

## Chemical Safety Data Sheet MSDS / SDS

## CADMIUM TELLURIDE

Revision Date:2025-02-01 Revision Number:1

## SECTION 1: Identification of the substance/mixture and of the company/undertaking

## Product identifier

Product name : CADMIUM TELLURIDE  
CBnumber : CB5130942  
CAS : 1306-25-8  
EINECS Number : 215-149-9  
Synonyms : Cadmium telluride,telluroxocadmium

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

Relevant identified uses : For R&D use only. Not for medicinal, household or other use.  
Uses advised against : none

## Company Identification

Company : Chemicalbook  
Address : Building 1, Huihuang International, Shangdi 10th Street, Haidian District, Beijing  
Telephone : 400-158-6606

## SECTION 2: Hazards identification

## GHS Label elements, including precautionary statements

Symbol(GHS)



Signal word

Warning

## Precautionary statements

P391 Collect spillage. Hazardous to the aquatic environment  
P321 Specific treatment (see ... on this label).  
P304+P340 IF INHALED: Remove victim to fresh air and Keep at rest in a position comfortable for breathing.  
P280 Wear protective gloves/protective clothing/eye protection/face protection.  
P273 Avoid release to the environment.  
P261 Avoid breathing dust/fume/gas/mist/vapours/spray.

## Hazard statements

H410 Very toxic to aquatic life with long lasting effects  
H400 Very toxic to aquatic life  
H332 Harmful if inhaled

H312 Harmful in contact with skin

H302 Harmful if swallowed

---

## SECTION 3: Composition/information on ingredients

### Substance

Product name	: CADMIUM TELLURIDE
Synonyms	: Cadmium telluride, telluroxocadmium
CAS	: 1306-25-8
EC number	: 215-149-9
MF	: CdTe
MW	: 240.01

---

## SECTION 4: First aid measures

### 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

### Indication of any immediate medical attention and special treatment needed

No data available

---

## SECTION 5: Firefighting measures

### Special hazards arising from the substance or mixture

Cadmium/cadmium oxides Tellurium oxides

Not combustible.

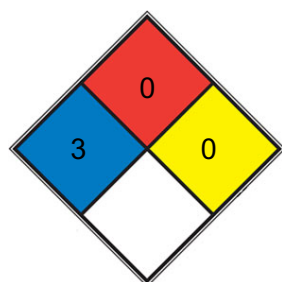
### Advice for firefighters

No data available

### Further information

No data available

### NFPA 704



■ HEALTH 3

Short exposure could cause serious temporary or moderate residual injury (e.g. [liquid hydrogen](#), [sulfuric acid](#), [calcium](#)

[hypochlorite](#), hexafluorosilicic acid)

---

Materials that will not burn under typical fire conditions, including intrinsically noncombustible materials such as concrete, stone, and sand. Materials that will not burn in air when exposed to a temperature of 820 °C (1,500 °F) for a period of 5 minutes.(e.g. Carbon tetrachloride)

---

☒ REACT 0 Normally stable, even under fire exposure conditions, and is not reactive with water (e.g. helium,[N2](#))

---

☐ SPEC.

☐ HAZ.

---

## SECTION 6: Accidental release measures

### Personal precautions, protective equipment and emergency procedures

For personal protection see section 8.

### Environmental precautions

No data available

### Methods and materials for containment and cleaning up

No data available

### Reference to other sections

For disposal see section 13.

---

## SECTION 7: Handling and storage

### Precautions for safe handling

For precautions see section 2.2.

### Conditions for safe storage, including any incompatibilities

No data available

### 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

### control parameter

### Hazard composition and occupational exposure limits

Does not contain substances with occupational exposure limits.

---

## SECTION 9: Physical and chemical properties

### Information on basic physicochemical properties

Appearance	white powder
Odour	odorless
Odour Threshold	Not applicable
pH	No data available
Melting point/freezing point	Melting point/range: 1.092 °C
Initial boiling point and boiling range	1.130 °C
Flash point	Not applicable
Evaporation rate	No data available
Flammability (solid, gas)	No data available
Upper/lower flammability or explosive limits	No data available
Vapour pressure	No data available
Vapour density	No data available
Relative density	6,2 g/cm <sup>3</sup> at 25 °C - lit. 5,83 at 22 °C - Regulation (EC) No. 440/2008, Annex, A.3
Water solubility	0,0008 g/l at 20 °C - OECD Test Guideline 105- slightly soluble
Partition coefficient: n-octanol/water	Not applicable for inorganic substances
Autoignition temperature	No data available
Decomposition temperature	No data available
Viscosity	Viscosity, kinematic: No data available Viscosity, dynamic: No data available
Explosive properties	No data available
Oxidizing properties	No data available

### Other safety information

No data available

## SECTION 10: Stability and reactivity

### Reactivity

No data available

### Chemical stability

No data available

### Possibility of hazardous reactions

No data available

### Conditions to avoid

No data available

### Incompatible materials

Strong oxidizing agents, Strong acids

## **Hazardous decomposition products**

In the event of fire: see section 5

---

# **SECTION 11: Toxicological information**

## **Information on toxicological effects**

### **Acute toxicity**

LD50 Oral - Rat - female - > 2.000 mg/kg (OECD Test Guideline 423)

Remarks: Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2)

LC50 Inhalation - Rat - male and female - 4 h - 2,71 mg/l (OECD Test Guideline 403)

Remarks: Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2) Dermal: Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2)

### **Skin corrosion/irritation**

Skin - Rabbit

Result: No skin irritation - 4 h (OECD Test Guideline 404)

Skin - reconstructed human epidermis (RhE)

Result: No skin irritation - 4 h (OECD Test Guideline 431)

### **Serious eye damage/eye irritation**

Eyes - Rabbit

Result: No eye irritation - 1 h (OECD Test Guideline 405)

### **Respiratory or skin sensitization**

(OECD Test Guideline 406)

### **Germ cell mutagenicity**

Test Type: Ames test

Test system: Escherichia coli/Salmonella typhimurium

Metabolic activation: with and without metabolic activation Method: OECD Test Guideline 471

Result: negative

Test Type: Chromosome aberration test in vitro Test system: Chinese hamster lung cells

Metabolic activation: with and without metabolic activation Method: OECD Test Guideline 473

Result: negative

Test Type: In vitro mammalian cell gene mutation test Test system: mouse lymphoma cells

Metabolic activation: with and without metabolic activation Method: OECD Test Guideline 476

Result: negative

### **Carcinogenicity**

No data available

### **Reproductive toxicity**

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

---

## SECTION 12: Ecological information

### **Toxicity**

#### **Toxicity to fish**

flow-through test LC50 - Danio rerio (zebra fish) - > 1.000 mg/l - 96 h

(OECD Test Guideline 203)

Remarks: Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2)

#### **Toxicity to daphnia and other aquatic invertebrates**

static test EC50 - Daphnia magna (Water flea) - 0,4 mg/l - 48 h (OECD Test Guideline 202)

Remarks: Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2)

#### **Toxicity to algae**

static test EC50 - Pseudokirchneriella subcapitata (algae) - 3,1 mg/l

- 72 h

(OECD Test Guideline 201)

Remarks: Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2)

#### **Toxicity to bacteria**

static test EC50 - activated sludge - > 1.000 mg/l - 3 h (OECD Test Guideline 209)

### **Persistence and degradability**

The methods for determining biodegradability are not applicable to inorganic substances.

### **Bioaccumulative potential**

No data available

### **Mobility in soil**

No data available

### **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.

### **Other adverse effects**

No data available

---

## SECTION 13: Disposal considerations

### **Waste treatment methods**

## Product

No data available

---

## SECTION 14: Transport information

### UN number

ADR/RID: 3077 IMDG: 3077 IATA: 3077

### UN proper shipping name

ADR/RID: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Cadmium telluride)

IMDG: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Cadmium telluride)

IATA: Environmentally hazardous substance, solid, n.o.s. (Cadmium telluride)

### Transport hazard class(es)

ADR/RID: 9 IMDG: 9 IATA: 9

### Packaging group

ADR/RID: III IMDG: III IATA: III

### Environmental hazards

ADR/RID: yes IMDG Marine pollutant: yes IATA: yes

### Special precautions for user

### Further information

EHS-Mark required (ADR 2.2.9.1.10, IMDG code 2.10.3) for single packagings and combination packagings containing inner packagings with Dangerous Goods > 5L for liquids or > 5kg for solids. Packages smaller than or equal to 5 kg / L , not dangerous goods of Class 9

---

## SECTION 15: Regulatory information

### Safety, health and environmental regulations/legislation specific for the substance or mixture

#### Regulations on the Safety Management of Hazardous Chemicals

China Catalog of Hazardous chemicals 2015: Listed. website: <https://www.mem.gov.cn/>

#### Measures for Environmental Management of New Chemical Substances

EC Inventory: Listed.

European Inventory of Existing Commercial Chemical Substances (EINECS): Listed. website: <https://echa.europa.eu/>

Vietnam National Chemical Inventory: Not Listed. website: <https://chemicaldata.gov.vn/>

New Zealand Inventory of Chemicals (NZIoC): Not Listed. website: <https://www.epa.govt.nz/>

Philippines Inventory of Chemicals and Chemical Substances (PICCS): Not Listed. website: <https://emb.gov.ph/>

Korea Existing Chemicals List (KECL): Listed. website: <http://ncis.nier.go.kr>

## SECTION 16: Other information

### Abbreviations and acronyms

CAS: Chemical Abstracts Service

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road

RID: Regulation concerning the International Carriage of Dangerous Goods by Rail

IMDG: International Maritime Dangerous Goods

IATA: International Air Transportation Association

TWA: Time Weighted Average

STEL: Short term exposure limit

LC50: Lethal Concentration 50%

LD50: Lethal Dose 50%

EC50: Effective Concentration 50%

### References

【1】CAMEO Chemicals, website: <http://cameochemicals.noaa.gov/search/simple>

【2】ChemIDplus, website: <http://chem.sis.nlm.nih.gov/chemidplus/chemidlite.jsp>

【3】ECHA - European Chemicals Agency, website: <https://echa.europa.eu/>

【4】eChemPortal - The Global Portal to Information on Chemical Substances by OECD, website:

[http://www.echemportal.org/echemportal/index?pageID=0&request\\_locale=en](http://www.echemportal.org/echemportal/index?pageID=0&request_locale=en)

【5】ERG - Emergency Response Guidebook by U.S. Department of Transportation, website: <http://www.phmsa.dot.gov/hazmat/library/erg>

【6】Germany GESTIS-database on hazard substance, website: <http://www.dguv.de/ifa/gestis/gestis-stoffdatenbank/index-2.jsp>

【7】HSDB - Hazardous Substances Data Bank, website: <https://toxnet.nlm.nih.gov/newtoxnet/hsdb.htm>

【8】IARC - International Agency for Research on Cancer, website: <http://www.iarc.fr/>

【9】IPCS - The International Chemical Safety Cards (ICSC), website: <http://www.ilo.org/dyn/icsc/showcard.home>

【10】Sigma-Aldrich, website: <https://www.sigmaaldrich.com/>

#### Disclaimer:

The information in this MSDS is only applicable to the specified product, unless otherwise specified, it is not applicable to the mixture of this product and other substances. This MSDS only provides information on the safety of the product for those who have received the appropriate professional training for the user of the product. Users of this MSDS must make independent judgments on the applicability of this SDS. The authors of this MSDS will not be held responsible for any harm caused by the use of this MSDS.