

TECHNICAL BULLETIN

EPOXIBOND EB-102F/EH-14 EPOXY ADHESIVE, SEALANT, ENCAPSULATING COMPOUND

EB-102F/EH-14 epoxy system is a clear, medium viscosity epoxy system suitable for bonding, potting and encapsulating, coating, and sealing applications. It offers high bond strength, vibration & shock resistance. This high performance epoxy adhesive has excellent physical, thermal, and electrical insulation properties. It can be used for bonding materials with widely different coefficient of thermal expansion including glass, metals, woods, and some plastics such as nylon, PVC, ABS etc. EB-102F has a variable mix ratio depending on the desired properties.

| TYPICAL HANDLING PROPERTIES: | | | | |
|---|--------------------------|--------------------------|-------------------------|-------------------------|
| Mix Ratio (EB-102F/EH-14) | 100/50 | 100/100 | 100/150 | 100/200 |
| Mixed Viscosity at 25°C, cps | 10,000-12,000 | 9,000-12,000 | 10,000-12,000 | 10,000-12,000 |
| Pot life at 25°C (100 gram) | 150 min | 120 min | 120 min | 120 min |
| Recommended Cure | 16 hr/25°C+ 2hr/100°C | 16 hr/25°C+ 2hr/100°C | 12 hr/25°C+ 2hr/65°C | 12 hr/25°C+ 2hr/65°C |
| Alternate Cure | 24 hr/25°C | 24 hr/25°C | 24 hr/25°C | 24 hr/25°C |
| TYPICAL CURED PROPERTIES: | | | | |
| Color | Clear/Amber | Clear/Amber | Clear/Amber | Clear/Amber |
| Specific Gravity | 1.15 | 1.15 | 1.15 | 1.15 |
| Hardness (D/A) | D-84 | D-80 | D-60 | A-60 |
| Lap shear strength to aluminum, psi | 3400 | 3200 | 1800 | 1200 |
| Linear Shrinkage (%) | 0.013 | 0.012 | 0.012 | 0.011 |
| Water absorption (24 hr immersion/25°C) | 0.18 | 0.33 | 0.56 | 0.9 |
| Glass Transition Temperature, °C | 86 | 85 | 85 | 146 |
| Tensile Strength Ultimate, psi | 8500 | 7300 | 3100 | 2600 |
| Tensile Elongation, % | 4.7 | 12.5 | 55 | 120 |
| Compression Strength | 33,000 | 34,000 | - | - |
| Flexural Strength, psi | 14,700 | 12,300 | 10,200 | 7,500 |
| Dielectric Strength, Volts/mil | 430 | 430 | 430 | 430 |
| Dielectric Constant at 1 kHz | 3.6 | 3.4 | 3.1 | 2.7 |
| Dissipation Factor at 1 kHz | 0.02 | 0.018 | 0.017 | 0.015 |
| Volume Resistivity, ohm-cm | 2.0x10 ¹⁵ | 2.0x10 ¹⁵ | 2.0x10 ¹⁵ | 2.0x10 ¹⁵ |

*Typical cured properties based on recommended cure schedule

Authorized Distributor



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INSTRUCTIONS FOR USE:

The individual components should be stirred or agitated without introducing excessive air before use to ensure that all fillers are properly dispersed. To obtain the best cured properties; accurate proportioning and thorough mixing are essential.

Mix contents thoroughly each time before removing material. To each 100 grams of EB-102F, add appropriate amount of EH-14 and mix it well preferably using a mechanical mixer. Vacuum degasses for about five minutes to remove any dissolved or entrapped air. Proceed with the bonding application and cure as recommended.

AVAILABILITY:

2 parts Kit - Packaged in Pint, Quart, Gallon, and 5-Gallon size.

Premixed and frozen - Packaged in 3cc, 5cc, 10cc and 30cc disposable syringes and ship in dry ice at -80°C.

Dual Cartridge: Available in 50mL, 200mL, and 400mL dual cartridges (except for 100/150 ratio).

FOR INDUSTRIAL USE ONLY:

These materials are intended for industrial use only, and the practices of good housekeeping, safety and cleanliness should be followed before, during and after use.

WARNING!

Although the system contains low volatility materials, care should be taken in handling. Adequate ventilation of work place and ovens is essential. These materials may cause injury to the skin following prolonged or repeated contact and dermatitis in susceptible individuals. In case of skin contact, wash thoroughly with soap and water. For eyes, flush immediately with plenty of water for at least 10 minutes and seek medical attention. Refer to Material Safety Data Sheet for additional health and safety information.

SHELF LIFE:

The shelf life of these materials is greater than one year when stored in unopened containers at an average temperature of 25°C.

DISCLAIMER:

All data given here is offered as a guide to the use of these materials and not as a guarantee of their performance. The user should evaluate their suitability for own purposes. Properties are typical and should not be used in preparing specifications. Statements are not to be construed as recommendations to infringe any patent.