



ISO-9001-2008 Certified

1 Industrial Circle, Lincoln, RI 02865, USA
Phone: (401) 726-4500 ■ Fax: (401) 726-4502
Email: info@epoxyset.com ■ Web: www.epoxyset.com

TECHNICAL BULLETIN

EPOXIBOND-107LP-2 OPTICAL GRADE, LOW VISCOSITY EPOXY ADHESIVE

EB-107LP-2 is a two components - optical, medical, and semiconductor grade epoxy resin, with low viscosity, long pot-life, and good handling characteristics.

Features & Suggested Application:

- **USP Class VI Certified for Biocompatibility**
- Ease of use: potting and casting, encapsulation and adhesive.
- **Semiconductor applications:** flip chips underfill, glob top encapsulation over wire bonds, spin coating at wafer level including wafer level packaging.
- **Fiber optic adhesive:** bundling fibers, terminating fiber into ferrule, adhesive for mounting optics inside fiber components, bonding glass cover slip over V-groove; spectral transmission of visible and IR light.
- Meets USP Class VI biocompatibility standards for medical devices and implantation applications
- Adhesion to glass, quartz, metals, wood and most plastics is very good

TYPICAL HANDLING PROPERTIES:

Adhesive	PART-A
Hardener	PART-B
Mix ratio by weight, (Adhesive/Hardener)	100/35
Mixed Viscosity at 25°C, cp	200-500
Pot Life at 25°C (100 grams), hrs	>8
Recommended Cure	3 hrs @ 80°C
Alternate Cure Schedule	1-2 days @ 25°C

TYPICAL CURED PROPERTIES:

(Tested @ 25°C unless otherwise indicated)

Color	Clear
Specific Gravity	1.1
Hardness, Shore D	82
Lap Shear Strength to Aluminum, psi	2300
Service Temperature range, °C	-55 to 200
Refractive Index (@589nm)	1.53
Spectral Transmission	
@ 320 nm	>94%
@ 400-1200 nm	>99%
@ 1200-1600 nm	>98%
Glass Transition Temperature, °C	82
Coefficient of Linear Thermal Expansion, 10 ⁻⁶ /°C	
Below T _g	61
Above T _g	>150
Dielectric Constant at 1 kHz	4.0
Dissipation Factor at 1 kHz	0.012
Volume Resistivity (ohm-cm)	1x10 ¹³

INSTRUCTIONS FOR USE:

1. Mix 100 grams of Resin, PART-A with 35 grams of Hardener, PART-B and vacuum degas.
2. Apply to clean bonding surfaces and cure as recommended to achieve the desired properties.
3. Typical cured properties were determined using recommended cure schedule.
4. Some difference in properties may occur with the alternate or other cure schedules.

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 two years 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.