MCMILLANCO

SAFETY DATA SHEET

MCM GNP-100 Graphene Nanoplatelets, Electronics Grade

Product No. MCM GNP-100 · Revision date 11/06/2026 · Version 1.0

SECTION 1 IDENTIFICATION

Product identifier	MCM GNP-100 Graphene Nanoplatelets, Electronics Grade
Product number	MCM GNP-100
Other means of identification	Few-layer graphene nanoplatelets; graphene nanosheets
Recommended use	Additive for electrically conductive inks, films and coatings; battery electrode materials; sensors; research and development.
Restrictions on use	Industrial and research use only. Not for consumer use.
Supplier	MCMILLANCO, LLC 150 Pottery Street Perrysville, Ohio 44864, USA
Telephone	614-800-0334 (Main Office)
Email	info@mcmillancomfg.com
Website	www.mcmillancomfg.com
Emergency telephone	614-800-0334 (MCMILLANCO Main Office)

SECTION 2 HAZARD(S) IDENTIFICATION

Classification

- Serious eye damage/eye irritation — Category 2A
- Carcinogenicity — Category 1A
- Specific target organ toxicity, single exposure — Category 3 (respiratory tract irritation)
- Specific target organ toxicity, repeated exposure — Category 2 (lungs)
- Combustible dust

Signal word

DANGER

Hazard pictograms



Health hazard



Exclamation mark

Hazard statements

- May cause cancer.
- May cause damage to organs (lungs) through prolonged or repeated exposure.
- Causes serious eye irritation.
- May cause respiratory irritation.
- May form combustible dust concentrations in air.

Precautionary statements — Prevention

- Obtain special instructions before use.
- Do not handle until all safety precautions have been read and understood.
- Do not breathe dust.
- Wash hands thoroughly after handling.
- Do not eat, drink or smoke when using this product.
- Use only outdoors or in a well-ventilated area.
- Wear protective gloves and eye protection.
- Keep away from heat, sparks, open flames and other ignition sources. Minimize dust generation and accumulation.

Precautionary statements — Response	• IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. • If eye irritation persists: Get medical advice/attention. • IF INHALED: Remove person to fresh air and keep comfortable for breathing. • Call a poison center or doctor if you feel unwell. • IF exposed or concerned: Get medical advice/attention. • Get medical advice/attention if you feel unwell.
Precautionary statements — Storage	• Store in a well-ventilated place. Keep container tightly closed. • Store locked up.
Precautionary statements — Disposal	• Dispose of contents and container at an approved waste disposal facility, in accordance with local, state and federal regulations.
Hazards not otherwise classified	None known.
Other hazards	Electrically conductive dust may cause short circuits in electrical equipment. Dry powder can build static charge during transfer and mixing.

SECTION 3 COMPOSITION / INFORMATION ON INGREDIENTS

Substance or mixture	Substance

Chemical name	CAS number	Concentration (wt %)
Graphene platelets (carbon)	7782-42-5	≥ 99.5
Water (moisture)	7732-18-5	≤ 0.35
Sulfur	7704-34-9	≤ 0.05
Ash (inorganic residue)	Not identified	≈ 0.1

Ash value from the MCM GNP-100 technical data sheet.

SECTION 4 FIRST-AID MEASURES

Eye contact	Gently lift the eyelids and flush immediately and continuously with plenty of water for at least 15 minutes. Consult a physician.
Skin contact	Quickly remove contaminated clothing. Rinse with plenty of water for at least 15 minutes, then wash the affected area with soap and water. Consult a physician for reddened or blistered skin.
Inhalation	Move to fresh air immediately and keep at rest in a position comfortable for breathing. If breathing has stopped, give artificial respiration and get medical attention immediately.
Ingestion	Rinse mouth with water. If the person is conscious, give small amounts of water to drink. Do not induce vomiting unless directed by medical personnel. Get medical attention if symptoms occur.
Most important symptoms and effects	Eye irritation; irritation of the nose, throat and upper respiratory tract. Prolonged or repeated inhalation may damage the lungs.
Immediate medical attention and special treatment	Treat symptomatically. If exposed or concerned, get medical advice.

SECTION 5 FIRE-FIGHTING MEASURES

Suitable extinguishing media	Water spray, dry powder, foam or carbon dioxide.
Unsuitable extinguishing media	Do not use a solid stream of water. It can disperse dust and cause a dust explosion.

Specific hazards	Dust suspended in air at high concentrations may present a fire and explosion hazard. Settled dust is a fire hazard; re-suspension by vibration, traffic or material handling near an ignition source can cause a dust explosion. Fire may release carbon dioxide, carbon monoxide or other toxic gases.
Protective equipment and precautions for firefighters	Wear full firefighting turnout gear and self-contained breathing apparatus. Thoroughly decontaminate equipment after use. Do not allow runoff to enter sewers or drains.

SECTION 6 ACCIDENTAL RELEASE MEASURES

Personal precautions and protective equipment	Use personal protective equipment (see Section 8). Ensure adequate ventilation. Avoid dust formation and contact with skin, eyes and clothing. Remove ignition sources.
Environmental precautions	Avoid release to the environment. Do not let material enter drains.
Methods for containment and cleanup	Vacuum spillage with an explosion-proof HEPA vacuum or use wet wiping methods, and collect in a suitable closed container for disposal. Avoid dust formation.

SECTION 7 HANDLING AND STORAGE

Precautions for safe handling	Do not breathe dust. Avoid contact with eyes, skin and clothing. Wear protective clothing and equipment (see Section 8) and ensure adequate ventilation. Do not eat, drink or smoke when using this material. Minimize dust generation and accumulation. Keep dust away from open flames, hot surfaces, strong oxidizers and ignition sources. Keep surfaces, including overhead areas such as piping and ductwork, free of settled dust; clean with an explosion-proof HEPA vacuum or wet wiping methods. Dry powder can build static charge during transfer and mixing, so ground equipment and/or use inert atmospheres. The material is electrically conductive and may short-circuit electrical equipment.
Conditions for safe storage	Store in closed containers in a well-ventilated place. Keep away from ignition sources and strong oxidizers. Store locked up.

SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION

Occupational exposure limits	No occupational exposure limits have been established for graphene by OSHA, ACGIH or NIOSH. Exposure limits published for graphite (CAS 7782-42-5) may be used as a reference. Keep exposure as low as possible through good industrial hygiene practice to minimize any potential for lung effects, and minimize skin exposure.
Engineering controls	Use only with adequate controls, such as source enclosure or local exhaust ventilation. Where airborne particles are possible, controls adequate for asbestos fibers (closed systems, negative-pressure enclosures, HEPA-filtered exhaust, and wet methods with local exhaust ventilation) should be effective for engineered nanoparticles. Dust-handling equipment, including local exhaust ventilation and material transport systems, should have explosion relief vents, an explosion suppression system and/or an oxygen-deficient environment, and be designed so dust cannot escape into the work area.
Respiratory protection	Where needed, use an approved respirator with high-efficiency particulate filters. Higher exposures may require a supplied-air respirator. Select respirators based on contaminant type, form and concentration, following applicable regulations and good industrial hygiene practice.
Eye protection	Safety glasses at a minimum.
Skin protection	Impervious gloves, such as rubber, and protective clothing to prevent skin contact.
Hygiene measures	Do not eat, drink or smoke in work areas. Wash thoroughly after handling.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Physical state	Solid (light powder)

Color	Dark gray to black
Odor	Odorless
Odor threshold	Not applicable
pH	Not applicable
Melting point / freezing point	Not available
Boiling point and range	Not applicable
Flash point	Not applicable
Evaporation rate	Not applicable
Flammability	Combustible dust (see Section 5)
Explosive limits	Not available
Vapor pressure / vapor density	Not applicable
Bulk (dry powder) density	≈ 160 kg/m³
True density	2.2 g/cm³
Solubility	Insoluble
Partition coefficient (n-octanol/water)	Not applicable
Auto-ignition temperature	452 °C
Decomposition temperature	Not available
Viscosity	Not applicable
Particle characteristics	Particle size range 50 nm – 5 µm; particle layer count < 10; mono-, bi- and tri-layer content > 85% (by particle count); average particle thickness < 1.7 nm and specific surface area < 250 m²/g (DLS/PSA estimates).

SECTION 10 STABILITY AND REACTIVITY

Reactivity	Not reactive under standard conditions. Reactive at high temperature in the presence of oxidizers.
Chemical stability	Stable.
Possibility of hazardous reactions	Reaction with oxidizers may be highly exothermic and may release carbon dioxide, carbon monoxide or other toxic gases.
Conditions to avoid	Heat, sparks, flames and other ignition sources; dust generation and accumulation.
Incompatible materials	Strong oxidizers.
Hazardous decomposition products	Carbon dioxide, carbon monoxide and other toxic gases.

SECTION 11 TOXICOLOGICAL INFORMATION

Likely routes of exposure	Inhalation, eye contact, skin contact.
General	The toxicity of graphene has not been fully investigated. Minimize all exposure to graphene nanoparticles by inhalation or skin contact.
Eye	May cause irritation.
Skin	Effects have not been fully evaluated.
Inhalation	Dust may irritate the nose, throat and upper respiratory tract.

Ingestion	Not likely to be a relevant route of exposure. Repeated ingestion or swallowing large amounts may cause internal injury.
Chronic effects	Not fully evaluated. Avoid prolonged or repeated exposure unless proper protective equipment and clothing are used.
Carcinogenicity	Category 1A (manufacturer classification).
Reproductive toxicity	Not fully evaluated; no adverse effects expected.
Germ cell mutagenicity	Not fully evaluated; no adverse effects expected.
STOT — single exposure	Respiratory system.
STOT — repeated exposure	Lungs.
Numerical measures of toxicity	No data available.

SECTION 12 ECOLOGICAL INFORMATION

Ecotoxicity	No data available. Do not discard into drains.
Persistence and degradability	No information available.
Bioaccumulative potential	No information available.
Mobility in soil	No information available.
Other adverse effects	No information available.

SECTION 13 DISPOSAL CONSIDERATIONS

Waste disposal	Not listed as a RCRA hazardous waste. Dispose of contents and container in accordance with federal, state and local regulations, and confirm state or local requirements before disposal. Store wet waste in plastic-lined containers.

SECTION 14 TRANSPORT INFORMATION

US DOT	Not regulated.
Canada TDG	Not regulated.
IMDG (sea)	Not regulated.
IATA (air)	Not regulated.

SECTION 15 REGULATORY INFORMATION

OSHA	Hazardous under the Hazard Communication Standard (29 CFR 1910.1200).
TSCA	Not subject to TSCA Section 12(b) export notification or a TSCA Significant New Use Rule, and not listed under TSCA Health and Safety Data Reporting or Chemical Test Rules (per manufacturer).
SARA Title III, Section 302	Not listed.
OSHA Process Safety Management	Not listed as a highly hazardous chemical.
Clean Water Act	Not applicable.
Clean Air Act	Not applicable.

SECTION 16 OTHER INFORMATION

Prepared by	MCMILLANCO, LLC, from manufacturer data.
Revision date	11/06/2026 · Version 1.0

Revision notes	First MCMILLANCO issue. Prepared from manufacturer data in the 16-section OSHA format. Label elements completed to match the manufacturer's classification; combustible dust hazard added (see Section 5); physical data and particle characteristics aligned with the MCM GNP-100 technical data sheet.
Disclaimer	The information in this Safety Data Sheet is believed to be accurate as of the revision date. It is intended as a guide for safe handling, use, processing, storage, transportation, disposal and release, and is not a warranty or quality specification. It applies only to the material named and may not be valid for this material used in combination with other materials or in any process.