

EpoPro 2295A/B

Flame Retardant, Heat & Chemical Resistant, Epoxy Encapsulant

EpoPro 2295A/B is a two-part, epoxy adhesive that cures with heat to form a very tightly cross-linked polymer that is flame retardant and demonstrates excellent heat and chemical resistance. The EpoPro 2295A/B system has a low CTE, a low viscosity and good air release for ease of processing. This product is design for electronic potting and encapsulation and can also be used for some specialty casting applications.

Benefits:

- High Heat Resistance (Glass transition temperature 150°C)
- Excellent Chemical Resistance
- Flame Retardant per UL 94 V0
- REACH and ROHS Compliant and free of SVHCs
- Low outgassing & Low/No Volatile Organic Components

| <u>HANDLING PROPERTIES</u> | <u>VALUE</u> | <u>TEST METHOD</u> |
|--|---|--------------------|
| <u>EpoPro 2295A</u> | | |
| Visual Appearance | Black liquid | |
| Density | 1.62 g/cm ³ | ASTM E-201 |
| Viscosity, Part A, @ 25°C | 15,000 cP | ASTM D-2393 |
| Flash Point | > 200°C | ASTM D-92 |
| <u>EpoPro 2295B</u> | | |
| Visual Appearance | Clear Yellow liquid | |
| Density | 0.95 g/cm ³ | ASTM E-201 |
| Viscosity, Part B, @ 25°C | 50 cP | ASTM D-2393 |
| Flash Point | > 120°C | ASTM D-92 |
| <u>Mixed Properties</u> | | |
| Mixed Viscosity | 4,200 cP | |
| Mix Ratio | 100A: 10B by weight or 6A:1B by volume | |
| Specific Gravity | 1.6 | |
| Shelf-life: | at least 1 year at 15°C - 35 °C | |
| Pot life (100 grams) at 25°C | 120 – 180 minutes | |
| Suggested Cure: | 8 hours at 80°C or 2-4 hours at 100°C or 1 hour at 120°C* | |
| *Note: many other cure schedules are possible. Please contact us for assistance if you'd like to use an alternate cure schedule. | | |

| PHYSICAL PROPERTIES | | TEST METHOD |
|------------------------------|------------------------|-------------|
| Color | Black | Visual |
| Shore D Hardness | 87 | ASTM D-2240 |
| Tensile Strength | 8,000 psi | |
| Glass Transition Temp. (Tg) | 150°C | |
| Coeff. Of thermal Exp. (CTE) | 52 ppm/°C | |
| Thermal Conductivity | 0.62 w/mK | |
| Flame retardant | meets UL 94 V0 at 6mm | |
| Dielectric Constant: | | |
| at 25°C | 3.6 | |
| at 100°C | 3.8 | |
| at 150°C | 4.1 | |
| Dissipation Factor: | | |
| at 25°C | 0.0025 | |
| at 100°C | 0.0028 | |
| at 150°C | 0.0055 | |
| Volume Resistivity (ohm-cm): | | |
| at 25°C | 1.0 x 10 ¹⁶ | |
| at 100°C | 2.4 x 10 ¹⁵ | |
| at 150°C | 3.1 x 10 ¹³ | |

NOTE: Typical Properties determined using EpoPro 2295A/B cured 4 hrs at 100C. Values are based on laboratory or average production results – not for specification purposes.

SUGGESTED PROCESSING GUIDELINES:

EpoPro 2295A/B can be applied pouring or dispensing. This system is also suitable for meter-mix dispensing, but requires agitation to prevent filler settling.

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 2-3 minutes using a kneading motion. Scrape the bottom and sides of the mixing container carefully and frequently to produce a uniform mixture. It may be helpful to gently heat the components prior to mixing. Temperatures between 90°F – 120°F will provide a substantial reduction in viscosity, without a significant effect on the pot life of the mixed system.

Always apply the material to clean, dry surfaces to attain the optimum adhesion.

STORAGE GUIDELINES:

Store this material in a clean, cool and dry environment in its tightly closed original container. Products may settle or separate 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.

Please note that these materials may crystallize during shipment and or storage, especially if exposed to temperature below 60°F. If Crystallized, heat in the original container for 3-4 hours at 65°C (150°F) until all crystals have melted. Allow to cool to room temperature, then thoroughly mix the individual components in their containers prior to using.

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 2295A

WARNING! Causes eye & skin irritation. Prolonged or repeated skin contact may cause 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 2295B

WARNING! 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

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