Custom Carrier Graphene Dispersion

SKUs: GI-DCU-32OZ, GI-DCU-1GAL, GI-DCU-5GAL

Safety Data Sheet

Prepared in OSHA Hazard Communication Standard (29 CFR 1910.1200, HazCom 2012) / GHS 16-section format. Revision date 2026-11-19. No measured value has been invented: finished-product values are “Reported on lot Certificate of Analysis” or “Not determined”; values labeled “typical, base fluid” are published carrier data.

1. IDENTIFICATION

Product identifier	Custom Carrier Graphene Dispersion
Product codes (SKUs)	GI-DCU-32OZ, GI-DCU-1GAL, GI-DCU-5GAL
Product form	Liquid dispersion/concentrate: Base version: graphene in deionized water. Custom-carrier formulations receive their own SDS.
Recommended use	Graphene dispersion for incorporation into the customer's formulation at the trial rate GI recommends.
Restrictions on use	Industrial/professional use only. Not for food, drug or cosmetic use. Not for direct consumer use.
Supplier / manufacturer	Graphene Integrations, LLC, 8101 Beatty Rd, Sherrills Ford, NC 28673, USA
Email	sales@grapheneintegrations.com
Website	grapheneintegrations.com
Phone	+1 (704) 659-3682
Emergency phone number	+1 (704) 659-3682 (24-hour emergency number)

2. HAZARD(S) IDENTIFICATION

GHS / OSHA HazCom 2012 classification	Not classified, based on the stated components (deionized water; graphene with no harmonized GHS classification).
Signal word	None
Hazard statements	None
Pictograms	None
Precautionary statements	Avoid contact with eyes. Wash hands after handling. Dispose of according to local regulations.
Hazards not otherwise classified	Conducts electricity. Spills make floors slippery. Stains black.
Ingredient(s) of unknown acute toxicity	Graphene content of this mixture is of unknown acute toxicity. Reported on lot Certificate of Analysis

3. COMPOSITION / INFORMATION ON INGREDIENTS

Mixture: graphene pre-mixed in a liquid carrier, never supplied as a dry powder. Contains no carbon black.

Component	CAS number	Concentration (% by weight)
Graphene	1034343-98-0	Reported on lot Certificate of Analysis
Water, deionized	7732-18-5	Balance

4. FIRST-AID MEASURES

Eye contact	Rinse cautiously with water for several minutes, removing contact lenses if easy to do. Get medical attention if irritation persists.
Skin contact	Wash with soap and water. Remove contaminated clothing.
Inhalation	Not expected under normal use (liquid; no dust). If mist or vapor causes discomfort, move to fresh air.
Ingestion	Rinse mouth. Do not induce vomiting. Get medical attention if you feel unwell.
Most important symptoms and effects	Mild, temporary eye irritation is possible from particles.
Immediate medical attention / special treatment	Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media	The product is water-based and does not sustain burning. Use media suitable for the surrounding fire.
Unsuitable extinguishing media	None known.
Specific hazards	Combustion may produce carbon monoxide, carbon dioxide and smoke.
Firefighter protection	Self-contained breathing apparatus and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions	Wear nitrile gloves and safety glasses. Spilled liquid is slippery; mark the area and keep people out. Isolate power to nearby electrical equipment before cleanup.
Environmental precautions	Keep out of drains, sewers and waterways.
Containment and clean-up	Absorb with pads or a wet-vacuum; collect in a labeled container; wipe with water and dry.

7. HANDLING AND STORAGE

Precautions for safe handling	Mix or stir before use; graphene may settle. Avoid contact with eyes. Wash hands after handling. Do not eat, drink or smoke in work areas.
Conditions for safe storage	Store in tightly closed original containers, indoors, away from heat and strong oxidizers. Protect from freezing. Storage temperature range and shelf life:; see lot COA.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Occupational exposure limits	Graphene and water: no OSHA PEL or ACGIH TLV established.
Engineering controls	General ventilation. Avoid generating mist.
Eye / face protection	Safety glasses with side shields (goggles if splashing is likely).
Skin / hand protection	Nitrile gloves.
Respiratory protection	Not normally required. If mist or vapor exceeds exposure limits, use a NIOSH-approved respirator.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state	Liquid
Appearance / color	Dark grey to black (graphene dispersion).
Odor	Odorless to slight
pH	Reported on lot Certificate of Analysis
Melting / freezing point	About 0 °C (water carrier)
Initial boiling point and range	About 100 °C (water carrier)
Flash point (method)	Not applicable (aqueous)
Evaporation rate	Similar to water (based on water carrier)
Flammability (solid, gas)	Not applicable (liquid)
Upper/lower flammability or explosive limits	Not applicable (aqueous, non-flammable)
Vapor pressure	About 2.3 kPa at 20 °C (based on water carrier)
Vapor density	About 0.62 (air = 1; based on water vapor)
Relative density / density	Reported on lot Certificate of Analysis
Solubility	Disperses in water
Partition coefficient (n-octanol/water)	Not applicable (mixture)
Auto-ignition temperature	Not applicable (aqueous)
Decomposition temperature	Not applicable (aqueous; based on water carrier)
Viscosity	Reported on lot Certificate of Analysis
VOC content	Negligible (water-based)
Graphene content	Reported on lot Certificate of Analysis

10. STABILITY AND REACTIVITY

Reactivity	Not reactive under normal conditions.
Chemical stability	Stable. Graphene may settle over time; mix before use.
Possibility of hazardous reactions	None known.

Conditions to avoid	Heat, open flames, freezing.
Incompatible materials	Strong oxidizers.
Hazardous decomposition products	Carbon oxides in a fire.

11. TOXICOLOGICAL INFORMATION

Likely routes of exposure	Skin and eye contact. Inhalation only if mist forms; no dust (liquid product).
Acute toxicity	Water: not toxic. Graphene: Graphene was assigned no harmonized GHS classification. Published reviews (Fadeel et al., ACS Nano 2018, Safety Assessment of Graphene-Based Materials: https://pubmed.ncbi.nlm.nih.gov/30387986/) report that the main concern is inhaling dry, airborne particles. This product contains graphene only as a dispersion in a liquid, not as a powder. Toxicity data for this graphene grade in this form are not available.
Skin corrosion / irritation	Not expected.
Serious eye damage / irritation	Particles may cause mild, temporary discomfort.
Respiratory or skin sensitization	None known.
Germ cell mutagenicity / Reproductive toxicity / STOT	None known.
Carcinogenicity (NTP, IARC, OSHA)	Graphene is not listed. Contains no carbon black.
Aspiration hazard	Not applicable.

12. ECOLOGICAL INFORMATION

Ecotoxicity	Water: none. Graphene: limited data; effects in aquatic systems are still being studied (Fadeel et al., ACS Nano 2018, Safety Assessment of Graphene-Based Materials: https://pubmed.ncbi.nlm.nih.gov/30387986/).
Persistence and degradability	Graphene: not biodegradable; persistent.
Bioaccumulative potential	No data.
Mobility in soil	Graphene is expected to settle and bind to soil and sediment.
Other adverse effects	None known.

13. DISPOSAL CONSIDERATIONS

Waste treatment / disposal methods	Collect for disposal through a licensed waste handler. Do not discharge to drains or waterways. Follow local, state and federal regulations.
Contaminated packaging	Empty completely, then recycle or dispose of according to local regulations.

14. TRANSPORT INFORMATION

UN number / proper shipping name / class / packing group	Not regulated (US DOT, IATA, IMDG).
Environmental hazards (marine pollutant)	No
Special precautions	Keep containers upright and closed.

15. REGULATORY INFORMATION

TSCA inventory status	Water (7732-18-5): listed. Graphene (1034343-98-0): Not identified on the public TSCA Chemical Substance Inventory. EPA has handled graphene and graphene nanoplatelets as new chemical substances (premanufacture notices with significant new use rules, e.g. 40 CFR 721.10844 and 721.11917). Some suppliers report graphene nanoplatelets under graphite (7782-42-5, TSCA active); that listing has not been applied to this product. Contact Graphene Integrations for the current TSCA status of the graphene in this product.
SARA 311/312	None
SARA 313	No listed chemicals known.
CERCLA reportable quantity	None known.
California Proposition 65	Contains no carbon black.

16. OTHER INFORMATION

Prepared by	Graphene Integrations, LLC, 8101 Beatty Rd, Sherrills Ford, NC 28673, USA • sales@grapheneintegrations.com
Revision date	2026-11-19
Revision	Version 1.1 (revised 2026-11-19)
Notes	Graphene is supplied only pre-mixed in a liquid carrier, never as a dry powder. Finished-product values are reported on each lot's Certificate of Analysis. This SDS covers the water-based base version only; each custom-carrier formulation receives its own SDS.
Disclaimer	The information in this SDS is believed to be accurate as of the revision date. It does not constitute a warranty. Users should determine the suitability of this product for their own use.