

# HIGH -TEMPERATURE SILVER-GRAPHENE ELECTRICALLY CONDUCTIVE EPOXY

# G6E-HTSG™

**DESCRIPTION:** G6E-HTSG<sup>™</sup> epoxy is primarily developed for applications requiring a high-performance bond or connection of electrically conductive components/materials which operate at higher temperatures and require low electrical resistivity.

**FEATURES:** 

- Higher Glass Transition & Operating Temperature
- Silver-Graphene Filled (Non-Magnetic)
- Excellent Electrical Conductivity
- Graphene Loaded
- Wide Temperature Operation

G6E-HTSG<sup>™</sup> epoxy incorporates a proprietary graphene additive to enhance crack resistance. A heating oven is required for curing. Uses for G6E-HTSG<sup>™</sup> epoxy include electronics, embedded electrical heater manufacture and repair, etc. **Operating temperature is up to 315°C/600°F.** 

#### **TYPICAL APPLICATIONS:**

- Electronics operated or exposed to High Temperature
- Embedded Electrical Heaters
- EMI / RFI Shielding
- Electrical Sensors / Transducers
- Solder Replacement

### **SPECIFICATIONS OF UNCURED MATERIAL:**

TWO COMPONENT SYSTEM:

Part A – smooth silver paste Part B – smooth silver paste

MIX RATIO:

100 (Part A) to 50 (Part B) by weight

POT LIFE:

4 hours

**CURING SCHEDULE:** 

2 hours @ 150°C / 302°F or 1 hour @ 180°C / 356°F

**DENSITY:** 

Part A 2.9 - 3.0 g/cm<sup>3</sup> Part B 2.7 - 2.9 g/cm<sup>3</sup>

MIXED VISCOSITY:

450 - 550 Pa·s @ 25°C / 77°F



## **SPECIFICATIONS OF CURED MATERIAL:**

HARDNESS, SHORE:

> 80 D

GLASS TRANSITION TEMPERATURE (Tg):

132°C / 270°F (cured at 150°C/302°F)

FLEXURAL MODULUS:

4 - 5 GPa at 25°C

LOSS MODULUS:

150 - 300 MPa at 25°C

**VOLUME RESISTIVITY:** 

<0.0005 Ω·cm (cured at 150°C/302 °F)

#### **GENERAL INFORMATION:**

MIXING INSTRUCTIONS:

Stir both components before use. Add Part B to Part A and mix slowly until uniform in a separate container.

STORAGE & SHELF LIFE:

12 months @ 25°C / 77°F in unopened, unmixed containers. Stores and ships at room temperature.

No freezing is required.

SHIPPING & HANDLING:

Always read both SDS before use. Use product with adequate ventilation. Keep away from sparks and open flames. Avoid prolonged contact with skin and breathing of vapors. Wash with soap and water to remove from skin.

ABOUT G6-EPOXY™:

All G6-EPOXY™ specifications are for normal use and routine applications. Please consult with our team to ensure the most appropriate selection of G6-EPOXY™ products. Depending upon your application requirements, a custom G6-EPOXY™ formulation may be available.

G6-EPOXY™ is a trademark owned by Graphene Laboratories, Inc.

G6-EPOXY™

Graphene Laboratories, Inc. 760 Koehler Avenue, Suite 2 Ronkonkoma, NY 11779 Web: https://g6-epoxy.com Phone: 631-405-5115 Fax: 781-287-1248 Email: support@graphenelab.com