

EpoPro 2014HT - A/B

CHEMICAL & TEMPERATURE RESISTANT EPOXY ADHESIVE

EpoPro 2014HT- A/B is a high performance epoxy adhesive system with excellent bond strength to at least 150°C. It demonstrates excellent adhesion to metals, ceramics, composites, glass, and many plastics and is excellent for bonding dissimilar materials. In addition, the cured polymer is resistant to impact, thermal shock and peel forces and provides excellent chemical, Environmental, & fatigue resistance.

Many variations on the standard system are available, including custom colors, alternate work-lives & curing speeds, modified viscosities, and many other variations. Please contact us to discuss your application if you think such a variant would be helpful for your application.

APPLICATIONS & BENEFITS:

- Aerospace and high performance bonding
- Small volume potting and filling application
- Liquid shim applications
- Heat and chemical resistant sealant applications

HANDLING PROPERTIES	VALUE	TEST METHOD
<u>EpoPro 2014HT - A</u>		
Visual Appearance	Beige colored paste	
Density	1.60 g/cm ³	ASTM E-201
Viscosity, Part A, @ 25°C	80,000 cP	ASTM D-2393
Flash Point	>100°C	ASTM D-92
<u>EpoPro 2014HT - B</u>		
Visual Appearance	Dark Gray-Black liquid	
Density	1.60 g/cm ³	ASTM E-201
Viscosity, Part B, @ 25°C	120,000 cP	ASTM D-2393
Flash Point	>100°C	ASTM D-92
<u>Mixed Properties</u>		
Mixed Viscosity	90,000 cP	
Mix Ratio (part by weight)	100A: 50B	
Mix Ratio (part by volume)	100A: 50B (2A: 1B)	
Shelf-life	at least 12 months @ room temperature (~ 25°C)	
Pot life (100 grams) @ 25°C	45 – 60 minutes	
Pot life (in static mixing nozzle) @ 25°C	60 – 90 minutes	
Cure Schedules:	Gel at room temperature +30 minutes at 80C for best heat & chemical resistance. However, a full cure can be accomplished in 3-7 days at room temperature and many other cure schedules possible. Please contact us for assistance if you'd like to use an alternate cure schedule.	

PHYSICAL PROPERTIES	VALUE	TEST METHOD
Color	Dark Gray-Black	Visual
Shore D Hardness	85	ASTM D-2240
Tensile Strength, psi	4200 psi	ASTM D-638
Tensile Elongation at break	4%	ASTM D-638
Effect of Temperature on Lap Shear Strengths:		ASTM D-1002
<u>Test Temperature</u>	<u>Shear Strength</u> (Cured 30 minutes @ 80°C)	
-55°C -67°F	2400 psi	
-40°C -40°F	2400 psi	
-20°C -4°F	2500 psi	
20°C 68°F	2600 psi	
82°C 180°F	2600 psi	
121°C 250°F	2100 psi	
149°C 300°F	1500 psi	
177°C 350°F	900 psi	
Chemical Resistance based on 90 days immersion in listed fluids		
<u>Chemical</u>	<u>Resistance</u>	<u>Chemical</u>
Acetic Acid 10%	Good	Power Steering Fluid
Acetone	Very Good	Skydrol
Ammonia	Very Good	Transmission Fluid
Gasoline	Very Good	Vegetable/Corn Oil
Motor Oil (HD30)	Excellent	Water @ 20°C
Mineral Oil	Excellent	Water @ 90°C
Paint Thinner	Very Good	
T Peel Strength at 75°F	17 pli	
Glass Transition Temp. (Tg)	290°F (143°C)	ASTM D-648
Water Absorption (% weight gain)		
24 hours immersion @ 25°C	0.15%	
1 hour @ 100°C	0.32%	
Thermal Conductivity	0.33 W/mK	
Coefficient of Thermal Expansion	68 ppm/ °C	
Dielectric Constant @ 60Hz	4.0	
Dielectric Strength	450 V/mil	
Surface Resistivity	1 x 10 ¹⁵ ohm	

NOTE : Most Typical Properties determined using EpoPro 2014HT A-B/B cured by gelling at room temperature followed by 30 minutes post cure @ 80°C cure unless otherwise stated. Values are based on laboratory or average production results – not for specification purposes.

SUGGESTED PROCESSING GUIDELINES:

EpoPro 2014HT-A/B can be applied by stiff 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.

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.

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 2014HT-A

WARNING! 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 2014HT-B

DANGER! Causes skin and eye irritation and possible eye burns. 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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Product Datasheet



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