

MATERIAL SAFETY DATASHEET

PRODUCT: GRAPHENE OXIDE

SECTION 1: Product and Company Identification

Product name: Graphene Oxide
Synonyms: GO powder, GO flakes
Manufacturer: Danubia NanoTech s.r.o.
Ilkovičova 3
84104 Bratislava
Slovakia
Phone: +421264282144

Chemical name: Graphene Oxide
Product use: Laboratory chemicals
CAS Registry No.: 7782-42-5

SECTION 2: Hazard Identification

Emergency overview: This material may be irritant to eyes, skin and respiratory tract.
Chronic health hazard: Inhalation of high concentration of graphene oxide powder may cause pneumoconiosis.

SECTION 3: Composition/information on ingredients

Chemical formula: $C_xO_yH_z$
Physical appearance: Black powder

SECTION 4: First Aid Measures

Eyes: Flush with plenty of water.
Skin: Wash with soap and plenty of water.
Ingestion: Rinse mouth with water.
Inhalation: If breathing is difficult, move a person into a fresh air. If breathing stopped give artificial respiration.

SECTION 5: Fire-fighting Measures

Extinguishing media: Water spray, carbon dioxide, foam, dry chemical powder
Special fire fighting procedures: At temperatures over 300°C this material may decompose releasing carbon monoxide and carbon dioxide gases.
Unusual fire and explosion hazards: Not known.
Hazardous decomposition products: Carbon monoxide (CO) and carbon dioxide (CO₂)
Notes: If necessary, wear self-contained breathing apparatus and protective clothing for firefighting.

SECTION 6: Accidental Release Measures

Personal precautions, protective equipment and emergency procedures:

Collect released material mechanically and keep in closed containers. Wear protective equipment and avoid breathing of dust. For personal protection, see section 8.

Environmental: No special precautions required.

SECTION 7: Handling and Storage

Handling and storage: Store at cool and dry place. Keep the container tightly closed in well-ventilated place. Keep the containers away of sources of heat.

Other precautions: Provide sufficient ventilation when handling.

SECTION 8: Exposure Control / Personal Protection

Engineering controls: Common industrial hygiene practice. A workplace should have adequate ventilation.

Respiratory

Protections: Protect against inhalation.

Eye protection: Use glasses or other face protection.

Skin protection: Handle with gloves. Do not touch the glove's outer surface to avoid the contact with the material. Wear appropriate clothing.

SECTION 9: Physical and Chemical Properties

Appearance: Black powder.
Odour: Odourless.
Boiling point: Not applicable.
Melting point: Powder melts above 3000°C.
Freezing point: Not applicable.
Vapour pressure: Not known.
Vapour density: Not known.
Bulk density: Approx. 1 g.cm³
Evaporation rate: Not known.
Solubility in water: Dispersible in water.

SECTION 10: stability and Reactivity

Stability: Stable on air.
Conditions to avoid: Avoid contact with oxidizing agents.
Incompatibility: Not known.
Hazardous decomposition: Not known.
Hazardous polymerization: Not known.

SECTION 11: Toxicological Information

Toxicity: Not known.
Skin irritation: Not known.
Eye irritation: Not known.

Skin sensitization: Not known.

Carcinogenicity: Not known.
Reproductive toxicity: Not known.

SECTION 12: Ecological Information

No data concerning the toxicity, degradability, bioaccumulative potential and environmental mobility are currently available.

SECTION 13: Disposal Considerations

Waste disposal methods: Dispose off in accordance with all applicable local or state regulations and laws.

SECTION 14: Transport Information

This material is not listed under ADR/DIR, IMDG and IATA regulations as an environmental hazard.

SECTION 15: Regulatory Information

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006. For this product a chemical safety assessment was not carried out.

SECTION 16: Other Information

This information represents our current state of knowledge and is based on available scientific literature. DNT takes no responsibility for the accuracy of the scientific literature. The information does not guarantee any specific material property and should be used as a guide only. DNT is not responsible for any damage resulting from handling the product described in the information.