



Material Safety Data Sheet

PRODUCT AND COMPANY IDENTIFICATION

Product name: Graphene oxide in water dispersion
Manufacturer: Grafoid Inc.
Address: 945 Princess St., Kingston, ON. K7L 0E9
Brand: Ultra Graphene Oxide
Product use: For research purposes
Telephone: 1 613 900 4619
Emergency phone number: 1 613 558 1012

HAZARDS IDENTIFICATION

Emergency Overview

WHIMIS Classification: Not a hazardous substance or mixture

HMIS Classification: Health Hazard: 0

Flammability: 0

Physical Hazard: 0

Potential Health Effects: Inhalation: May be harmful if inhaled. May cause irritation.

Skin: May be harmful if absorbed through skin. May cause irritation.

Eyes: May cause eye irritation.

Ingestion: May be harmful if swallowed.

COMPOSITION/INFORMATION ON INGREDIENTS

Name	CAS #	EC #	Index #	Concentration
Water	7732-18	231-791-2	-	99.4%
Graphene Oxide	-	-	-	0.6%

FIRST AID MEASURES

If inhaled: If breathed in, move person into fresh air. If not breathing, give artificial respiration.

In case of skin contact: Wash off with soap and plenty of water.

In case of eye contact: Flush eyes with water as a precaution.

If swallowed: Never give anything by mouth to an unconscious person. Rinse mouth with water.

FIREFIGHTING MEASURES

Conditions of flammability: Not flammable or combustible.

Suitable extinguishing media: Use water spray, alcohol resistant foam, dry chemical or carbon dioxide.

Special protective equipment for firefighters: Wear self contained breathing apparatus for firefighting if necessary.

Hazardous combustion products: Hazardous decomposition products formed under fire conditions. Nature of decomposition products not known.

Explosion data-sensitivity to mechanical impact: No data available

Explosion data-sensitivity to static discharge: No data available

ACCIDENTAL RELEASE MEASURES

Personal precautions: Avoid breathing vapours, mist or gas.

Environmental precautions: No special environmental precautions required.

Methods and materials for containment and cleaning up: Keep in suitable, closed containers for disposal.

HANDLING AND STORAGE

Safe Storage Conditions: Keep container tightly closed in a dry, ventilated area

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EXPOSURE CONTROL/PERSONAL PROTECTION

Personal protective equipment:

Respiratory protection: Respiratory protection not required. For nuisance exposures use type OV/AG (US) or type ABEK(EU EN14387) respirator cartridges.

Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Hand protection: Handle with protective gloves

Eye protection: Wear protective goggles

Skin and body protection: Wear full body industrial type clothing

Specific Engineering controls: Use exhaust of laboratory fume hood when working with the material

PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Liquid

Colour: Brown

Odour: Odourless

Initial boiling point (°C): Not applicable.

Melting point (°C): Approximately 3600°C.

Decomposition temperature (°C): ---

Flash point (°C): Not applicable.

Auto Ignition Temperature (°C): Dispersed dust cloud - >600°C, deposited dust ->365°C.

Oxidising properties: Not applicable (the substance is incapable of reacting exothermically with combustible materials on the basis of chemical structure)

Chemical stability: Stable under recommended storage conditions.

Vapour density (air=1): Not applicable.

Vapour pressure: Not applicable

Evaporation rate: Not applicable

pH: 2.5-3

Density: ~0.98g/cm³

Solubility Value: Negligible.

STABILITY AND REACTIVITY

Conditions to avoid: No data available

Materials to avoid: Strong oxidizing agents, fluorine or chlorine trifluorine
Hazardous decomposition products: Hazardous decomposition products formed under fire conditions - Nature of decomposition products not known.

Other decomposition products: No data available

TOXICOLOGICAL INFORMATION

Carcinogenicity

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.
No other data available.

ECOLOGICAL INFORMATION

No data available.

DISPOSAL CONSIDERATIONS

When handling waste, consideration should be made to the safety precautions applying to handling of the product. Waste should not be disposed of by release to sewers. Uncleaned packaging: Disposal must be made according to official regulations

Not classified as a dangerous good for transport under DOT, IMDG, ADR, RID, or ICAO/IATA

WHMIS Classification: Not Rated.

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations

OTHER INFORMATION

This information is based on our present state of knowledge and our research into available scientific literature as well as information obtained from our vendors. Grafoid makes no responsibility regarding the accuracy of the scientific literature or any third party information and, therefore, cannot guarantee any specific material properties. Use of this information shall not establish a legally binding relationship.

The information provided in this SDS must be considered as a starting point for a comprehensive program of health and safety in your company. If further data on the product is required to perform your risk assessment, contact us and we will try to assist as much as possible.

