

G6-EPOXY™ ELECTRICALLY CONDUCTIVE ADHESIVES SELECTION GUIDE

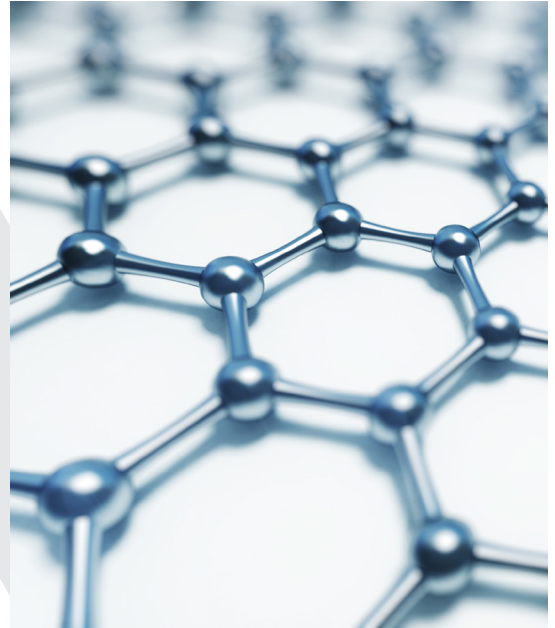
G6-EPOXY™ offers a broad range of electrically conductive adhesives that incorporate proprietary fillers. In our formulations, we extensively use graphene, a novel material that can profoundly enhance the performance of polymers and composites including epoxy resins.

About Graphene

Graphene is a single layer of carbon atoms, tightly bound in a hexagonal structure. Graphene's crystalline structure gives it unique optical, thermal, mechanical, and electrical properties. Being one atom thick, it is the thinnest and lightest material known to man. Graphene is also the strongest compound discovered (between 100 to 300 times stronger than steel), the best conductor of heat at room temperature, and the best conductor of electricity known.

Our team uses these phenomenal properties of graphene to enhance polymer resins. This incorporation of graphene additives offers an effective technique to improve the electrical and mechanical properties of our epoxies. G6-EPOXY™ products have an improved resistance to stress, corrosion, cracking and fatigue.

Additional benefits of using graphene may include increased tensile strength and stiffness, reduced flammability, as well as improved thermal and UV stability. Graphene reduces overall density, weight, and cost of epoxy resins, and increases the durability of cured epoxy.



G6-EPOXY™ Electrically Conductive Adhesives Categories:

- **GENERAL PURPOSE** adhesives are effective for high-performance bonding, sealing, and coating.
- **FLEXIBLE** adhesives are optimized for applications requiring a soft or flexible bond.
- **HIGH-TEMPERATURE** adhesives offer service temperatures up to 316°C/600°F.
- **ROOM TEMPERATURE** adhesives do not require a heating oven during the curing time, and are perfect for bonding of sensitive components at room temperature.

Conductive Fillers





Within each category, we utilize a unique proprietary blend of fillers. The selection of fillers includes:

- **Silver/Graphene** We use a proprietary mix of silver and graphene materials to achieve an outstanding combination of mechanical and electrical properties. This is the best choice for applications that require low resistivity. While traditional epoxy materials tend to be brittle, and are prone to mechanical failure, graphene fillers add exceptional durability, fatigue and crack resistance in addition to low electrical resistance.
- **Low Silver Load NS-Series** Traditional silver-based epoxy materials require up to 80% weight load of silver fillers, and as a result tend to be costly, brittle and susceptible to mechanical failure. Our NS line of adhesives is formulated using our unique PATENT PENDING technology that requires lower silver content to be at par with leading silver-based epoxies in terms of electrical properties. This development not only decreases the cost of the material but also makes these materials less vulnerable to fracture, thus allowing for stronger adhesion to the target substrate.
- **Carbon Filled** adhesives are a cost-effective alternative to silver-based ones. These materials are corrosion-resistant as well as ultralight with density less than 1.1 g/cm³.


Model Number	Epoxy Type	Volume Resistivity (Ohms-cm)	Glass Transition (Tg) Temperature	Pot Life
GENERAL USE				
G6E-P	CARBON FILLED	5	73°C/163°F	2 hours
G6E-SG	SILVER/GRAPHENE	0.0001	90°C/194°F	3 hours
G6E-NS10*	CONDUCTIVE SILVER/CARBON EPOXY	0.005	103°C/217°F	3 hours
G6E-NS11*	CONDUCTIVE SILVER/CARBON EPOXY	0.0007	65°C/149°F	4 hours
FLEXIBLE				
G6E-FXSG	FLEXIBLE SILVER/GRAPHENE	0.0005	39°C/102°F	1 hours
G6E-FXNS*	FLEXIBLE SILVER/CARBON	0.003	26°C/79°F	1 hours
G6-FRP	FLEXIBLE CARBON FILLED	15	43°C/109°F	2 hours
HIGH TEMPERATURE				
G6E-HTSG	HIGH TEMPERATURE SILVER/GRAPHENE	0.0005	129°C/264°F	4 hours
G6E-HTNS*	HIGH TEMPERATURE SILVER/CARBON	0.003	140°C/284°F	4 hours
G6E-HTC	HIGH TEMPERATURE CARBON FILLED	15	142°C/288°F	4 hours
ROOM TEMPERATURE CURABLE				
G6E-RTSG	ROOM TEMPERATURE CURABLE SILVER/GRAPHENE	0.003	96°C/205°F	15 minutes
G6E-RTC	ROOM TEMPERATURE CURABLE CARBON FILLED	15	74°C/165°F	15 minutes

* Patent Pending

Contact Us

 Graphene Laboratories, Inc.
 760 Koehler Avenue, Suite #2
 Ronkonkoma, New York 11779
 Phone 1(631) 405-5115
 Fax 1(781) 287-1248
 Email: info@graphenelab.com

G6-EPOXY™

 <https://g6-epoxy.com/>
 G6-EPOXY™ is a registered trademark
 of Graphene Laboratories, Inc.

Custom Requests:

G6-EPOXY™'s team members are dedicated to our customer's requirements. All G6-EPOXY™ products are manufactured and packaged in our facility located in Long Island, New York. We offer consistent high-quality epoxy products. All orders for standard "off-the-shelf" products usually ship within one business day. Custom formulations and packaging may be available upon request.

Our G6-EPOXY™ product line is growing! Additional G6-EPOXY™ product groups are in development and will be available soon.