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	Graphene Textile Additive
Product codes (SKUs)	GI-TEX-1GAL, GI-TEX-5GAL
Product form	Liquid dispersion: graphene in waterborne aliphatic polyurethane binder
Recommended use	Add to the textile finish or coating and mix until uniform.
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 as hazardous under OSHA HCS 2024 (29 CFR 1910.1200), based on the carrier SDS (carrier supplier SDS for aliphatic polyurethane aqueous dispersion). Graphene has no harmonized GHS classification.
Signal word	None
Hazard statements	None
Pictograms	None
Precautionary statements	Avoid contact with eyes and skin. Wash hands after handling.
Hazards not otherwise classified	When heated/cured, dried film may release small amounts of amine vapors (carrier). Slippery when spilled; stains black.
Ingredient(s) of unknown acute toxicity	Graphene is of unknown acute toxicity.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Mixture: graphene pre-dispersed in the liquid carrier below. 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
Aliphatic polyurethane polymer (aqueous dispersion)	No data available	Reported on lot Certificate of Analysis
Water	7732-18-5	Balance Reported on lot Certificate of Analysis
Amine neutralizer / preservative, if any	No data available	Reported on lot Certificate of Analysis

4. FIRST-AID MEASURES

Eye contact	Rinse with plenty of water for at least 15 minutes; get medical attention if irritation persists.
Skin contact	Wash with soap and water; remove dried film by peeling or with soap; get medical attention if irritation occurs.
Inhalation	Move to fresh air if mist or heated vapors are inhaled.
Ingestion	Rinse mouth; do not induce vomiting; get medical attention if you feel unwell.
Most important symptoms and effects	Possible mild eye and skin irritation.
Immediate medical attention / special treatment	Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media	Water spray, foam, carbon dioxide, dry chemical. The aqueous product does not burn, but dried solids are combustible.
Unsuitable extinguishing media	None known.
Specific hazards	Dried material burns producing carbon oxides, nitrogen oxides and traces of hydrogen cyanide (polyurethane).
Firefighter protection	Self-contained breathing apparatus and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions	Spills are very slippery; wear gloves and goggles.
Environmental precautions	Keep out of drains and waterways (dispersion coagulates).
Containment and clean-up	Absorb with inert material or collect with wet vacuum before it dries; place in labeled containers.

7. HANDLING AND STORAGE

Precautions for safe handling	Avoid eye and skin contact. Provide ventilation when heating/curing (amine release). Mix before use.

Conditions for safe storage	Store in closed containers between about 5 °C and 30 °C; protect from freezing (dispersion is destroyed by frost).

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Occupational exposure limits	No OSHA PEL/ACGIH TLV for components above threshold per carrier SDS; graphene: none established.
Engineering controls	General ventilation; local exhaust at drying/curing ovens.
Eye / face protection	Safety glasses with side shields.
Skin / hand protection	Nitrile gloves.
Respiratory protection	Not normally required; use NIOSH-approved respirator if spraying.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state	Liquid (aqueous dispersion)
Appearance / color	Black (graphene)
Odor	Odorless to slight (carrier)
pH	Reported on lot Certificate of Analysis
Boiling point	About 100 °C (water)
Flash point	Not applicable (water-based; dried solids combustible)
Density	About 1.1 g/cm³ at 20 °C (carrier, typical); finished: Reported on lot Certificate of Analysis
Solubility	Dilutable with water
Viscosity	Reported on lot Certificate of Analysis
VOC content	Reported on lot Certificate of Analysis
Graphene content	Reported on lot Certificate of Analysis

10. STABILITY AND REACTIVITY

Reactivity	Not reactive under normal conditions.
Chemical stability	Stable; freezing or high heat coagulates the dispersion.
Possibility of hazardous reactions	None known.
Conditions to avoid	Freezing, temperatures above 30 °C in storage.
Incompatible materials	Strong acids, strong oxidizers, salts (coagulation).
Hazardous decomposition products	On heating: amine vapors; in fire: carbon oxides, nitrogen oxides.

11. TOXICOLOGICAL INFORMATION

Likely routes of exposure	Skin and eye contact.

Acute toxicity	Carrier: oral LD50 > 2000 mg/kg (rat, OECD 423) per carrier SDS. 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 / eye	Not classified (carrier); may cause mild irritation.
Sensitization	Not classified (carrier)
Carcinogenicity	Not listed by NTP, IARC or OSHA. Graphene not listed. No carbon black.
Aspiration hazard	Not applicable.

12. ECOLOGICAL INFORMATION

Ecotoxicity	Carrier: not classified. Graphene: limited data (Fadeel et al., ACS Nano 2018, Safety Assessment of Graphene-Based Materials: https://pubmed.ncbi.nlm.nih.gov/30387986/).
Persistence	Polymer not readily biodegradable; separable by flocculation in treatment plants. Graphene persistent.
Bioaccumulative potential	Not expected.
Mobility in soil	Low (polymer).
Other	None known.

13. DISPOSAL CONSIDERATIONS

Waste treatment / disposal methods	Coagulate and dispose of solids as non-hazardous waste per regulations; do not discharge liquid to drains without permit.
Contaminated packaging	Empty completely, then recycle or dispose of per local regulations.

14. TRANSPORT INFORMATION

UN number / shipping	Not regulated (US DOT, IMDG, IATA) per carrier SDS.
Marine pollutant	No
Special precautions	Protect from freezing.

15. REGULATORY INFORMATION

TSCA	Carrier components: listed per carrier SDS. Graphene: 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	Not applicable
SARA 313	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. Carrier data source (cited, typical values): carrier supplier SDS for aliphatic polyurethane aqueous dispersion. Graphene notes: Fadeel et al., ACS Nano 2018, Safety Assessment of Graphene-Based Materials: https://pubmed.ncbi.nlm.nih.gov/30387986/.
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.