

Section 1.- Identification of the substance/mixture and of the company

- **Identification of the product:** Graphene oxide
- **Chemical family:** Synthetic graphite
- **Product name:** DRP-GPHOX
- **Use of the substance/preparation:** Research use only
- **Manufacturer/supplier identification:** Metrohm DropSens, S.L. Vivero de Ciencias de la Salud, Calle Colegio Santo Domingo de Guzmán, s/n, 33010 Oviedo, Asturias, Spain
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Section 2.- Hazards identification

Classification of the mixture:

According to Regulation CLP (EC) No1272/2008

- Eye irritation (Category 2)
- Specific target organ toxicity- single exposure (Category 3), respiratory system

Label elements:



Hazard statements

- H319 – Causes serious eye irritation.
- H335 – May cause respiratory irritation

Precautionary statements

- P305 + P338 + P351– If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- P261 – Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.

Supplemental Hazard Statements: None

Section 3.- Composition/Information on ingredients

- **Graphene oxide** **Synonyms:** GOX, GPHOX
CAS: Graphite 7782-42-5

Section 4.- First aid measures

- **General advice:** Consult a physician. Show this safety data sheet to the doctor in attendance.
- **After skin contact:** Wash skin with soap and copious amounts of water.
- **After ingestion:** Make victim drink plenty of water. Never give anything by mouth to an unconscious person, rinse mouth with water.
- **After eye contact:** Rinse out with plenty of water with the eyelid held wide open for at least 15

minutes.

- **After inhalation:** Move the person into fresh air. If it is necessary, give artificial respiration with oxygen.

The most important symptoms and effects are described in the section 2 (label elements).

Section 5.- Fire-fighting measures

- **Suitable extinguishing media:** use water spray, alcohol resistant foam, dry chemical or carbon dioxide.
- **Special hazards arising from the substance:** carbon oxides
- **Special protective equipment for fire fighting:** Wear self contained breathing apparatus for fire fighting if necessary.
- **Further information:** Use water spray to cool unopened containers.

Section 6.- Accidental release measures

- **Person-related precautionary measures:** Use personal protective equipment. Avoid breathing vapours. Ensure adequate ventilation.
- **Environmental precautions:** Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.
- **Methods and materials for containment and cleaning up:** Contain with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations.
- **Procedures for cleaning/absorption:** Keep in suitable, closed containers for disposal.

Section 7.- Handling and storage

- **Handling:** Avoid eye and skin contact. Avoid formation of dust and aerosols. Take measures to prevent the build-up of electrostatic charge.
- **Storage:** Store in cool place. Keep container tightly closed in a dry and well-ventilated place protected from sunlight.

Section 8.- Exposure controls/personal protection

Exposure controls

General industrial hygiene practice

- Hand protection Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique to avoid skin contact with this product.
- Eye protection Safety glasses with side-shields conforming to NIOSH (US) or EN166 (EU)
- Skin and body protection Choose body protection according to the amount and concentration of the dangerous substance at the work place. Handle with gloves. Wash and dry hands. The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and standard EN 374 derived from it.
- Hygiene measures Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

Section 9.- Physical and chemical properties

- **General information:**
 - Form: solid
 - Colour: brown
 - Odour: odourless
- **Important health, safety and environmental information:**
 - pH value: no data available
 - Relative density: 1.8 g/cm³

- Explosion limits: no data available

Section 10.- Stability and reactivity

- **Reactivity and chemical stability:** No data available
- **Possibility of hazardous reactions:** No data available.
- **Incompatible materials:** Strong oxidizing agents.
- **Conditions to avoid:** Heat, flames and sparks. Direct sunlight should be avoid.
- **Hazardous decomposition products:** Other decomposition products – no data available.
- **Further information:** Stable under recommended storage conditions.

Section 11.- Toxicological information

To the best of our knowledge the toxicological effects of this substance has not been thoroughly researched

- **Carcinogenicity:** 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.
- **Specific target organ toxicity – single exposure:** inhalation – may cause respiratory irritation.
- **Serious eye damage/ eye irritation:** Causes serious eye irritation

Section 12.- Ecological information:

To the best of our knowledge the ecological effects of this substance has not been thoroughly researched.

Persistence and degradability: This substance contains no components considered to be either persistent, bioaccumulative and toxic (PBT) or very persistent and very bioaccumulative (vPvB) at levels of 0.1 % or higher.

Section 13.- Disposal considerations

- **Product:** Observe all federal, state, and local environmental regulations. Contact a licensed professional waste disposal service to dispose this material.
- **Contaminated packaging:** Dispose of as unused product.

Section 14.- Transport information

Not a hazardous material for transportation

Section 15.- Regulatory information

This safety datasheet has been revised to comply with the requirements establish in (EC) 453/2010.

Section 16.- Other information

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The contents and format of this MSDS are in accordance with EC 453/2010.

Disclaimer: Metrohm DropSens S.L. provides the information contained herein in good faith and makes no representation as to its comprehensiveness or accuracy. This document is intended only as a guide to the appropriate precautionary handling of the material by a properly trained person using this product. Individuals

MATERIAL SAFETY DATA SHEET

Graphene oxide
According to EC N°
453/2010 Edition date
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