

HICD

Safety Data Sheet

according to the Hazard Communication Standard (CFR29 1910.1200) HazCom 2012 and the Hazardous Products Regulations (HPR) WHMIS 2015

Issue date: 2021-06-15

Revision date: 2021-06-15

Version: 1.0

SECTION 1: Identification

1.1. Product identifier

Product form : Mixture
Product name : HICD

1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of the substance/mixture : High purity cadmium Certified Reference Material, for laboratory use only

1.3. Details of the supplier of the safety data sheet

National Research Council Canada
1200 Montreal Road
Ottawa, K1A 0R6 - Canada
T 613-993-2359



National Research
Council Canada

Conseil national de
recherches Canada

1.4. Emergency telephone number

Emergency number : CANUTEC 1-613-996-6666

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

GHS classification

Acute Toxicity 2 (Inhalation:dust,mist)
Mutagenicity 2
Carcinogen 1B
Reproductive toxicity 2
Specific Target Organ Tissue Repeat Exposure 1

2.2. Label elements

GHS labelling

Hazard pictograms (GHS) :



GHS06

GHS08

Signal word (GHS) : Danger

Hazard statements (GHS) : Fatal if inhaled. Suspected of causing genetic defects. May cause cancer. Suspected of damaging fertility or the unborn child. Causes damage to organs through prolonged or repeated exposure.

Precautionary statements (GHS) : Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not breathe dust/fume/gas/mist/vapours/spray. Wash hands, forearms and face 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. In case of inadequate ventilation wear respiratory protection. If exposed or concerned: Get medical advice/attention. If inhaled: Remove person to fresh air and keep comfortable for breathing. Immediately call a poison center or doctor. Store in a well-ventilated place. Keep container tightly closed. Store locked up. Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

HICD

Safety Data Sheet

according to the Hazard Communication Standard (CFR29 1910.1200) HazCom 2012 and the Hazardous Products Regulations (HPR) WHMIS 2015

2.3. Other hazards

No additional information available

2.4. Unknown acute toxicity (GHS)

Not applicable

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	% (by weight)
Cadmium	(CAS-No.) 7440-43-9	≥ 99

SECTION 4: First aid measures

4.1. Description of first aid measures

- First-aid measures after inhalation : If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a POISON CENTER/doctor.
- First-aid measures after skin contact : If skin irritation occurs: Wash skin with plenty of water. Obtain medical attention if irritation persists.
- First-aid measures after eye contact : IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
- First-aid measures after ingestion : Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person. Get medical advice/attention if you feel unwell.

4.2. Most important symptoms and effects, both acute and delayed

- Symptoms/effects after inhalation : Fatal if inhaled.
- Symptoms/effects after skin contact : May cause skin irritation. Repeated exposure may cause skin dryness or cracking.
- Symptoms/effects after eye contact : May cause eye irritation. Symptoms may include discomfort or pain, excess blinking and tear production, with possible redness and swelling.
- Symptoms/effects after ingestion : May be harmful if swallowed. May cause gastrointestinal irritation, nausea, vomiting and diarrhea.
- Chronic symptoms : Suspected of causing genetic defects. May cause cancer. Suspected of damaging fertility or the unborn child. Causes damage to organs through prolonged or repeated exposure.

4.3. Indication of any immediate medical attention and special treatment needed

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

SECTION 5: Firefighting measures

5.1. Extinguishing media

- Suitable extinguishing media : Use extinguishing media appropriate for surrounding fire. Metal fire powders
- Unsuitable extinguishing media : Do not use water jet.

5.2. Special hazards arising from the substance or mixture

No additional information available

- Fire hazard : Products of combustion may include, and are not limited to: oxides of carbon. Cadmium oxides.

HICD

Safety Data Sheet

according to the Hazard Communication Standard (CFR29 1910.1200) HazCom 2012 and the Hazardous Products Regulations (HPR) WHMIS 2015

5.3. Advice for firefighters

Protection during firefighting : Keep upwind of fire. Wear full fire fighting turn-out gear (full Bunker gear) and respiratory protection (SCBA).

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Use personal protection recommended in Section 8. Isolate the hazard area and deny entry to unnecessary and unprotected personnel.

6.2. Methods and material for containment and cleaning up

For containment : Contain spill, then place in a suitable container. Do not flush to sewer or allow to enter waterways. Use appropriate Personal Protective Equipment (PPE).

Methods for cleaning up : Sweep or shovel spills into appropriate container for disposal. Provide ventilation.

6.3. Reference to other sections

For further information refer to section 8: "Exposure controls/personal protection".

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not breathe gas, fumes, vapour or spray. Do not get in eyes, on skin, or on clothing. Do not swallow. Handle and open container with care. When using do not eat, drink or smoke. Use only outdoors or in a well-ventilated area.

Hygiene measures : Wash contaminated clothing before reuse. Wash hands, forearms and face thoroughly after handling.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Keep out of the reach of children. Keep container tightly closed. Store locked up. Store in a dry, cool and well-ventilated place. Keep away from food, drink and animal feedingstuffs.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Cadmium (7440-43-9)	
USA - ACGIH - Occupational Exposure Limits	
ACGIH OEL TWA	0.01 mg/m ³ 0.002 mg/m ³ (respirable particulate matter)
ACGIH chemical category	Suspected Human Carcinogen
USA - ACGIH - Biological Exposure Indices	
BEI	5 µg/g creatinine Parameter: Cadmium - Medium: urine - Sampling time: not critical (background) 5 µg/l Parameter: Cadmium - Medium: blood - Sampling time: not critical (background)
USA - OSHA - Occupational Exposure Limits	
OSHA PEL TWA [1]	0.1 mg/m ³ (fume) 0.2 mg/m ³ (dust) 5 µg/m ³

HICD

Safety Data Sheet

according to the Hazard Communication Standard (CFR29 1910.1200) HazCom 2012 and the Hazardous Products Regulations (HPR) WHMIS 2015

OSHA PEL C	0.3 mg/m ³ (applies to any operations or sectors for which the Cadmium standard is stayed or otherwise not in effect-fume) 0.6 mg/m ³ (applies to any operations or sectors for which the Cadmium standard is stayed or otherwise not in effect-dust)
USA - IDLH - Occupational Exposure Limits	
IDLH	9 mg/m ³ (dust)

8.2. Exposure controls

Appropriate engineering controls	: Ensure good ventilation of the work station. Ensure that eyewash stations and safety showers are close to the workstation location.
Hand protection	: Wear suitable gloves. Nitrile rubber gloves.
Eye protection	: Safety glasses or goggles are recommended when using product.
Skin and body protection	: Wear suitable protective clothing.
Respiratory protection	: Wear respiratory protection. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.
Environmental exposure controls	: Avoid release to the environment.
Other information	: Handle in accordance with good industrial hygiene and safety procedures. Do not eat, drink or smoke when using this product.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Solid
Appearance	: Solid
Colour	: Silver-White
Odour	: No data available
Odour threshold	: No data available
pH	: No data available
Melting point	: 321 °C (610 °F)
Freezing point	: 765 °C (1409 °F)
Boiling point	: No data available
Flash point	: No data available
Relative evaporation rate (butyl acetate=1)	: No data available
Flammability (solid, gas)	: Not flammable.
Vapour pressure	: 0.00013 hPa @ 180 °C / 356 °F
Relative vapour density at 20 °C /68 °F	: No data available
Relative density	: No data available
Density	: 8.65 g/cm ³ (72.184 lbs/gal) @ 20 °C / 68 °F
Solubility	: No data available
Partition coefficient n-octanol/water	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive limits	: No data available
Explosive properties	: No data available
Oxidising properties	: No data available

HICD

Safety Data Sheet

according to the Hazard Communication Standard (CFR29 1910.1200) HazCom 2012 and the Hazardous Products Regulations (HPR) WHMIS 2015

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

No dangerous reactions known under normal conditions of use.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

Heat. Incompatible materials.

10.5. Incompatible materials

Strong oxidizers.

10.6. Hazardous decomposition products

May include, and are not limited to: oxides of carbon. Cadmium oxides.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral) : Not classified.
Acute toxicity (dermal) : Not classified.
Acute toxicity (inhalation) : Fatal if inhaled.

ATE CA (dust,mist)	0.05 mg/l/4h
--------------------	--------------

Cadmium (7440-43-9)	
LD50 oral rat	1140 mg/kg
LC50 inhalation rat	25 mg/m ³ (Exposure time: 30 min)

Skin corrosion/irritation : Based on available data, the classification criteria are not met.
Serious eye damage/irritation : Based on available data, the classification criteria are not met.
Respiratory or skin sensitisation : Based on available data, the classification criteria are not met.
Germ cell mutagenicity : Suspected of causing genetic defects.
Carcinogenicity : May cause cancer.

Cadmium (7440-43-9)	
IARC group	1 - Carcinogenic to humans
National Toxicology Program (NTP) Status	2 - Known Human Carcinogens
In OSHA Specifically Regulated Carcinogen list	Yes

Reproductive toxicity : Suspected of damaging fertility or the unborn child.
STOT-single exposure : Based on available data, the classification criteria are not met.
STOT-repeated exposure : Causes damage to organs through prolonged or repeated exposure.
Aspiration hazard : Based on available data, the classification criteria are not met.
Symptoms/effects after inhalation : Fatal if inhaled.

HICD

Safety Data Sheet

according to the Hazard Communication Standard (CFR29 1910.1200) HazCom 2012 and the Hazardous Products Regulations (HPR) WHMIS 2015

Symptoms/effects after skin contact	: May cause skin irritation. Repeated exposure may cause skin dryness or cracking.
Symptoms/effects after eye contact	: May cause eye irritation. Symptoms may include discomfort or pain, excess blinking and tear production, with possible redness and swelling.
Symptoms/effects after ingestion	: May be harmful if swallowed. May cause gastrointestinal irritation, nausea, vomiting and diarrhea.
Chronic symptoms	: Suspected of causing genetic defects. May cause cancer. Suspected of damaging fertility or the unborn child. Causes damage to organs through prolonged or repeated exposure.
Other information	: Likely routes of exposure: ingestion, inhalation, skin and eye.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : May cause long-term adverse effects in the aquatic environment.

Cadmium (7440-43-9)	
LC50 - Fish [1]	0.003 mg/l (Exposure time: 96 h - Species: <i>Oncorhynchus mykiss</i> [flow-through])
EC50 - Crustacea [1]	0.0244 mg/l (Exposure time: 48 h - Species: <i>Daphnia magna</i> [Static])
LC50 - Fish [2]	0.006 mg/l (Exposure time: 96 h - Species: <i>Oncorhynchus mykiss</i> [static])

12.2. Persistence and degradability

HICD	
Persistence and degradability	Not established.

12.3. Bioaccumulative potential

HICD	
Bioaccumulative potential	Not established.

12.4. Mobility in soil

No additional information available

12.5. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Product/Packaging disposal recommendations	: Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation. The generation of waste should be avoided or minimized wherever possible.
Ecology - waste materials	: Hazardous waste due to toxicity.

SECTION 14: Transport information

Department of Transportation (DOT) and Transportation of Dangerous Goods (TDG)

In accordance with DOT/TDG

Not regulated for transport

Additional information

Other information	: No supplementary information available.
Special transport precautions	: Do not handle until all safety precautions have been read and understood.

HICD

Safety Data Sheet

according to the Hazard Communication Standard (CFR29 1910.1200) HazCom 2012 and the Hazardous Products Regulations (HPR) WHMIS 2015

SECTION 15: Regulatory information

15.1. Federal regulations

All components of this product are listed, or excluded from listing, on the Canadian DSL (Domestic Substances List) and NDSL (Non-Domestic Substances List) inventories.

Cadmium (7440-43-9)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory Subject to reporting requirements of United States SARA Section 313	
CERCLA RQ	10 lb no reporting of releases of this hazardous substance is required if the diameter of the pieces of the solid metal released is >100 µm
SARA Section 313 - Emission Reporting	0.1 %

15.2 US State regulations

No additional information available

SECTION 16: Other information

Issue date	: 2021-06-15
Revision date	: 2021-06-15
Version #	: 1.0
Prepared by	: Nexreg Compliance Inc.

DISCLAIMER:

The information provided on this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

This material is for research and experimental applications only. It is not intended for food, drug, household, agricultural, or cosmetic use. Its use must be supervised by technically qualified individuals with experience in the handling of potentially hazardous chemicals. Apart from the solvent in this product (if applicable), the hazardous components present in the solution are at such low concentrations that exact determination of degree of hazard is not warranted and would be misleading. We shall not be held liable for any damage resulting from handling or from contact with the above product.