thickness	ASTM D-2730
Pot life (200 grams) @ 25°C	25 minutes	Gardner
Cure Schedules:	achieve handling strength in 2-4 hours at 25°C.	
Minimum suggested cure times are: 6 hours @ 25C or 30 minutes at 60°C or 10 minutes at 100°C*		
Many other cure schedules are possible. Please contact us for assistance if you'd like to use an alternate cure schedule.		

PHYSICAL PROPERTIES

	<u>VALUE</u>	<u>TEST METHOD</u>	
Color	Blue-Gray	Visual	
Shore D Hardness	89	ASTM D-2240	
Tensile Strength, psi	5200 psi	ASTM D-638	
Tensile Elongation at break	3%	ASTM D-638	
Compressive Strength	12,000 psi	ASTM D-695	
Flexural Strength	7,200 psi	ASTM D-790	
Flexural Modulus	700,000 psi	ASTM D-790	
Glass Transition Temperature (Tg)	166°F (74°C)	ASTM E-1356	
Heat Deflection Temperature	122°F (50°C)	ASTM D-648	
Coefficient of Thermal Expansion	54.3 ppm/ °C	ASTM D-696	
Lap Shear Strength		ASTM D-1002	
Development:			
	<u>Cure time</u>		
	6 hrs @ 25°C (77°F)	2560 psi	
	24 hrs @ 25°C (77°F)	2700 psi	
	7 days @ 25°C (77°F)	2840 psi	
Effect of Temperature:			
	<u>Test Temperature</u>		
	-60°C (-76°F)	2280 psi	
	25°C (77°F)	2840 psi	
	60°C (140°F)	1140 psi	
	80°C (176°F)	330 psi	
Tropical Aging at 49°C and in 95% relative humidity:			
	<u>Aging Period</u>		
	Initial results	2840 psi	
	30 days	3400 psi	
	90 days	3560 psi	
	120 days	3130 psi	
Chemical Resistance (after Immersion for 90 days):			
<u>Chemical</u>	<u>Shear Strength</u>	<u>Chemical</u>	<u>Shear Strength</u>
Control	2840 psi	Power Steering Fluid	3020 psi
Acetic Acid 10%	350 psi	Transmission Fluid	2900 psi
Gasoline	2560 psi	Vegetable/Corn Oil	2900 psi
Motor Oil (HD30)	3100 psi	Water @ 23°C	2300 psi
Mineral Oil	3100 psi	Water @ 60°C	1490 psi
Paint Thinner	1920 psi	Xylene	2640 psi

NOTE: Typical Properties determined using EpoPro® 158A/B cured 7 days @ 25°C cure and tested at 25°C - unless otherwise stated. Values are based on laboratory or average production results – not for specification purposes.

SUGGESTED PROCESSING GUIDELINES

EpoPro 158A/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.

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.

Optimal bond strengths are typically achieved with an adhesive bondline thickness of 3 – 5 mils, but larger gaps and thicker bondlines are possible with this adhesive without major loss of mechanical strength

PACKAGING AVAILABLE

This product is available in a wide range of kits including 1/2-pints, pints, quarts, 1/2-gallons, 1-gallons.

It can be supplied in 150 g and 300 g squeeze tubes for easy dispensing of small volumes of material, or in dual syringe cartridges in 1:1 by volume mix ratios to eliminate the need for hand mixing.

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

STORAGE GUIDELINES

Store this material in a clean, cool and dry environment in its tightly closed original containers. 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.

Product Datasheet



PERSONAL HYGIENE

EpoPro® 158A

CAUTION! May cause eye irritation. Prolonged or repeated skin contact may cause irritation or 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® 158B

WARNING! Corrosive. 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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