

SAFETY DATA SHEET

Revision Date 06/14/2019



SECTION 1: Product and Company Identification

1.1 Product identifiers

Product name : PEG Cd-based Quantum Dots in water

Product Number : QMG620

Manufacturer : Ocean Nanotech, LLC

1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses : Laboratory chemicals, Manufacture of substances

1.3 Supplier Details

Manufacturer/Supplier : Ocean Nanotech, LLC
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San Diego, CA 92126
United States

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SECTION 2: Hazards Identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008

Carcinogenicity (Category 1B), H350

Specific target organ toxicity - repeated exposure (Category 2), H373

For the full text of the H-Statements mentioned in this Section, see Section 16.

2.2 Label elements

Labelling according Regulation (EC) No 1272/2008

Pictogram



Signal word : Danger

Hazard statement(s)

H350

May cause cancer.

H373

May cause damage to organs through prolonged or repeated exposure.

Precautionary statement(s)
P201 Obtain special instructions before use.
P260 Do not breathe dust/ fume/ gas/ mist/ vapors/ spray.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
P308 + P313 IF exposed or concerned: Get medical advice/ attention.
Supplemental Hazard Statements none
Restricted to professional users.
Restricted to professional users.

2.3 Other hazards

This substance/mixture 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 3: Composition/information on Ingredients

3.1 Mixtures

Synonyms : Fluorescent nanocrystals
QDs

3.2 Hazardous ingredients according to Regulation (EC) No 1272/2008

| Component | Classification | Concentration |
|--|--|-------------------|
| Cadmium sulfide Included in the Candidate List of Substances of Very High Concern (SVHC) according to Regulation (EC) No. 1907/2006 (REACH) | | |
| CAS-No. 1306-23-6 | Acute Tox. 4; Muta. 2; Carc. 1B; Repr. 2; STOT RE 1; Aquatic Acute 1; Aquatic Chronic 1; H302, H341, H350, H361, H372, H400, H410 Concentration limits: >= 10 %: STOT RE 1, H372; 0.1 - < 10 %: STOT RE 2, H373; M-Factor - Aquatic Acute: 1 | >= 0.1 - < 0.25 % |
| EC-No. 215-147-8 | | |
| Index-No. 048-010-00-4 | | |

For the full text of the H-Statements mentioned in this Section, see Section 16.

SECTION 4: First Aid Measures

4.1 Description of first aid measures

General advice

Consult a physician. Show this safety data sheet to the doctor in attendance.

If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact

Wash off with soap and plenty of water. Consult a physician.

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. Consult a physician.

4.2 Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

- 4.3 Indication of any immediate medical attention and special treatment needed**
No data available

SECTION 5: Firefighting Measures

- 5.1 Extinguishing media**
Suitable extinguishing media
Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
- 5.2 Special hazards arising from the substance or mixture**
Carbon oxides
- 5.3 Advice for firefighters**
Wear self-contained breathing apparatus for firefighting if necessary.
- 5.4 Further information**
No data available

SECTION 6: Accidental Release Measures

- 6.1 Personal precautions, protective equipment and emergency procedures**
Use personal protective equipment. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas.
For personal protection see section 8.
- 6.2 Environmental precautions**
Prevent further leakage or spillage if safe to do so. Do not let product enter drains.
- 6.3 Methods and materials for containment and cleaning up**
Soak up with inert absorbent material and dispose of as hazardous waste. Keep in suitable, closed containers for disposal.
- 6.4 Reference to other sections**
For disposal see section 13.

SECTION 7: Handling and Storage

- 7.1 Precautions for safe handling**
Avoid exposure - obtain special instructions before use. Avoid contact with skin and eyes. Avoid inhalation of vapor or mist.
For precautions see section 2.2.
- 7.2 Conditions for safe storage, including any incompatibilities**
Store in cool place. Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

Recommended storage temperature 2 - 8 °C

Do not freeze.
Storage class (TRGS 510): Non-combustible, acute toxic Cat.3 / toxic hazardous materials or hazardous materials causing chronic effects
- 7.3 Specific end use(s)**
Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

SECTION 8: Exposure Controls/Personal Protection

- 8.1 Control parameters**
- 8.2 Exposure controls**
Appropriate engineering controls
Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

Personal protective equipment

Eye/face protection

Safety glasses with side-shields conforming to EN166 Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

The selected protective gloves must satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

Body Protection

Complete suit protecting against chemicals, the type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineer protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Control of environmental exposure

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

SECTION 9: Physical and Chemical Properties

9.1 Information on basic physical and chemical properties

- | | |
|---|---------------------|
| a) Appearance | Form: liquid |
| b) Odor | No data available |
| c) Odor Threshold | No data available |
| d) pH | No data available |
| e) Melting point/freezing point | No data available |
| f) Initial boiling point and boiling range | No data available |
| g) Flash point | No data available |
| h) Evaporation rate | No data available |
| i) Flammability (solid, gas) | No data available |
| j) Upper/lower flammability or explosive limits | No data available |
| k) Vapor pressure | No data available |
| l) Vapor density | No data available |
| m) Relative density | 1 g/cm ³ |
| n) Water solubility | No data available |
| o) Partition coefficient: n-octanol/water | No data available |
| p) Auto-ignition temperature | No data available |
| q) Decomposition temperature | No data available |

- r) Viscosity No data available
- s) Explosive properties No data available
- t) Oxidizing properties No data available

9.2 Other safety information

No data available

SECTION 10: Stability and Reactivity

10.1 Reactivity

No data available

10.2 Chemical stability

Stable under recommended storage 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

Hazardous decomposition products formed under fire conditions. - Carbon oxides

Other decomposition products - No data available

In the event of fire: see section 5

SECTION 11: Toxicological Information

11.1 Information on toxicological effects

Acute toxicity

No data available

Skin corrosion/irritation

No data available

Serious eye damage/eye irritation

No data available

Respiratory or skin sensitization

No data available

Germ cell mutagenicity

No data available

Carcinogenicity

IARC: 1 - Group 1: Carcinogenic to humans (Cadmium sulfide)

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

Additional Information

RTECS: Not available

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

SECTION 12: Ecological Information

- 12.1 Toxicity**
No data available
- 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 Results of PBT and vPvB assessment**
This substance/mixture 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.
- 12.6 Other adverse effects**
No data available

SECTION 13: Disposal Considerations

- 13.1 Waste treatment methods**
- Product**
Offer surplus and non-recyclable solutions to a licensed disposal company.
- Contaminated packaging**
Dispose of as unused product.

SECTION 14: Transportation Information

- 14.1 UN number**
ADR/RID: - IMDG: - IATA: -
- 14.2 UN proper shipping name**
ADR/RID: Not dangerous goods
IMDG: Not dangerous goods
IATA: Not dangerous goods
- 14.3 Transport hazard class(es)**
ADR/RID: - IMDG: - IATA: -
- 14.4 Packaging group**
ADR/RID: - IMDG: - IATA: -
- 14.5 Environmental hazards**
ADR/RID: no IMDG Marine pollutant: no IATA: no
- 14.6 Special precautions for user**
No data available

SECTION 15: Regulatory Information

- 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.
- Authorizations and/or restrictions on use**
- 15.2 Chemical safety assessment**
For this product a chemical safety assessment was not carried out

SECTION 16: Other Information

Full text of H-Statements referred to under sections 2 and 3.

| | |
|------|--|
| H302 | Harmful if swallowed. |
| H341 | Suspected of causing genetic defects. |
| H350 | May cause cancer. |
| H361 | Suspected of damaging fertility or the unborn child. |
| H372 | Causes damage to organs through prolonged or repeated exposure. |
| H373 | May cause damage to organs through prolonged or repeated exposure. |
| H400 | Very toxic to aquatic life. |
| H410 | Very toxic to aquatic life with long lasting effects. |

Further information

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The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Ocean Nanotech shall not be held liable for any damage resulting from handling or from contact with the above product. See www.oceannanotech.com for additional terms and conditions of sale.