

# Safety Data Sheet

acc. to OSHA HCS

Printing date 02/22/2023

Reviewed on 02/22/2023

## 1 Identification

- **Product identifier**
- **Trade name:** cadmium iodide
- **Article number:** 12320, 12321
- **CAS Number:**  
7790-80-9
- **EC number:**  
232-223-6
- **Index number:**  
048-007-00-8
- **Application of the substance / the mixture** Laboratory chemicals
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**  
Electron Microscopy Sciences  
1560 Industry Road  
USA-Hatfield, PA 19440  
Tel: 215-412-8400 Fax: 215-412-8450  
email: [info@emsdiasum.com](mailto:info@emsdiasum.com)  
[www.emsdiasum.com](http://www.emsdiasum.com)
- **Information department:** Product safety department
- **Emergency telephone number:**  
ChemTrec 1-800-424-9300 Contract CCN7661  
1-703-527-3887

## 2 Hazard(s) identification

- **Classification of the substance or mixture**



GHS06 Skull and crossbones

Acute Toxicity - Oral 3

H301 Toxic if swallowed.

Acute Toxicity - Inhalation 3

H331 Toxic if inhaled.



GHS08 Health hazard

Carcinogenicity 2

H351 Suspected of causing cancer.

Specific Target Organ Toxicity - Repeated Exposure 2 H373 May cause damage to organs through prolonged or repeated exposure.

- **Label elements**
- **GHS label elements** The substance is classified and labeled according to the Globally Harmonized System (GHS).
- **Hazard pictograms**



GHS06



GHS08

- **Signal word** *Danger*
- **Hazard statements**  
*Toxic if swallowed or if inhaled.*  
*Suspected of causing cancer.*

(Contd. on page 2)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 02/22/2023

Reviewed on 02/22/2023

**Trade name: cadmium iodide**

(Contd. of page 1)

May cause damage to organs through prolonged or repeated exposure.

· **Precautionary statements**

Obtain special instructions before use.

Do not handle until all safety precautions have been read and understood.

Do not breathe dust/fume/gas/mist/vapors/spray.

Wash thoroughly after handling.

Do not eat, drink or smoke when using this product.

Use only outdoors or in a well-ventilated area.

Wear protective gloves/protective clothing/eye protection/face protection.

If swallowed: Immediately call a poison center/doctor.

Specific treatment (see on this label).

Rinse mouth.

IF INHALED: Remove person to fresh air and keep comfortable for breathing.

IF exposed or concerned: Get medical advice/attention.

Get medical advice/attention if you feel unwell.

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

Store locked up.

Dispose of contents/container in accordance with local/regional/national/international regulations.

· **Classification system:**

· **NFPA ratings (scale 0 - 4)**



Health = 4

Fire = 0

Reactivity = 0

· **HMIS-ratings (scale 0 - 4)**



Health = 3

Fire = 0

Reactivity = 0

· **Other hazards**

· **Results of PBT and vPvB assessment**

· **PBT:** Not applicable.

· **vPvB:** Not applicable.

## 3 Composition/information on ingredients

· **Chemical characterization: Substances**

· **CAS No. Description**

7790-80-9 cadmium iodide

· **Identification number(s)**

· **EC number:** 232-223-6

· **Index number:** 048-007-00-8

## 4 First-aid measures

· **Description of first aid measures**

· **General information:**

Immediately remove any clothing soiled by the product.

Remove breathing apparatus only after contaminated clothing have been completely removed.

In case of irregular breathing or respiratory arrest provide artificial respiration.

(Contd. on page 3)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 02/22/2023

Reviewed on 02/22/2023

**Trade name: cadmium iodide**

(Contd. of page 2)

- **After inhalation:**  
Supply fresh air or oxygen; call for doctor.  
In case of unconsciousness place patient stably in side position for transportation.
- **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:** Do not induce vomiting; immediately call for medical help.
- **Information for doctor:**
- **Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed**  
No further relevant information available.

## 5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:** Use fire fighting measures that suit the environment.
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:** Mouth respiratory protective device.

## 6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures** Not required.
- **Environmental precautions:**  
Inform respective authorities in case of seepage into water course or sewage system.  
Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**  
Dispose contaminated material as waste according to item 13.  
Ensure adequate ventilation.
- **Reference to other sections**  
See Section 7 for information on safe handling.  
See Section 8 for information on personal protection equipment.  
See Section 13 for disposal information.
- **Protective Action Criteria for Chemicals**
- **PAC-1:** Substance is not listed.
- **PAC-2:** Substance is not listed.
- **PAC-3:** Substance is not listed.

## 7 Handling and storage

- **Handling:**
- **Precautions for safe handling**  
Thorough dedusting.  
Ensure good ventilation/exhaustion at the workplace.  
Open and handle receptacle with care.  
Prevent formation of dust.
- **Information about protection against explosions and fires:** Keep respiratory protective device available.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** Keep receptacle tightly sealed.

(Contd. on page 4)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 02/22/2023

Reviewed on 02/22/2023

Trade name: cadmium iodide

(Contd. of page 3)

· **Specific end use(s)** No further relevant information available.

## 8 Exposure controls/personal protection

· **Additional information about design of technical systems:** No further data; see item 7.· **Control parameters**· **Components with limit values that require monitoring at the workplace:**

### 7790-80-9 cadmium iodide

PEL Long-term value: 0.005 mg/m<sup>3</sup>  
as Cd; see 29 CFR 1910.1027

REL See Pocket Guide App. A

TLV Long-term value: 0.01 0.002\* mg/m<sup>3</sup>  
as Cd; A2; \*respirable fraction; BEI

· **Ingredients with biological limit values:**

### 7790-80-9 cadmium iodide

BEI 5 µg/g creatinine  
Medium: urine  
Time: not critical  
Parameter: Cadmium (background)

5 µg/L  
Medium: blood  
Time: not critical  
Parameter: Cadmium (background)

· **Additional information:** The lists that were valid during the creation were used as basis.· **Exposure controls**· **Personal protective equipment:**· **General protective and hygienic measures:**

Keep away from foodstuffs, beverages and feed.  
Immediately remove all soiled and contaminated clothing.  
Wash hands before breaks and at the end of work.  
Store protective clothing separately.

· **Breathing equipment:**

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.

· **Protection of hands:**

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.  
Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.  
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

· **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

· **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

· **Eye protection:** Not required.

US

(Contd. on page 5)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 02/22/2023

Reviewed on 02/22/2023

Trade name: cadmium iodide

(Contd. of page 4)

## 9 Physical and chemical properties

· <b>Information on basic physical and chemical properties</b>	
· <b>General Information</b>	
· <b>Appearance:</b>	
Form:	Solid
Color:	Whitish
· <b>Odor:</b> Odorless	
· <b>Odor threshold:</b> Not determined.	
· <b>pH-value:</b> 5	
· <b>Change in condition</b>	
Melting point/Melting range:	388 °C (730.4 °F)
Boiling point/Boiling range:	787 °C (1,448.6 °F)
· <b>Flash point:</b> Not applicable.	
· <b>Flammability (solid, gaseous):</b> Product is not flammable.	
· <b>Decomposition temperature:</b> Not determined.	
· <b>Auto igniting:</b> Not determined.	
· <b>Danger of explosion:</b> Product does not present an explosion hazard.	
· <b>Explosion limits:</b>	
Lower:	Not determined.
Upper:	Not determined.
· <b>Vapor pressure at 402 °C (755.6 °F):</b> 0.13 hPa (0.1 mm Hg)	
· <b>Density at 20 °C (68 °F):</b> 5.67 g/cm <sup>3</sup> (47.31615 lbs/gal)	
· <b>Bulk density:</b> 2,100 kg/m <sup>3</sup>	
· <b>Relative density</b> Not determined.	
· <b>Vapor density</b> Not applicable.	
· <b>Evaporation rate</b> Not applicable.	
· <b>Solubility in / Miscibility with</b>	
Water at 20 °C (68 °F):	798 g/l
· <b>Partition coefficient (n-octanol/water):</b> Not determined.	
· <b>Viscosity:</b>	
Dynamic:	Not applicable.
Kinematic:	Not applicable.
· <b>Other information</b> No further relevant information available.	

## 10 Stability and reactivity

- **Reactivity** No further relevant information available.
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.

(Contd. on page 6)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 02/22/2023

Reviewed on 02/22/2023

Trade name: cadmium iodide

· **Hazardous decomposition products:** No dangerous decomposition products known.

(Contd. of page 5)

## 11 Toxicological information

· **Information on toxicological effects**

· **Acute toxicity:**

· **LD/LC50 values that are relevant for classification:**

Oral	LD50	166 mg/kg (mouse)
------	------	-------------------

· **Primary irritant effect:**

· **on the skin:** No irritant effect.

· **on the eye:** No irritating effect.

· **Sensitization:** No sensitizing effects known.

· **Additional toxicological information:**

· **Carcinogenic categories**

· **IARC (International Agency for Research on Cancer) 1**

· **NTP (National Toxicology Program) K**

· **OSHA-Ca (Occupational Safety Health Administration) Substance is listed.**

## 12 Ecological information

· **Toxicity**

· **Aquatic toxicity:** No further relevant information available.

· **Persistence and degradability** No further relevant information available.

· **Behavior in environmental systems:**

· **Bioaccumulative potential** No further relevant information available.

· **Mobility in soil** No further relevant information available.

· **Ecotoxicological effects:**

· **Remark:** Very toxic for fish

· **Additional ecological information:**

· **General notes:**

Water hazard class 3 (Assessment by list): extremely hazardous for water

Do not allow product to reach ground water, water course or sewage system, even in small quantities.

Danger to drinking water if even extremely small quantities leak into the ground.

Also poisonous for fish and plankton in water bodies.

Very toxic for aquatic organisms

· **Results of PBT and vPvB assessment**

· **PBT:** Not applicable.

· **vPvB:** Not applicable.

· **Other adverse effects** No further relevant information available.

## 13 Disposal considerations

· **Waste treatment methods**

· **Recommendation:**

Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

· **Uncleaned packagings:**

· **Recommendation:** Disposal must be made according to official regulations.

(Contd. on page 7)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 02/22/2023

Reviewed on 02/22/2023

Trade name: cadmium iodide

(Contd. of page 6)

· **Recommended cleansing agent:** Water, if necessary with cleansing agents.

## 14 Transport information

· **UN-Number**· **DOT, ADR, IMDG, IATA**

UN2570

· **UN proper shipping name**· **DOT**· **ADR**· **IMDG**· **IATA**

Cadmium compounds (cadmium iodide)

2570 CADMIUM COMPOUND (cadmium iodide),  
ENVIRONMENTALLY HAZARDOUSCADMIUM COMPOUND (cadmium iodide), MARINE  
POLLUTANT

CADMIUM COMPOUND (cadmium iodide)

· **Transport hazard class(es)**· **DOT**· **Class**

6.1 Toxic substances

· **Label**

6.1

· **ADR, IMDG**· **Class**

6.1 Toxic substances

· **Label**

6.1

· **IATA**· **Class**

6.1 Toxic substances

· **Label**

6.1

· **Packing group**· **DOT, ADR, IMDG, IATA**

III

· **Environmental hazards:**

Environmentally hazardous substance, solid; Marine Pollutant

· **Marine pollutant:**

Yes (DOT)

Symbol (fish and tree)

· **Special marking (ADR):**

Symbol (fish and tree)

· **Special precautions for user**

Warning: Toxic substances

· **Hazard identification number (Kemler code):** 60· **EMS Number:**

F-A,S-A

· **Stowage Category**

A

(Contd. on page 8)

US

# Safety Data Sheet

acc. to OSHA HCS

Printing date 02/22/2023


Reviewed on 02/22/2023

Trade name: cadmium iodide


(Contd. of page 7)

· <b>Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code</b>	Not applicable.
· <b>Transport/Additional information:</b>	
· <b>DOT</b>	
· <b>Quantity limitations</b>	On passenger aircraft/rail: 100 kg On cargo aircraft only: 200 kg
· <b>Remarks:</b>	Special marking with the symbol (fish and tree).
· <b>ADR</b>	
· <b>Excepted quantities (EQ)</b>	Code: E1 Maximum net quantity per inner packaging: 30 g Maximum net quantity per outer packaging: 1000 g
· <b>IMDG</b>	
· <b>Limited quantities (LQ)</b>	5 kg
· <b>Excepted quantities (EQ)</b>	Code: E1 Maximum net quantity per inner packaging: 30 g Maximum net quantity per outer packaging: 1000 g
· <b>UN "Model Regulation":</b>	UN 2570 CADMIUM COMPOUND (CADMIUM IODIDE), 6.1, III, ENVIRONMENTALLY HAZARDOUS

## 15 Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**  
No further relevant information available.
  - **Sara**
  - **Section 355 (extremely hazardous substances):** Substance is not listed.
  - **Section 313 (Specific toxic chemical listings):** Substance is listed.
  - **TSCA (Toxic Substances Control Act):** ACTIVE
  - **Hazardous Air Pollutants** Substance is listed.
  - **Proposition 65**
  - **Chemicals known to cause cancer:** Substance is listed.
  - **Chemicals known to cause reproductive toxicity for females:** Substance is not listed.
  - **Chemicals known to cause reproductive toxicity for males:** Substance is not listed.
  - **Chemicals known to cause developmental toxicity:** Substance is not listed.
  - **Carcinogenic categories**
  - **EPA (Environmental Protection Agency)** Substance is not listed.
  - **TLV (Threshold Limit Value)** Substance is not listed.
  - **NIOSH-Ca (National Institute for Occupational Safety and Health)** Substance is listed.
  - **GHS label elements** The substance is classified and labeled according to the Globally Harmonized System (GHS).
  - **Hazard pictograms**
- 

GHS06



GHS08
- **Signal word** Danger
  - **Hazard statements**  
Toxic if swallowed or if inhaled.  
Suspected of causing cancer.

(Contd. on page 9)



# Safety Data Sheet

## acc. to OSHA HCS

Printing date 02/22/2023

Reviewed on 02/22/2023

**Trade name: cadmium iodide**

(Contd. of page 8)

*May cause damage to organs through prolonged or repeated exposure.*

**Precautionary statements**

*Obtain special instructions before use.*

*Do not handle until all safety precautions have been read and understood.*

*Do not breathe dust/fume/gas/mist/vapors/spray.*

*Wash thoroughly after handling.*

*Do not eat, drink or smoke when using this product.*

*Use only outdoors or in a well-ventilated area.*

*Wear protective gloves/protective clothing/eye protection/face protection.*

*If swallowed: Immediately call a poison center/doctor.*

*Specific treatment (see on this label).*

*Rinse mouth.*

*IF INHALED: Remove person to fresh air and keep comfortable for breathing.*

*IF exposed or concerned: Get medical advice/attention.*

*Get medical advice/attention if you feel unwell.*

*Store in a well-ventilated place. Keep container tightly closed.*

*Store locked up.*

*Dispose of contents/container in accordance with local/regional/national/international regulations.*

**Chemical safety assessment:** *A Chemical Safety Assessment has not been carried out.*

## 16 Other information

*This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.*

**Contact:**

**Date of preparation / last revision** 02/22/2023

**Abbreviations and acronyms:**

*ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)*

*IMDG: International Maritime Code for Dangerous Goods*

*DOT: US Department of Transportation*

*IATA: International Air Transport Association*

*EINECS: European Inventory of Existing Commercial Chemical Substances*

*CAS: Chemical Abstracts Service (division of the American Chemical Society)*

*NFPA: National Fire Protection Association (USA)*

*HMIS: Hazardous Materials Identification System (USA)*

*LC50: Lethal concentration, 50 percent*

*LD50: Lethal dose, 50 percent*

*PBT: Persistent, Bioaccumulative and Toxic*

*vPvB: very Persistent and very Bioaccumulative*

*NIOSH: National Institute for Occupational Safety*

*OSHA: Occupational Safety **Health***

**TLV: Threshold Limit Value**

**PEL: Permissible Exposure Limit**

**REL: Recommended Exposure Limit**

**BEI: Biological Exposure Limit**

**Acute Toxicity - Oral 3: Acute toxicity – Category 3**

**Carcinogenicity 2: Carcinogenicity – Category 2**

**Specific Target Organ Toxicity - Repeated Exposure 2: Specific target organ toxicity (repeated exposure) – Category 2**