

1.- Identification of the substance/preparation 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:** DropSens, S.L.
Ed. CEEI, locales 4 y 5
Parque Tecnológico de Asturias
Llanera - 33428 (Asturias) SPAIN
Tel.- +34 985 27 76 85 Fax.- +34 985 27 76 85
E-mail.- info@dropsens.com
Internet Web Site: www.dropsens.com
- **Emergency phone:** DropSens, S.L. +34 985 27 76 85

2 Hazards identification

Caution! To the best of our knowledge the toxicological properties of this material has not been thoroughly investigated. The present substance has been classified according to hazards identification of graphite.

Hazards classification for the substance according to the European directives:

- According to Regulation CLP (EC) No1272/2008:
Eye Irritation (Category 2);
Specific target organ toxicity- single exposure (Category 3).



- Signal word: Warning
- Hazards statement(s):
H319 Causes serious eye irritation
H335 May cause respiratory irritation
- Precautionary statement(s):
P261 Avoid breathing dust/fume/gas/mist/vapours/spray
P305+ P351+ P338 If contact with eyes: rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

3.- Composition/Information on ingredients

- **Graphene oxide** **CAS:**
Concentration: ≤ 100%

4.- First aid measures

- **After inhalation:** Move the person into fresh air. If it is necessary, give artificial respiration with oxygen. Summon physician if necessary.
- **After skin contact:** Wash skin with soap and copious amounts of water. Consult a physician.
- **After ingestion:** Make victim drink plenty of water. Never give anything by mouth to an unconscious person, rinse mouth with water. Consult a physician.
- **After eye contact:** Rinse out with plenty of water with the eyelid held wide open for at least 15 minutes.

Summon eye specialist.

- **In case of persisting adverse effects:** Consult a physician.
- **General:** Show this safety data sheet to the doctor in attendance.

5.- Fire-fighting measures

- **Suitable extinguishing media:** Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
- **Special hazards arising from the substance:** Metal oxides, carbon dioxide and carbon monoxide. May form toxic fumes.
- **Special protective equipment for fire fighting:** Wear self contained breathing apparatus for fire fighting if necessary.

6.- Accidental release measures

- **Person-related precautionary measures:** Use personal protective equipment. Avoid dust formation. Avoid breathing dust. Ensure adequate ventilation.
- **Environmental precautions:** Do not discharge into the drains/surface waters/groundwaters.
- **Procedures for cleaning/absorption:** Pick up and arrange disposal without creating dust. Keep in suitable, closed containers for disposal.

7.- Handling and storage

- **Handling:** Avoid eye and skin contact. Avoid formation of dust and aerosols. Provide appropriate exhaust ventilation at places where dust is formed. Normal measures for preventive fire protection.
- **Storage:** Store in cool place. Keep container tightly closed in a dry and well-ventilated place.

8.- Exposure controls/personal protection

Exposure controls

- Respiratory protection Where risk assessment shows air-purifying respirators are appropriate use a dust mask type N95 (US) or type P1 (EN 143) respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).
- Hand protection The selected protective gloves have to satisfy the specification of EU Directive 89/686/EEC and the standard EN 374 derived from it. Handle with gloves.
- Eye protection Safety glasses with side-shields conforming to EN166.
- Skin and body protection Choose body protection according to the amount and concentration of the dangerous substance at the work place.
- Hygiene measures Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

9.- Physical and chemical properties

- **General information:**
 - Form: powder
 - Colour: brown
- **Important health, safety and environmental information:**
 - pH value: not determined.
 - Solubility in water (20°C): soluble (hydrophilic)
 - Relative vapour density: Not determined.
 - Refractive index: Not determined.
 - Melting temperature: Not determined.
 - Ignition temperature: Not determined.

10.- Stability and reactivity

- **Conditions to be avoided:** Heating should be avoid.
- **Substances to be avoided:** Strong oxidizing agents and/or reducing agents.
- **Hazardous decomposition products:** Hazardous decomposition products formed under fire conditions.

- **Further information:** Stable under recommended storage conditions.

11.- Toxicological information

- **Acute toxicity:**
 - **Carcinogenicity:** no data available
- **Further toxicolo Carcinogenicity:** no data available
 - **After skin contact:** No irritation and no corrosion.
 - **After eye contact:** Irritations.
 - **After ingestion:** No data available.
 - **After inhalation:** May cause respiratory irritation

12.- Ecological information:

- **Mobility:** no data available.
- **Bioaccumulative potential:** no data available.
- **Persistence and degradability:** no data available.
- **Other adverse effects:** no data available.

13.- Disposal considerations

- **Product:** Observe all federal, state, and local environmental regulations. Contact a licensed professional waste disposal service to dispose this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.
- **Packaging:** Dispose of as unused product.

14.- Transport information

- **Road transport:** - Not dangerous goods
- **Sea transport:** - Not dangerous goods
- **Air transport:** - Not dangerous goods

15.- Regulatory information

This safety datasheet complies with the requirements of Regulation (EC) 1907/2006 and/or 67/548/EEC and/or 1999/45/EC.

- **R-phrases:**
R36/37 Irritating to eyes and respiratory system.
- **S-phrases:**
S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice
S36 Wear suitable protective clothing

16. Other information

Date of creation: 08/07/2011
Author: Carla Navarro

Revised by: Pablo Fanjul Bolado (Director I+D, DropSens, S.L.)

The contents and format of this MSDS are in accordance with EEC Commission Directive 2001/58/EC, 67/548/EC resp. 99/45/EC

Disclaimer: 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 receiving the information must exercise their independent judgment in determining its appropriateness for a particular purpose. As the conditions or methods of use are beyond our control, we do not assume any responsibility and expressly disclaim any liability for any use of this material.