

# SAFETY DATA SHEET

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## SECTION 1. IDENTIFICATION

**Product Name:** Cadmium Iodide

**CAS #:** 7790-80-9

**Relevant identified uses of the substance:** Scientific research and development

**Supplier details:**

Stanford Advanced Materials

E-mail: [sales@samaterials.com](mailto:sales@samaterials.com)

Tel: (949) 407-8904

Address: 23661 Birtcher Dr., Lake Forest, CA 92630 U.S.A.

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## SECTION 2. HAZARDS IDENTIFICATION

Classification of the substance or mixture in accordance with 29 CFR 1910 (OSHA HCS)

GHS06 Skull and crossbones

Acute Tox. 3 H301 Toxic if swallowed.

Acute Tox. 3 H331 Toxic if inhaled.

GHS08 Health hazard

Carc. 2

H351 Suspected of causing cancer.

STOT RE 2 H373 May cause damage to the kidneys, the liver, the reproductive system and the blood

through prolonged or repeated exposure. Route of exposure: Oral.

Hazards not otherwise classified

No data available

GHS label elements

GHS label elements, including precautionary statements

Hazard pictograms

GHS06 GHS08

Signal word Danger

Hazard statements

H301+H331 Toxic if swallowed or if inhaled.

H351

Suspected of causing cancer.

H373

May cause damage to the kidneys, the liver, the reproductive system and the blood through prolonged

or repeated exposure. Route of exposure: Oral.

Precautionary statements

P260

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

P261

Avoid breathing dust/fume/gas/mist/vapors/spray.

P281

Use personal protective equipment as required.

P301+P310 IF SWALLOWED: Immediately call a POISON CENTER/ doctor/...

P405

Store locked up.

P501

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

WHMIS classification

D1A - Very toxic material causing immediate and serious toxic effects

D2A - Very toxic material causing other toxic effects

Classification system

HMIS ratings (scale 0-4)

(Hazardous Materials Identification System)

Health (acute effects) = 2

Flammability = 0

Physical Hazard = 1

Other hazards

Results of PBT and vPvB assessment

PBT:

N/A

vPvB:

N/A

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## **SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS**

Substances

CAS No. / Substance Name:

7790-80-9 Cadmium iodide

Identification number(s):

EC number:

232-223-6

Index number:

048-007-00-8

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## **SECTION 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 has been completely removed.

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

If inhaled:

Supply patient with fresh air. If not breathing, provide artificial respiration. Keep patient warm.

Seek immediate medical advice.

In case of skin contact:

Immediately wash with soap and water; rinse thoroughly.

Seek immediate medical advice.

In case of eye contact:

Rinse opened eye for several minutes under running water. Consult a physician.

If swallowed:

Do not induce vomiting; immediately call for medical help.

Information for doctor

Most important symptoms and effects, both acute and delayed

No data available

Indication of any immediate medical attention and special treatment needed

No data available

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## **SECTION 5. FIREFIGHTING MEASURES**

Extinguishing media

Suitable extinguishing agents

Product is not flammable. Use fire-fighting measures that suit the surrounding fire.

Special hazards arising from the substance or mixture

If this product is involved in a fire, the following can be released:

Hydrogen iodide (HI)

Toxic metal oxide fume

Advice for firefighters

Protective equipment:

Wear self-contained respirator.

Wear fully protective impervious suit.

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## **SECTION 6. ACCIDENTAL RELEASE MEASURES**

Personal precautions, protective equipment and emergency procedures

Use personal protective equipment. Keep unprotected persons away.

Ensure adequate ventilation

Environmental precautions:

Do not allow material to be released to the environment without official permits.

Methods and materials for containment and cleanup:

Dispose of contaminated material as waste according to section 13.

Ensure adequate ventilation.

Prevention of secondary hazards:

No special measures required.

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.

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## **SECTION 7. HANDLING AND STORAGE**

Handling

Precautions for safe handling

Keep container tightly sealed.

Store in cool, dry place in tightly closed containers.

Ensure good ventilation at the workplace.

Open and handle container with care.

Prevent formation of dust.

Information about protection against explosions and fires:

The product is not flammable

Conditions for safe storage, including any incompatibilities

Requirements to be met by storerooms and receptacles:

No special requirements.

Information about storage in one common storage facility:

Store away from oxidizing agents.

Store away from water/moisture.

Further information about storage conditions:

This product is hygroscopic.

Store under dry inert gas.

Keep container tightly sealed.

Store in cool, dry conditions in well-sealed containers.

Protect from humidity and water.

Specific end use(s)

No data available

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## **SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

Additional information about design of technical systems:

Properly operating chemical fume hood designed for hazardous chemicals and having an average face velocity of at least 100 feet per minute.

Control parameters

Components with limit values that require monitoring at the workplace:

7790-80-9 Cadmium iodide (100.0%)

PEL (USA)

Long-term value: 0.005 mg/m

3

as Cd; see 29 CFR 1910.1027

REL (USA)

See Pocket Guide App. A

TLV (USA)

Long-term value: 0.01 0.002\* mg/m

3

as Cd; \*respirable fraction; BEI

EL (Canada) Long-term value: 0.01 mg/m

3

as Cd; ACIGH A1, IARC 1

Ingredients with biological limit values:

7790-80-9 Cadmium iodide (100.0%)

BEI (USA) 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:

No data

Exposure controls

Personal protective equipment

Follow typical protective and hygienic practices for handling chemicals.

Keep away from foodstuffs, beverages and feed.

Remove all soiled and contaminated clothing immediately.

Wash hands before breaks and at the end of work.

Store protective clothing separately.

Maintain an ergonomically appropriate working environment.

Breathing equipment:

Use self-contained respiratory protective device in emergency situations.

Protection of hands:

Impervious gloves

Inspect gloves prior to use.

Suitability of gloves should be determined both by material and quality, the latter of which may vary

by

manufacturer.

Penetration time of glove material (in minutes)

No data available

Eye protection:

Safety glasses

Body protection:

Protective work clothing.

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## SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Appearance:

Form: Powder

Color: Light green

Odor: Odorless

Odor threshold: No data available.

pH: N/A

Melting point/Melting range: 387-389 °C (729-732 °F)

Boiling point/Boiling range: 787 °C (1449 °F)

Sublimation temperature / start: No data available

Flammability (solid, gas)

No data available.

Ignition temperature: No data available

Decomposition temperature: No data available

Autoignition: No data available.

Danger of explosion: Product does not present an explosion hazard.

Explosion limits:

Lower: No data available

Upper: No data available

Vapor pressure at 402 °C (756 °F): 0.13 hPa

Density at 20 °C (68 °F): 5.30-5.67 g/cm

3

(44.229-47.316 lbs/gal)

Relative density

No data available. Vapor density

N/A

Evaporation rate

N/A

Solubility in Water (H

2

O): Soluble

Partition coefficient (n-octanol/water): No data available.

Viscosity:

Dynamic: N/A

Kinematic: N/A

Other information

No data available

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## **SECTION 10. STABILITY AND REACTIVITY**

Reactivity

No data available

Chemical stability

Stable under recommended storage conditions.

Thermal decomposition / conditions to be avoided:

Decomposition will not occur if used and stored according to specifications.

Possibility of hazardous reactions

No dangerous reactions known

Conditions to avoid

No data available

Incompatible materials:

Oxidizing agents

Water/moisture

Hazardous decomposition products:

Hydrogen iodide (HI)

Toxic metal oxide fume

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## **SECTION 11. TOXICOLOGICAL INFORMATION**

Information on toxicological effects

Acute toxicity:

Toxic if inhaled.

Toxic if swallowed.

The Registry of Toxic Effects of Chemical Substances (RTECS) contains acute toxicity data for components in this product.

LD/LC50 values that are relevant for classification:

Oral LD50 166 mg/kg (mouse)

222 mg/kg (rat)

Skin irritation or corrosion:

Irritant to skin and mucous membranes.

Eye irritation or corrosion:

Irritating effect.

Sensitization:

No sensitizing effects known.

Germ cell mutagenicity:

Suspected of causing genetic defects.

Carcinogenicity:IARC-1: Carcinogenic to humans: sufficient evidence of carcinogenicity.

EPA-B1: Probable human carcinogen, limited evidence of carcinogenicity from epidemiologic studies.

Carcinogen as defined by OSHA.

ACGIH A2: Suspected human carcinogen: Agent is carcinogenic in experimental animals at dose levels, by route(s) of administration, at site(s), of histologic type(s), or by mechanism(s) considered relevant to worker exposure. Available epidemiologic studies are conflicting or insufficient to confirm an increased risk of cancer in exposed humans.

NTP-K: Known to be carcinogenic: sufficient evidence from human studies.

Reproductive toxicity:

The Registry of Toxic Effects of Chemical Substances (RTECS) contains reproductive data for this substance.

Specific target organ system toxicity - repeated exposure:

May cause damage to the kidneys, the liver, the reproductive system and the blood through prolonged

or repeated exposure. Route of exposure: Oral.

Specific target organ system toxicity - single exposure:

No effects known.

Aspiration hazard:

No effects known.

Subacute to chronic toxicity:

No effects known.

Additional toxicological information:

To the best of our knowledge the acute and chronic toxicity of this substance is not fully known.

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## **SECTION 12. ECOLOGICAL INFORMATION**

Toxicity

Aquatic toxicity:

No data available

Persistence and degradability

No data available

Bioaccumulative potential

No data available

Mobility in soil

No data available

Ecotoxicological effects:

Remark:

Very toxic for aquatic organisms

Additional ecological information:

Do not allow material to be released to the environment without official permits.

Do not allow product to reach groundwater, water courses, or sewage systems, 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.

May cause long lasting harmful effects to aquatic life.

Avoid transfer into the environment.

Very toxic for aquatic organisms

Results of PBT and vPvB assessment

PBT:

N/A

vPvB:

N/A

Other adverse effects

No data available

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## **SECTION 13. DISPOSAL CONSIDERATIONS**

Waste treatment methods

Recommendation

Consult official regulations to ensure proper disposal.

Uncleaned packagings:

Recommendation:

Disposal must be made according to official regulations.

Recommended cleansing agent:

Water, if necessary with cleansing agents.

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## **SECTION 14. TRANSPORT INFORMATION**

UN-Number

DOT, IMDG, IATA

UN2570

UN proper shipping name

DOT

Cadmium compounds (Cadmium iodide)

IMDG

CADMIUM COMPOUND (Cadmium iodide), MARINE POLLUTANT

IATA

CADMIUM COMPOUND (Cadmium iodide)

Transport hazard class(es)

DOT

Class

6.1 Toxic substances.

Label

6.1

Class

6.1 (T5) Toxic substances

Label

6.1

IMDG

Class

6.1 Toxic substances.

Label

6.1

IATA

Class

6.1 Toxic substances.

Label

6.1

Packing group

DOT, IMDG, IATA

III

Environmental hazards:

Environmentally hazardous substance, solid; Marine Pollutant

Marine pollutant (IMDG):

Symbol (fish and tree)

Special precautions for user Warning: Toxic substances

EMS Number: F-A,S-A

Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

N/A

Transport/Additional information:

DOT

Marine Pollutant (DOT):

No

Remarks:

Special marking with the symbol (fish and tree).

UN "Model Regulation":

UN2570, Cadmium compounds (Cadmium iodide), 6.1, III

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## SECTION 15. REGULATORY INFORMATION

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

GHS GHS label elements, including precautionary statements

Hazard pictograms

GHS06

GHS08

Signal word

Danger

Hazard statements

H301+H331 Toxic if swallowed or if inhaled.

H351

Suspected of causing cancer.

H373

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or repeated exposure. Route of exposure: Oral.

Precautionary statements

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P301+P310 IF SWALLOWED: Immediately call a POISON CENTER/ doctor/...

P405

Store locked up.

P501

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

National regulations

All components of this product are listed in the U.S. Environmental Protection Agency Toxic Substances Control Act Chemical substance Inventory.

All components of this product are listed on the Canadian Domestic Substances List (DSL).

SARA Section 313 (specific toxic chemical listings)

7790-80-9 Cadmium iodide

California Proposition 65

Prop 65 - Chemicals known to cause cancer

7790-80-9 Cadmium iodide

Prop 65 - Developmental toxicity

Substance is not listed.

Prop 65 - Developmental toxicity, female Substance is not listed.

Prop 65 - Developmental toxicity, male

Substance is not listed.

Information about limitation of use:

For use only by technically qualified individuals.

Other regulations, limitations and prohibitive regulations

Substance of Very High Concern (SVHC) according to the REACH Regulations (EC) No. 1907/2006.

Substance is not listed.

The conditions of restrictions according to Article 67 and Annex XVII of the Regulation (EC) No 1907/2006 (REACH) for the manufacturing, placing on the market and use must be observed.

Substance is not listed.

Annex XIV of the REACH Regulations (requiring Authorisation for use)

Substance is not listed.

Chemical safety assessment:

A Chemical Safety Assessment has not been carried out.

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## **SECTION 16. OTHER INFORMATION**

Safety Data Sheet according to Regulation (EC) No. 1907/2006 (REACH). The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product.