

Safety Data Sheet

According to OSHA Hazard Communication Standard, 29 CFR 1910.1200

Initial preparation date: 11.22.2017

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Cadmium Metal

SECTION 1: Identification

Product identifier

Product name: Cadmium Metal

Product code: S25213

Recommended use of the product and restriction on use

Relevant identified uses: Not determined or not applicable.

Uses advised against: Not determined or not applicable.

Reasons why uses advised against: Not determined or not applicable.

Manufacturer or supplier details

Manufacturer:

Supplier:

AquaPhoenix Scientific

860 Gitts Run Road

Hanover

PA 17331

(717) 632-1291

Fisher Science Education

6771 Silver Crest Road

Nazareth

PA 18064

800 955-1177

Emergency telephone number:

United States

Emergency Telephone No.: 800-255-3924

SECTION 2: Hazard(s) identification

GHS classification:

Acute toxicity (inhalation), category 2

Germ cell mutagenicity, category 2

Carcinogenicity, category 1B

Reproductive toxicity, category 2

Specific target organ toxicity - repeated exposure, category 1

Acute aquatic hazard, category 1

Chronic aquatic hazard, category 1

Label elements

Hazard pictograms:



Signal word: Danger

Hazard statements:

H330 Fatal if inhaled

H341 Suspected of causing genetic defects

H350 May cause cancer

H361 Suspected of damaging fertility or the unborn child

H372 Causes damage to organs through prolonged or repeated exposure

H400 Very toxic to aquatic life

H410 Very toxic to aquatic life with long lasting effects

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Precautionary statements:

- P260 Do not breathe dust/fume/gas/mist/vapors/spray
- P271 Use only outdoors or in a well-ventilated area
- P284 Wear respiratory protection
- P201 Obtain special instructions before use
- P202 Do not handle until all safety precautions have been read and understood
- P281 Use personal protective equipment as required
- P264 Wash skin thoroughly after handling
- P270 Do not eat, drink or smoke when using this product
- P273 Avoid release to the environment
- P304+P340+P310 If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a poison center or doctor/physician
- P320 Specific treatment is urgent (see ... on this label)
- P308+P313 If exposed or concerned: Get medical advice/attention
- P391 Collect spillage
- P405 Store locked up
- P403+P233 Store in a well ventilated place. Keep container tightly closed
- P501 Dispose of contents and container as instructed in Section 13

Hazards not otherwise classified: None

SECTION 3: Composition/information on ingredients

Identification	Name	Weight %
CAS number: 7440-43-9	Cadmium Metal	100

Additional Information: None

SECTION 4: First aid measures

Description of first aid measures

General notes:

Not determined or not applicable.

After inhalation:

- Loosen clothing as necessary and position individual in a comfortable position
- Maintain an unobstructed airway
- Move exposed individual to fresh air
- Immediately call a POISON CONTROL CENTER or seek medical attention

After skin contact:

- Rinse affected area with soap and water
- If symptoms develop or persist, seek medical attention

After eye contact:

- Rinse/flush exposed eye(s) gently using water for 15-20 minutes
- If symptoms develop or persist, seek medical attention

After swallowing:

- Rinse mouth thoroughly
- Seek medical attention if irritation, discomfort, or vomiting persists
- Immediately call a POISON CONTROL CENTER or seek medical attention
- Do not induce vomiting
- Rinse mouth and then drink plenty of water

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Most important symptoms and effects, both acute and delayed

Acute symptoms and effects:

Not determined or not applicable.

Delayed symptoms and effects:

Not determined or not applicable.

Immediate medical attention and special treatment

Specific treatment:

Not determined or not applicable.

Notes for the doctor:

Not determined or not applicable.

SECTION 5: Firefighting measures

Extinguishing media

Suitable extinguishing media:

Use appropriate fire suppression agents for adjacent combustible materials or sources of ignition

Unsuitable extinguishing media:

Not determined or not applicable.

Specific hazards during fire-fighting:

Thermal decomposition can lead to release of irritating gases and vapors

Special protective equipment for firefighters:

Wear protective eye wear, gloves and clothing

Refer to Section 8

Special precautions:

Avoid inhaling gases, fumes, dust, mist, vapor and aerosols

Avoid contact with skin, eyes and clothing

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures:

Ensure adequate ventilation

Ensure air handling systems are operational

Wear protective eye wear, gloves and clothing

Environmental precautions:

Should not be released into the environment

Prevent from reaching drains, sewer or waterway

Methods and material for containment and cleaning up:

Wear protective eye wear, gloves and clothing

Reference to other sections:

Not determined or not applicable.

SECTION 7: Handling and storage

Precautions for safe handling:

Do not eat, drink, smoke or use personal products when handling chemical substances.

Avoid breathing mist or vapor.

Conditions for safe storage, including any incompatibilities:

Store in a cool, well-ventilated area.

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SECTION 8: Exposure controls/personal protection

Only those substances with limit values have been included below.

Occupational Exposure limit values:

Country (Legal Basis)	Substance	Identifier	Permissible concentration
ACGIH	Cadmium Metal	7440-43-9	ACGIH TLV TWA 0.01 mg/m ³ as Cd (0.002 mg/m ³ as Cd, respirable fraction)
United States (OSHA)	Cadmium Metal	7440-43-9	OSHA PEL TWA 0.005 mg/m ³ as Cd
NIOSH	Cadmium Metal	7440-43-9	NIOSH IDLH 9 mg/m ³ as Cd

Biological limit values:

No biological exposure limits noted for the ingredient(s).

Information on monitoring procedures:

Not determined or not applicable.

Appropriate engineering controls:

Emergency eye wash fountains and safety showers should be available in the immediate vicinity of use or handling.

Personal protection equipment

Eye and face protection:

Safety goggles or glasses, or appropriate eye protection.

Skin and body protection:

Select glove material impermeable and resistant to the substance.

Respiratory protection:

When necessary, use NIOSH-approved breathing equipment.

General hygienic measures:

Wash hands before breaks and at the end of work.

Avoid contact with skin, eyes and clothing.

SECTION 9: Physical and chemical properties

Information on basic physical and chemical properties

Appearance	Silver-white granules
Odor	Odorless
Odor threshold	Not determined or not available.
pH	Not determined or not available.
Melting point/freezing point	321°C
Initial boiling point/range	765°C
Flash point (closed cup)	Not determined or not available.
Evaporation rate	Not determined or not available.
Flammability (solid, gas)	Not determined or not available.
Upper flammability/explosive limit	Not determined or not available.
Lower flammability/explosive limit	Not determined or not available.
Vapor pressure	Not determined or not available.
Vapor density	Not determined or not available.
Density	8.64 g/cm ³ at 25°C

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Relative density	Not determined or not available.
Solubilities	Insoluble in water.
Partition coefficient (n-octanol/water)	Not determined or not available.
Auto/Self-ignition temperature	Not determined or not available.
Decomposition temperature	Not determined or not available.
Dynamic viscosity	Not determined or not available.
Kinematic viscosity	Not determined or not available.
Explosive properties	Not determined or not available.
Oxidizing properties	Not determined or not available.

Other information

Molecular weight	112.40
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SECTION 10: Stability and reactivity

Reactivity:

Does not react under normal conditions of use and storage.

Chemical stability:

Stable under normal conditions of use and storage.

Possibility of hazardous reactions:

None under normal conditions of use and storage.

Conditions to avoid:

Incompatible Materials.

Incompatible materials:

Strong acids. Strong bases. Oxidizing agents.

Hazardous decomposition products:

None known.

SECTION 11: Toxicological information

Acute toxicity

Assessment: Fatal if inhaled

Product data: No data available.

Substance data:

Name	Route	Result
Cadmium Metal	inhalation	LC50 - Rat - 25 mg/m ³ /30 mins

Skin corrosion/irritation

Assessment: Based on available data, the classification criteria are not met.

Product data: No data available.

Substance data: No data available.

Serious eye damage/irritation

Assessment: Based on available data, the classification criteria are not met.

Product data: No data available.

Substance data: No data available.

Respiratory or skin sensitization

Assessment: Based on available data, the classification criteria are not met.

Product data: No data available.

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Substance data: No data available.

Carcinogenicity

Assessment: May cause cancer

Product data: No data available.

Substance data:

Name	Species	Result
Cadmium Metal		Component may cause cancer.

International Agency for Research on Cancer (IARC):

Name	Classification
Cadmium Metal	Group 1 - Carcinogenic to humans

National Toxicology Program (NTP):

Name	Classification
Cadmium Metal	Known to be human carcinogens

Germ cell mutagenicity

Assessment: Suspected of causing genetic defects

Product data: No data available.

Substance data:

Name	Result
Cadmium Metal	Cadmium is a mutagen that acts by inhibiting mismatch repair.

Reproductive toxicity

Assessment: Suspected of damaging fertility or the unborn child

Product data: No data available.

Substance data:

Name	Result
Cadmium Metal	Toxic effects on the reproductive system.

Specific target organ toxicity (single exposure)

Assessment: Based on available data, the classification criteria are not met.

Product data: No data available.

Substance data:

Name	Result
Cadmium Metal	Substance causes damage to organs.

Specific target organ toxicity (repeated exposure)

Assessment: Causes damage to organs through prolonged or repeated exposure

Product data: No data available.

Substance data: No data available.

Aspiration toxicity

Assessment: Based on available data, the classification criteria are not met.

Product data: No data available.

Substance data: No data available.

Information on likely routes of exposure: No data available.

Symptoms related to the physical, chemical and toxicological characteristics: No data available.

Other information: No data available.

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SECTION 12: Ecological information

Acute (short-term) toxicity

Assessment: Very toxic to aquatic life

Product data: No data available.

Substance data:

Name	Result
Cadmium Metal	NOEC - Parachlorella kessleri - 0.002 mg/L - 5 days
	LC50 - Chrysophrys major - 0.56 mg/L - 72 hr

Chronic (long-term) toxicity

Product data: No data available.

Substance data: No data available.

Persistence and degradability

Product data: No data available.

Substance data: No data available.

Bioaccumulative potential

Product data: No data available.

Substance data: No data available.

Mobility in soil

Product data: No data available.

Substance data: No data available.

Other adverse effects: No data available.



SECTION 13: Disposal considerations

Disposal methods:



It is the responsibility of the waste generator to properly characterize all waste materials according to applicable regulatory entities (US 40CFR262.11)

SECTION 14: Transport information

United States Transportation of dangerous goods (49 CFR DOT)

UN number	UN2930
UN proper shipping name	Toxic solid, Inorganic, n.o.s. (Cadmium).
UN transport hazard class(es)	6  
Packing group	II
Environmental hazards	Marine Pollutant
Special precautions for user	None

International Maritime Dangerous Goods (IMDG)

UN number	UN2930
UN proper shipping name	Toxic solid, Inorganic, n.o.s. (Cadmium).
UN transport hazard class(es)	6  
Packing group	II

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Environmental hazards	Marine Pollutant
Special precautions for user	None

International Air Transport Association Dangerous Goods Regulations (IATA-DGR)

UN number	UN2930
UN proper shipping name	Toxic solid, Inorganic, n.o.s. (Cadmium).
UN transport hazard class(es)	6  
Packing group	II
Environmental hazards	Marine Pollutant
Special precautions for user	None

SECTION 15: Regulatory information

United States regulations

Inventory listing (TSCA):

7440-43-9	Cadmium Metal	Listed
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Significant New Use Rule (TSCA Section 5): Not determined.

Export notification under TSCA Section 12(b): Not determined.

SARA Section 311/312 hazards:

Acute	Chronic	Fire	Pressure	Reactive
No	No	No	No	No

SARA Section 302 extremely hazardous substances: Not determined.

SARA Section 313 toxic chemicals:

7440-43-9	Cadmium Metal	Listed
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CERCLA:

7440-43-9	Cadmium Metal	Listed	10
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RCRA: Not determined.

Section 112(r) of the Clean Air Act (CAA): Not determined.

Massachusetts Right to Know:

7440-43-9	Cadmium Metal	Listed
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New Jersey Right to Know:

7440-43-9	Cadmium Metal	Listed
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New York Right to Know:

7440-43-9	Cadmium Metal	Listed
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Pennsylvania Right to Know:

7440-43-9	Cadmium Metal	Listed
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California Proposition 65:

WARNING: This product contains a chemical known to the State of California to cause cancer.

7440-43-9	Cadmium Metal
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WARNING: This product contains a chemical known to the State of California to cause birth defects or

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other reproductive harm.

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SECTION 16: Other information

Abbreviations and Acronyms: None

Disclaimer:

This product has been classified in accordance with hazard criteria of the Controlled Products Regulations and the SDS contains all the information required by the Controlled Products Regulations. The responsibility to provide a safe workplace remains with the user. The user should consider the health hazards and safety information contained herein as a guide and should take those precautions required in an individual operation to instruct employees and develop work practice procedures for a safe work environment. The information contained herein is, to the best of our knowledge and belief, accurate. However, since the conditions of handling and use are beyond our control, we make no guarantee of results, and assume no liability for damages incurred by the use of this material. It is the responsibility of the user to comply with all applicable laws and regulations applicable to this material.

NFPA: 4-0-1

HMIS: 4-0-1-X

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End of Safety Data Sheet