

1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

Product name : Cadmium selenide

2. HAZARDS IDENTIFICATION

Classification of the substance or mixture

According to Regulation (EC) No1272/2008

Acute toxicity, Inhalation (Category 4)

Acute toxicity, Dermal (Category 4)

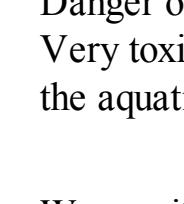
Acute aquatic toxicity (Category 1)

According to European Directive 67/548/EEC as amended.

Harmful in contact with skin. Toxic by inhalation and if swallowed. Danger of cumulative effects. Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Label elements

Pictogram



Signal word : Warning

Hazard statement(s)

H312 Harmful in contact with skin.

H332 Harmful if inhaled.

H400 Very toxic to aquatic life.

Precautionary statement(s)

P273 Avoid release to the environment.

P280 Wear protective gloves/protective clothing.

Hazard symbol(s)

T Toxic

N Dangerous for the environment

R-phrase(s)

R21 Harmful in contact with skin.

R23/25 Toxic by inhalation and if swallowed.

R33 Danger of cumulative effects.

R50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

S-phrase(s)

S36/37 Wear suitable protective clothing and gloves.

S45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

S60 This material and its container must be disposed of as hazardous waste.

S61 Avoid release to the environment. Refer to special instructions/ Safety data sheets.

Other hazards - none

3. COMPOSITION/INFORMATION ON INGREDIENTS

Formula : CdSe

Molecular Weight : 191,37 g/mol

CAS-No.	EC-No.	Classification	Concentration
Cadmium selenide 1306-24-7	215-148-3	Acute Tox. 4; Aquatic Acute 1; H312, H332, H400 Xn, N, R20/21/22 - R50/53	-

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

4. 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

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

If swallowed

Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Special protective equipment for fire-fighters

Wear self contained breathing apparatus for fire fighting if necessary.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions

Wear respiratory protection. Avoid dust formation. Avoid breathing dust. Ensure adequate ventilation.

Evacuate personnel to safe areas.

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

Pick up and arrange disposal without creating dust. Keep in suitable, closed containers for disposal.

7. HANDLING AND STORAGE

Precautions for safe handling

Avoid contact with skin and eyes. Avoid formation of dust and aerosols.

Provide appropriate exhaust ventilation at places where dust is formed. Normal measures for preventive fire protection.

Conditions for safe storage

Store in cool place. Keep container tightly closed in a dry and well-ventilated place.

Moisture sensitive.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Personal protective equipment

Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N99 (US) or type P2 (EN 143) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of 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).

Hand protection

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

Handle with gloves.

Eye protection

Face shield and safety glasses

Skin and body protection

Choose body protection according to the amount and concentration of the dangerous substance at the work place.

Hygiene measures

Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance

Form : granules

Colour : light grey

Safety data

pH : no data available

Melting point : no data available

Boiling point : no data available

Flash point : no data available

Ignition temperature : no data available

Lower explosion limit : no data available

Upper explosion limit : no data available

Density : 5,81 g/cm3 at 25 °C

Water solubility : no data available

10. STABILITY AND REACTIVITY

Chemical stability

Stable under recommended storage conditions.

Conditions to avoid

Avoid moisture.

Materials to avoid

Acids, Oxidizing agents

Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. - Cadmium/cadmium oxides, Selenium/selenium oxides

11. TOXICOLOGICAL INFORMATION

Acute toxicity

LD50 Oral - rat > 5.000 mg/kg

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

This product or contains a component that has been reported to be carcinogenic based on its IARC, OSHA, ACGIH, NTP, or EPA classification. Chronic exposure to cadmium may cause lung and prostate cancer.

IARC: 3 - Group 3: Not classifiable as to its carcinogenicity to humans (Cadmium selenide)

Overexposure may cause reproductive disorder(s) based on tests with laboratory animals.

Specific target organ toxicity - single exposure

no data available

Specific target organ toxicity - repeated exposure

no data available

Aspiration hazard

no data available

Potential health effects

Inhalation : Toxic if inhaled. May cause respiratory tract irritation.

Ingestion : Toxic if swallowed. May cause intestinal irritation.

Skin : Harmful if absorbed through skin. May cause skin irritation.

Eyes : May cause eye irritation. May cause eye irritation.

Acute inhalation exposure of Cadmium fumes may cause "metal fume fever" with flu-like symptoms of weakness, fever, headache, chills, nausea, vomiting, dizziness, sweating, muscular pain, cough and difficulty breathing. Acute, pulmonary edema may develop within 24 hours and reaches a maximum by three days. The first chronic effect to cadmium is generally kidney damage, manifested by excessive protein in the urine, followed by anemia, tooth discoloration and loss of smell. Cadmium also is believed to cause pulmonary emphysema and bone disease.

Additional Information

RTECS: EV2300000

RTECS: EV2300000

12. ECOLOGICAL INFORMATION

Toxicity

no data available

Persistence and degradability

no data available

Bioaccumulative potential

no data available

Mobility in soil

no data available

PBT and vPvB assessment

no data available

Other adverse effects

Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

13. DISPOSAL CONSIDERATIONS

Product

Observe all federal, state and local environmental regulations. Contact a licensed professional solvent and disposal service to dispose of this material. Dispose of surplus material with a licensed contractor and burn in a chemical incinerator equipped with an afterburner and scrubber.

Contaminated packaging

Dispose of as unused product.

14. TRANSPORT INFORMATION

ADR/RID

UN-Number: 2570 Class: 6.1

Proper shipping name: CADMIUM COMPOUND

Marine pollutant: No

IATA

UN-Number: 2570 Class: 6.1

Proper shipping name: Cadmium compound

Packing group: III

EMS-No: F-A, S-A

15. REGULATORY INFORMATION

This safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006.

16. OTHER INFORMATION