

## EpoPro<sup>®</sup> 115A/C

### Toughened High Performance Epoxy Adhesive

EpoPro<sup>®</sup> 115A/C is a room temperature curing adhesive that provides tough, impact and shock resistant bonds. It is sag and run resistant in thicknesses up to 1/2" and is excellent for filling gaps and holes of similar size. EpoPro 115A/C is a fast setting adhesive that cures rapidly at room temperature. The cured adhesive has high shear and peel strengths and resist chemical exposure, weathering, and heat aging. EpoPro<sup>®</sup> 115A/C bonds most substrates and has shown itself excellent for bonding SMC, composites, metals, glass, and many rigid plastics.

EpoPro<sup>®</sup> 115A/C is available in a neutral beige color that does not read through most thin bond-lines. It is also available in Black, White, Gray, and custom colors by request. Other variants, such as thicker or thinner version, versions with glass beads added to control bond-line thickness, and slower or faster setting varieties are also available by request. Please contact us for assistance if such a variant might be helpful for your application.

#### BENEFITS

- Non-sagging/Non-running, excellent gap filling up to 1/2" thickness
- Fast Setting – fast curing
- Tough, peel resistant bonds to many types of materials

HANDLING PROPERTIES	VALUE	TEST METHOD
<u>EpoPro<sup>®</sup> 115A</u>		
Color	Beige	Visual
Density	1.30 g/cm <sup>3</sup>	ASTM E-201
Viscosity, Part A, at 25°C	20,000 cps	ASTM D-2393
<u>EpoPro<sup>®</sup> 115C</u>		
Color	Beige	Visual
Density	1.30 g/cm <sup>3</sup>	ASTM E-201
Viscosity, Part B, at 25°C	25,000 cps	ASTM D-2393
Mixed Properties		
Mix Ratio	1A:1B by weight (1A:1B by volume)	Calculated
Density	1.30 g/cm <sup>3</sup>	ASTM D-792
Mixed Viscosity	22,000 cps	ASTM D-2393
Pot life (100 grams) at 25°C	5-10 minutes	ASTM D-2471
Time to Handling Strength	15 – 20 minutes at 25°C	
Shelf-life	at least 2 years at room temperature (15°C - 40°C)	
Suggested cure times	4-8 hours at 25°C or 30 minutes at 65°C or 5 minutes at 100°C*	
* Note: many other cure schedules are possible. Please contact us for assistance if you'd like to use an alternate cure schedule.		

# Product Datasheet

PHYSICAL PROPERTIES	VALUE	TEST METHOD	
Lap Shear Strengths		ASTM D-1002	
Effect of Temperature on Lap Shear Strength (Al-Al bonds):			
Test Temperature	Cured 24 hour at 25°C	Cured 5 minutes @ 100°C	
	-40°C	3400 psi	3450 psi
	25°C	3050 psi	3100 psi
	40°C	2700 psi	2820 psi
	60°C	1700 psi	2200 psi
	70°C	950 psi	1080 psi
	100°C	650 psi	760 psi
Effect of Chemical Exposure (90 day immersion, unless noted differently):			
Chemical			
	Gasoline	2100 psi	
	Xylene	1800 psi	
	Ethyl Acetate (30 day immersion)	1700 psi	
	Lubricating Oil – HD30	2800 psi	
	Mineral Spirits	1700 psi	
	Water at 25°C	1650 psi	
	Water at 90°C	1450 psi	
Effect of Aging - Tropical Exposure (40°C/104°F & 92% relative Humidity) & Heat Aging:			
Test Temperature	Tropical Aging*	Heat Aging (at 70°C)	
Initial Value	2500 psi	2500 psi	
10 days	2380 psi	2980 psi	
30 days	2200 psi	2980 psi	
60 days	2100 psi	3120 psi	
90 days	2150 psi	3250 psi	
Bond strength with various Substrates:			
Substrate	Substrate Thickness		
Carbon Steel	1 mm	2200 psi	
Stainless Steel	1 mm	1800 psi	
Galvanized Steel	1.5 mm	1700 psi	
Copper	1.5 mm	2800 psi	
Brass	1.5 mm	1700 psi	
Sheet Molding Compound (SMC)	4 mm	1650 psi	
Low Profile SMC	4 mm	1750 psi	
Glass Transition Temperature (Tg)	81°C	ASTM D-4065	
Roller Peel Test	28 ppi	ISO 4578	

**NOTE:** Typical Properties determined using EpoPro® 115A/C cured 24 hours at 25°C - unless otherwise stated. Values are based on laboratory or average production results – not for specification purposes.

## **SUGGESTED PROCESSING GUIDELINES**

EpoPro® 115A/C can be applied by a 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 c 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.

For best bond strength, roughen surface to be bonded with wire brush, sand-blasting, etc. After roughening, clean and dry surface and remove any loose material prior to bonding. Optimal bond strengths are typically achieved with an adhesive bondline thickness of 2 – 5 mils, but larger gaps and thicker bondlines are possible with this adhesive without major loss of mechanical strength. If bond-line thickness control is important, this adhesive can be supplied with spacer beads that ensure the designed minimum bond-line thickness is achieved. Please contact us for more information if spacer beads would be of interest for your applications.

## **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 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.

## **PERSONAL HYGIENE**

### **EpoPro® 115A**

**WARNING!** May cause eye & skin irritation and possible allergic reaction. Harmful if inhaled. Harmful if swallowed.

### **EpoPro® 115C**

**WARNING!** May cause eye & skin irritation and possible allergic reaction. Harmful if inhaled. Harmful if swallowed.

## **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.

# Product Datasheet



**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. 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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