Product Datasheet

EpoPro® 115A/B20

Toughened High Performance Epoxy Adhesive

EpoPro® 115A/B20 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/B20 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® 115A/B20 bonds most substrates and has shown itself excellent for bonding SMC, composites, metals, glass, and many rigid plastics.

EpoPro® 115A/B20 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 versions or versions with glass beads added to control bond-line thickness and slower or faster setting varieties are also available. 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 ½" thickness
- Fast Setting – fast curing
- Tough, peel resistant bonds to many types of materials

HANDLING PROPERTIES	VALUE	TEST METHOD
EpoPro® 115A		
Color	Beige	Visual
Density	1.30 g/cm³	ASTM E-201
Viscosity, Part A, at 25ºC	20,000 cps	ASTM D-2393
EpoPro® 115B20		
Color	Beige	Visual
Density	1.31 g/cm³	ASTM E-201
Viscosity, Part B, at 25ºC	28,000 cps	ASTM D-2393
Mixed Properties		
Mix Ratio	1A:1B by weight (1A:1B by volume)	Calculated
Density	1.30 g/cm³	ASTM D-792
Mixed Viscosity	25,000 cps	ASTM D-239
Pot life (100 grams) at 25ºC	15 - 25 minutes	ASTM D-2471
Time to Handling Strength	30 - 60 minutes at 25ºC	
Shelf-life	at least 2 years at room temperature (15ºC - 40ºC)	
Minimum cure times:	6 - 12 hours at 25ºC **or** 60 minutes at 65ºC **or** 10 minutes at 100ºC*	

* Note: many other cure schedules are possible. Please contact us for assistance if you are considering or would like to evaluate an alternate cure schedule.

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 25ºC	Cured 5 minutes @ 100ºC
-40ºC	3400 psi	3450 psi
25ºC	3050 psi	3100 psi
40ºC	2700 psi	2820 psi
60ºC	1700 psi	2200 psi
70ºC	950 psi	1080 psi
100ºC	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 25ºC	1650 psi
Water at 90ºC	1450 psi

Effect of Aging - Tropical Exposure (40ºC/104ºF & 92% relative Humidity) & Heat Aging:

Test Temperature	Tropical Aging*	Heat Aging (at 70ºC)
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)	81ºC	ASTM D-4065
Roller Peel Test	28 ppi	ISO 4578

NOTE: Typical Properties determined using EpoPro® 115A/B20 cured 24 hours at 25ºC - unless otherwise stated. Values are based on laboratory or average production results – not for specification purposes.

SUGGESTED PROCESSING GUIDELINES

EpoPro® 115A/B20 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 and 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® 115B20
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.

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

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