

HOW G2G GRAPHENE IS INTEGRATED INTO GLASS MANUFACTURING

G2G produces ultra-pure, multilayered graphene (99.9%) specifically engineered for advanced industrial applications. In the case of conductive glass, the graphene is not applied as a surface coating, but fully embedded during the glass manufacturing process for maximum performance and durability.

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MAIN PROCESS STAGES:

- 1. Nano-Level Dispersion G2G Graphene powder is uniformly dispersed into a sol-gel or silicate-based mixture. This ensures even distribution at the nanoscale without affecting transparency.
- 2. Raw Material Blending
 The graphene-infused mixture is blended with the molten glass
 batch materials prior to melting, enabling deep integration at the
 structural level.
- 3. High-Temperature Melting During melting (approx. 1500°C), the graphene bonds physically and chemically with the glass matrix, maintaining its integrity and forming a conductive, transparent structure.
- 4. Controlled Cooling & Annealing
 The glass is cooled and annealed under controlled conditions to
 stabilize the embedded graphene and ensure consistent
 conductivity across the surface.

Advantages of In-Process Graphene Integration:

- Superior Thermal & Mechanical Stability No delamination or wear over time
- Uniform Electrical Conductivity Across the entire glass surface
- Maximum Optical Transparency No impact on visible light transmission
- Long-Term Performance Maintenance-free and highly reliable