

Material Safety Data Sheet

acc. to OSHA and ANSI

<p>1 <u>Identification of substance:</u></p> <ul style="list-style-type: none">• Product details:• Product name: <u>Fluorescent markers on alloyed Zinc Cadmium Selenide Sulfide basis, powder, hydrophobic, ca. 6 nm</u>• Stock number: PL-QD-OA• Manufacturer/Supplier: PlasmaChem GmbH, Berlin Rudower Ch. 29, D-12489 Tel.: 030 6392-6313 <p>Version 1.1</p>
<p>2 <u>Composition/Data on components:</u></p> <ul style="list-style-type: none">• Chemical characterization: <u>Description: (CAS#)</u> Zinc Cadmium Selenide Sulfide, powder, ca.6 nm, ZnCdSeS: 50+% inorganics• Identification number(s): <u>EC Number:</u>
<p>3 <u>Hazards identification</u></p> <p>Harmful by inhalation, in contact with skin and if swallowed. Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.</p>
<p>4 <u>First aid measures</u></p> <ul style="list-style-type: none">• After inhalation If inhaled, remove to fresh air. If not breathing give artificial respiration. If breathing is difficult, give oxygen.• After skin contact Immediately wash with water and soap and rinse thoroughly.• After eye contact Rinse opened eye for several minutes under running water. Then consult a doctor.• After swallowing If swallowed, wash out mouth with water provided person is conscious. Call a physician.
<p>5 <u>Fire fighting measures</u></p> <ul style="list-style-type: none">• Suitable extinguishing agents Suitable: Noncombustible. Use extinguishing media appropriate to surrounding fire conditions.• Special hazards caused by the material, its products of combustion or resulting gases: In case of fire, emits toxic fumes• Protective equipment: Wear self-contained respirator. Wear protective clothing to prevent contact with skin and eyes.
<p>6 <u>Accidental release measures</u></p> <ul style="list-style-type: none">• Person-related safety precautions: Wear protective equipment. Keep unprotected persons away. Ensure adequate ventilation Keep away from ignition sources• Measures for environmental protection: Do not allow material to be released to the environment without proper governmental permits.• Measures for cleaning/collecting: Sweep up, place in a bag and hold for waste disposal. Avoid raising dust. Ventilate area and wash spill site after material pickup is complete.
<p>7 <u>Handling and storage</u></p> <ul style="list-style-type: none">• Handling

Directions for Safe Handling: Do not breathe dust. Do not get in eyes, on skin, on clothing. Avoid prolonged or repeated exposure. Store in cool, dry place in tightly closed containers. Ensure good ventilation at the workplace.

- **Information about protection against explosions and fires:**

Keep ignition sources away.

Protect against electrostatic charges.

Fumes can combine with air to form an explosive mixture.

- **Information about storage in one common storage facility:**

Do not store together with acids.

- **Further information about storage conditions:**

Avoid contact with acid

8 Exposure controls and personal protection

- **Additional information about design of technical systems:**

Use only in a chemical fume hood. Safety shower and eye bath.

- **Personal protective equipment**

- **General protective and hygienic measures**

The usual precautionary measures for handling chemicals should be followed.

Keep away from foodstuffs, beverages and feed.

Remove all soiled and contaminated clothing and shoes.

Wash hands before breaks and at the end of work.

Avoid contact with the eyes and skin.

- **Breathing equipment:**

Use suitable respirator when high concentrations are present.

- **Protection of hands:**

Impervious gloves

Check protective gloves prior to each use for their proper condition.

- **Material of gloves**

The selection of suitable gloves not only depends on the material, but also on quality. Quality will vary from manufacturer to manufacturer.

- **Eye protection:** Safety glasses

- **Body protection:** Protective work clothing.

9 Physical and chemical properties:

- **General Information**

- **Form:** Powder

- **Color:** Green to red

- **Odor:** NA

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	<u>Value/Range</u>	<u>Unit</u>	<u>Method</u>
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- **Change in condition**

- **Melting point/Melting range:** 2150-2200 °C

- **Boiling point/Boiling range:** Not determined

- **Sublimation temperature / start:** Not determined

- **Flash point:** Not determined

- **Flammability (solid, gaseous)** Not determined

- **Ignition temperature:** Not determined

- **Decomposition temperature:** Not determined

- **Explosion limits:**

- **Lower:** Not determined

- **Upper:** Not determined

- **Vapor pressure:** Not determined

- **Density:** Not determined

- **Solubility in / Miscibility with**

- **Water:** Not soluble

- **Ethanol:** Not soluble

- **Hexane:** Soluble

- **Toluene:** Soluble

- **Chloroform:** Soluble

10 Stability and reactivity

- **Thermal decomposition / conditions to be avoided:**
Decomposition will not occur if used and stored according to specifications.
- **Materials to be avoided:**
Strong oxidizing agents, acids
- **Dangerous reactions:** No information
- **Dangerous products of decomposition:** No information

11 Toxicological information

Acute toxicity:

LD50

Intraperitoneal

Rat

2820 MG/KG

Remarks: Behavioral:Change in motor activity (specific assay).

Nutritional and Gross Metabolic:Weight loss or decreased weight gain.

Behavioral:Tremor.

LD50

Intraperitoneal

Mouse

2100 MG/KG

Remarks: Behavioral:Change in motor activity (specific assay).

Nutritional and Gross Metabolic:Weight loss or decreased weight gain.

Behavioral:Tremor.

- **Signs and symptoms of exposure:**
To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.
- **Route of exposure:**
Multiple Routes: Harmful if swallowed, inhaled, or absorbed through skin. May cause irritation.
- **Chronic exposure:**
Carcinogen. IARC carcinogen list: Group 1

12 Ecological information:

- **General notes:**
Do not allow material to be released to the environment without proper governmental permits.
- **Additional information:**
No data available

13 Disposal considerations

- **Substance disposal:**
Bury in a landfill site approved for the disposal of chemical and hazardous wastes. Observe all federal, state, and local environmental regulations.

14 Transport information

- Non-hazardous for air, sea and road freight

15 Regulations

- **Risk phrases:**
20/21/22-50/53
Harmful by inhalation, in contact with skin and if swallowed.
Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
- **Safety phrases:** 60-61
This material and its container must be disposed of as hazardous waste. Avoid release to the environment. Refer to special instructions/safety data sheets.

16 Other information:

- Employers should use this information only as a supplement to other information gathered by them, and should make independent judgement of suitability of this information to ensure proper use and protect the

health and safety of employees. This information is furnished without warranty, and any use of the product not in conformance with this Material Safety Data Sheet, or in combination with any other product or process, is the responsibility of the user.

- **Disclaimer:**

For R&D use only. Not for drug, household or other uses.