

### 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](mailto:info@dropsens.com)  
Internet Web Site: [www.dropsens.com](http://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.