

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

Version 4.0 Revision Date 13.03.2010

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GENERIC EU MSDS - NO COUNTRY SPECIFIC DATA - NO OEL DATA

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

Product name : Cadmium telluride

Product Number : 256544
Brand : Aldrich

Company : Sigma-Aldrich Ireland Ltd.
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Chemical Emergency Centre (NCEC)
E-mail address : EIRProductStewardship@sial.com

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 toxicity, Oral (Category 4)

Acute aquatic toxicity (Category 1)

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

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

Label elements

Pictogram



Signal word

Warning

Hazard statement(s)

H302

Harmful if swallowed.

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)

Xn

Harmful

N

Dangerous for the environment

R-phrases)

R20/21/22

Harmful by inhalation, in contact with skin and if swallowed.

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

S-phrase(s)
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 : CdTe
Molecular Weight : 240,01 g/mol

CAS-No.	EC-No.	Index-No.	Classification	Concentration
Cadmium telluride				
1306-25-8	215-149-9	048-001-00-5	Acute Tox. 4; Aquatic Acute 1; H302, 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

Use personal protective equipment. Avoid dust formation. Avoid breathing dust. Ensure adequate ventilation.

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.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION**Personal protective equipment****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

Handle with gloves.

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

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**Appearance**

Form powder

Colour white

Safety data

pH no data available

Melting point 1.092 °C

Boiling point 1.130 °C

Flash point not applicable

Ignition temperature no data available

Lower explosion limit no data available

Upper explosion limit no data available

Density 6,2 g/mL at 25 °C

Water solubility no data available

10. STABILITY AND REACTIVITY**Chemical stability**

Stable under recommended storage conditions.

Conditions to avoid

no data available

Materials to avoid

Strong oxidizing agents, Strong acids

Hazardous decomposition products

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

11. TOXICOLOGICAL INFORMATION

Acute toxicity

LD50 Intraperitoneal - rat - 2.820 mg/kg

Remarks: Behavioral:Tremor. Behavioral:Change in motor activity (specific assay). Nutritional and Gross Metabolic:Weight loss or decreased weight gain.

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 is 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: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

Reproductive toxicity

no data available

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	Harmful if inhaled. May cause respiratory tract irritation.
Ingestion	Harmful if swallowed.
Skin	Harmful if absorbed through skin. May cause skin irritation.
Eyes	May cause eye irritation.

Signs and Symptoms of Exposure

Acute inhalation exposure to 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 of exposure to cadmium is generally kidney damage, manifested by excretion of excessive protein in the urine, followed by anemia, teeth discoloration and loss of smell. Cadmium also is believed to cause pulmonary emphysema and bone disease.

Additional Information

RTECS: EV3330000

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 waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent 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 Packing group: III
Proper shipping name: CADMIUM COMPOUND (Cadmium telluride)

IMDG

UN-Number: 2570 Class: 6.1 Packing group: III EMS-No: F-A, S-A
Proper shipping name: CADMIUM COMPOUND
Marine pollutant: No

IATA

UN-Number: 2570 Class: 6.1 Packing group: III
Proper shipping name: Cadmium compound

15. REGULATORY INFORMATION

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

16. OTHER INFORMATION**Text of H-code(s) and R-phrase(s) mentioned in Section 3**

Acute Tox.	Acute toxicity
Aquatic Acute	Acute aquatic toxicity
H302	Harmful if swallowed.
H312	Harmful in contact with skin.
H332	Harmful if inhaled.
H400	Very toxic to aquatic life.
N	Dangerous for the environment
Xn	Harmful
R20/21/22	Harmful by inhalation, in contact with skin and if swallowed.
R50/53	Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Further information

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