Product Datasheet

EpoPro® 106A/B
EpoPro® 106-1A/B
EpoPro® 106HV-A/B

HIGH STRENGTH PLASTIC BONDING EPOXY ADHESIVES

EpoPro® 106 series of adhesives are designed to provide high strength bonds between plastics, composites, metals, and many other materials. When cured they are highly resistant to water including salt water, JP-4, hydraulic fluids, most cleaning fluids, and many other chemicals. EpoPro® 106 adhesives performs very well over a temperature range from -67ºF (-55ºC) up to 180ºF (82ºC).

The Standard EpoPro® 106A/B is a medium viscosity adhesive. The EpoPro® 106-1A/B is a thicker, brushable version of the standard EpoPro® 106A/B and the EpoPro® 106HV-AB is a higher viscosity version.

This adhesives do not require substantial pressure to achieve a good bond, they will cure and develop excellent bond strength with just contact pressure (1-5 psi). The EpoPro® 106 epoxy adhesives are 100% solids systems that have almost zero VOC content.

APPLICATIONS & BENEFITS

- Exceptional adhesion to a wide variety of materials including many plastics
- Long Work Life and Room Temperature Cure
- 100% Solids & Very Low Volatile Organic Content (VOC)

HANDLING PROPERTIES	VALUE	TEST METHOD
EpoPro® 106A, 106-1A and 106HV-A		
Visual Appearance	Amber	Visual
Density	1.13 g/cm³	ASTM E-201
106A Viscosity, Part A, at 25ºC	1,200 cP	ASTM D-2393
106-1A Viscosity, Part A, at 25ºC	3000 cP	ASTM D-2393
106HV-A Viscosity, Part A, at 25ºC	paste	ASTM D-2393
EpoPro® 106B, 106-1B, 106HV-B		
Visual Appearance	Amber	
Density	0.98 g/cm³	ASTM E-201
106B Viscosity, Part B, at 25ºC	2,000 cP	ASTM D-2393
106-1B Viscosity, Part B, at 25ºC	2,000 cP	ASTM D-2393
106HV-B Viscosity, Part B, at 25ºC	paste	ASTM D-2393

Mixed Properties		
Mix Ratio	100A: 100B by weight (100A:116B by volume)*	Calculated
Mixed Viscosity, 106A/B	2,000 cP	ASTM D-2393
Mixed Viscosity, 106A/B	2,600 cP	ASTM D-2393
Mixed Viscosity, 106A/B	Paste cP	ASTM D-2393
Pot life (100 grams) at 25ºC	120 minutes	Gardner gel timer
Shelf Life	at least 12 months at 15ºC - 35ºC	
Cure Schedules:	48 -72 hours at 25ºC or 20-30 minutes at 250ºF, Many other cure schedules are possible. Please contact us for assistance if you'd like to use an alternate cure schedule.	

*see discussion about mix ratio in processing guidelines below.

PHYSICAL PROPERTIES

	VALUE	TEST METHOD
Lap Shear Strength		ASTM D-1002
Effect of Temperature:		
Test Temperature		
-67ºC (-55ºF)	3100 psi	
25ºC (77ºF)	2900 psi	
82ºC (180ºF)	550 psi	
Effect of Chemical Exposure:		
After 7 Day Immersion at 25ºC (77ºF) in:		
Distilled Water	1540 psi	
JP-4 Fuel	2270 psi	
ASTM Fuel B / TT-S-735 Type III	2390 psi	

NOTE: Typical Properties determined using EpoPro® 106A/B cured 72 hours at 25ºC cure and tested at 25ªC - unless otherwise stated. Values are based on laboratory or average production results – not for specification purposes.

SUGGESTED PROCESSING GUIDELINES

The EpoPro® 106 adhesives can be applied by brush, roller, squeegee, knife, or spatula or used in meter-mix dispensing systems.

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 sandpaper. 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

Please Note: The mix ratio of this product can be varied as its chemistry is relatively mix ratio insensitive. However variations in mix ratio affect the properties of the adhesive and the cured adhesive bonds. For example, a by volume mix ratio of 1A:1B may be desirable for this product as it allows the product to be supplied in dual syringe cartridges or used on low cost meter-mix dispensing equipment. A 1:1 by volume ratio is close to the normal ratio, so for most applications this should work well, however this ratio must be qualified by the end user before use in their applications. All uses of this product using alternate mix ratios must be fully qualified for the applications and ratios intended under the full processing conditions and end use conditions of the intended applications. SP&S can consult with customers about possible qualification testing and may sometime be able to provide supporting data, but SP&S cannot perform qualifications of alternate mix ratios for customers or absolve end users of their technical or engineering responsibilities.

PACKAGING AVAILABLE

This product is available in a wide range of kits including pints, quarts, and gallons. Other sizes and custom kits that combine the adhesive with mix sticks, patching materials, and mixing cups and other supplies for field use are also available by request.

SP&S can also supply custom color and modified versions of this product such as thickened, thinned, non-running/non-sagging, or faster setting version. Please call use with any special 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. 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.

It is possible for these products to crystallize if exposed to extremely cold temperature such as during air shipment or transit during the certain times of the year. This can appear as graininess, cloudiness or an increase in viscosity. If this has occurred, heat the component in its original container for about 4 hours at 50ºC and this should re-liquefy the material. Once fully re-liquefied allow to cool to room temperature and stir gently for about a minute before use to ensure the material is completely uniform.

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.

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.

Specialty Polymers & Services, Inc. (SP&S)
27822 Fremont Court
Valencia, CA 91355
www.spolymers.com

Tel: 661-294-1790
Fax: 661-294-0640
info@spolymers.com