



SAFETY DATA SHEET

1 IDENTIFICATION

1.1 Product Identifier

Product Name

Graphene oxide aqueous solution

Product Number

10001

Brand

SupraG Energy

1.2 Other means of identification

Graphene oxide, graphite oxide, GO

1.3 Recommended use of the chemical and restrictions on use

Laboratory chemical, manufacture carbon materials. Do not allow material to dry out and form dust.

1.4 Details of supplier

Company details

SupraG Energy Pty Ltd
276 Flinders St, Melbourne, VIC 3000
AUSTRALIA

Telephone

+61 425 254 882

Email

yufei.wang@supragenergy.com

1.5 Emergency phone number

SupraG contact

+61 425 254 882

Poisons Information Centre

13 11 26

2 HAZARDS IDENTIFICATION

2.1 Classification of hazardous chemical

Not a hazardous substance or mixture

2.2 Label elements, including precautionary statements

Not a hazardous substance or mixture

3 COMPOSITION AND INFORMATION ON INGREDIENTS

Substance

Graphene oxide

Concentration

1- 10 mg/mL of H₂O (0.1-1 % by weight)

Description

Graphene oxide flakes suspended in water. Graphene oxide is a type of oxidized carbon material, arranged in sheets of hexagonal carbon rings.

Formula

C_xO_yH_z

CAS-No.:

-

EC/List-No:

942-699-3

4 FIRST AID MEASURES

4.1 Description of first aid measures

- | | |
|--------------------------------|--|
| General advice | <ul style="list-style-type: none">• Move person away from contamination area if safe to do so. Wear gloves and appropriate PPE to prevent further contamination |
| In case of skin contact | <ul style="list-style-type: none">• Immediately remove all contaminated clothing• Flush skin and hair with running water, soap is recommended• Seek medical attention if irritation occurs |
| In case of eye contact | <ul style="list-style-type: none">• Flush eyes immediately with fresh running water• Ensure complete irrigation of the eye by keeping eyelids apart and away from eye by occasionally lifting the upper and lower eyelids• Seek medical attention• Remove contact lenses if easy to do so. Otherwise this should be undertaken by skilled personnel |
| If inhaled | <ul style="list-style-type: none">• Move person to fresh air, away from contaminated area• Lay patient down and keep them warm, calm and rested• Prothesis such as false teeth should be removed prior to first aid procedures• Apply artificial respiration if not breathing• Transport to hospital or doctor |
| If ingested | <ul style="list-style-type: none">• Rinse mouth with water and then give a glass of water• Monitor symptoms, if feeling unwell, call Poisons Information Centre or a doctor |

4.2 Symptoms caused by exposure

The most important known symptoms are described on label and Section 2. Also beware of the staining of clothing and contact surfaces.

4.3 Medical attention and special treatment

No data available.

5 FIREFIGHTING MEASURES

5.1 Suitable extinguishing equipment

Substance is 99% water and generally non-combustible, if on fire use agent most appropriate to extinguish fire in local area. This can include water spray, foam, dry chemical powder, CO₂ etc. For intensely hot fires (> 1500°C), sand should be used to cover and isolate this material

5.2 Specific hazards arising from the chemical

Combustion products include carbon monoxide (CO) and carbon dioxide (CO₂). No data available on other decomposition products.

5.3 Special protective equipment and precautions for firefighters

Wear self-contained breathing apparatus for firefighting where necessary. Avoid contamination with oxidizing agents (ie: nitrates, oxidizing acids, chlorine bleaches etc.) as ignition can occur

6 ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment, and emergency procedures

Clean up spills immediately if safe to do so and advise personnel in area. Avoid breathing in vapours, mist or gas and ensure adequate ventilation. Wear personal protective equipment such as gloves and safety glasses when handling to avoid skin and eye contact. See Section 8 for more details.

6.2 Environmental precautions

Prevent leakage if safe to do so. Do not allow material to enter drains or environmental waterways.

6.3 Methods and materials for containment and cleaning up

Use inert absorbent material to take up material and keep in suitable closed container for disposal.

7 HANDLING AND STORAGE

7.1 Precautions for safe handling

Avoid all personal contact and use in a well-ventilated area. Open container slowly, use care when pouring out material as it can be quite viscous and cause unpredictable releases which will splash. Also use proper manual handling techniques and tools when handling large (> 5L) jerry cans.

7.2 Conditions for safe storage, including any incompatibles

Store in a cool, dry place. Keep container tightly closed and away from sunlight.

8 EXPOSURE CONTROLS AND PERSONAL PROTECTION

8.1 Control parameters

We are unaware of any exposure limits or standards.

8.2 Engineering controls

Use in a well-ventilated area and adhere to general laboratory hygiene practice. Wearing of safety glasses, gloves, lab coat, no food or drink and working in a fumehood where possible.

8.3 Personal protective equipment

Eye and face protection	Use eye protection such as safety glasses as recommended by the appropriate government standards (AS/NZS 1336, AS/NZS 1337).
Skin protection	Handle with gloves at all times, inspect gloves for holes and damage prior to use. Use proper glove removal technique to avoid touching skin with this product. A lab coat or similar impervious clothing is also recommended to avoid chemical staining and skin contact.
Inhalation protection	Avoid breathing in fumes and work in a fumehood if possible

9 PHYSICAL AND CHEMICAL PROPERTIES

9.1 Basic physical and chemical properties

Appearance	Viscous liquid, dark brown in colour
Odour	No data available
Odour threshold	No data available
pH	6 – 7
Melting/freezing point	No data available

Boiling point & boiling range	No data available
Flash point	No data available
Evaporation rate	No data available
Flammability (solid, gas)	No data available
Upper/lower flammability or explosive limits	No data available
Vapour pressure	No data available
Vapour density	No data available
Relative density	No data available
Solubility (H ₂ O)	Miscible
Partition coefficient: n-octanol/water	No data available
Auto-ignition temperature	No data available
Decomposition temperature	No data available
Viscosity	300 – 10,000 mPa·s

9.2 Additional physical/chemical information

No data available

10 STABILITY AND REACTIVITY

10.1 Reactivity

No data available

10.2 Chemical stability

Stable at room temperature in closed containers and normal storage and handling conditions.

10.3 Possibility of hazardous reactions

No data available

10.4 Conditions to avoid

No data available

10.5 Incompatible materials

Strong oxidizing agents

10.6 Hazardous decomposition products

Combustion products include carbon monoxide (CO) and carbon dioxide (CO₂). No data available on other decomposition products.

11 TOXICOLOGICAL INFORMATION

11.1 Toxicological effects

Acute toxicity	No data available
Skin corrosion/irritation	No data available
Serious eye damage/irritation	No data available
Respiratory or skin sensitisation	No data available
Germ cell mutagenicity	No data available
Carcinogenicity	No data available

Reproductive toxicity	No data available
Specific target organ toxicity – single exposure	No data available
Specific target organ toxicity – repeated exposure	No data available
Aspiration hazard	No data available

11.2 Information on possible routes of exposure

Skin and eye contact represent the most common possible routes of exposure. Beware of touching eyes/face with contaminated gloves. Inhalation risks are low due to the chemical being in a solution form with low volatility.

11.3 Early onset symptoms related to exposure

Skin and eye irritation

11.4 Delayed health effects from exposure

No data available

11.5 Exposure levels and health effects

No data available

11.6 Interactive effects

No data available

12 ECOLOGICAL INFORMATION

12.1 Ecotoxicity

No data available, but do not discharge raw material into waterways or sewer systems

12.2 Persistence and degradability

No data available

12.3 Bioaccumulative potential

No data available

12.4 Mobility in soil

No data available

12.5 Other adverse effects

No data available

13 DISPOSAL CONSIDERATIONS

13.1 Safe handling and disposal methods

Dispose of unused material to a licensed chemical disposal company in a suitable, inert container with a tightly closed lid and contents clearly labelled. Alternatively, dry out the material until it forms a cake and dispose of in landfill waste.

13.2 Disposal of any contaminated packaging

Wash out residual material and collect waste in inert container for disposal. The rinsed container can then be dried and disposed.

13.3 Environmental regulations

No data available

14 TRANSPORT INFORMATION

UN number	No data available
Proper shipping name or Technical name	Graphene Oxide Aqueous Solution
Transport hazard class	Not dangerous goods
Packing group	No data available
Environmental hazards	No data available
Special precautions for user	No data available
Additional information	No data available
Hazchem or emergency action code	No data available

15 REGULATORY INFORMATION

15.1 Safety, health and environmental regulations

Standard for the Uniform Scheduling of Medicines and Poisons:

No data available

16 OTHER INFORMATION

This information is prepared by SupraG Energy from in-house testing and expertise and the aid of information from:

- ChemWatch Review SDS: Graphene Oxide (Chemwatch: 25-3227)
- Sigma-Aldrich SDS: Graphene Oxide (Product number: 777676)
- European Chemicals Agency: Graphene Oxide (EC/List No.: 942-699-3)

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The above information is believed to be correct but does not purport to be all inclusive and should be used as a guide. Please ensure that the SDS documentation is up to date, email yufei.wang@supragenergy.com for more information or inquiries to the safe use of this product.