

# Safety Data Sheet

According to Canadian Hazardous Products Regulations and WHMIS 2015

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:**

AquaPhoenix Scientific  
860 Gitts Run Road  
Hanover  
PA 17331  
(717) 632-1291

**Supplier:**

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 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

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H400 Very toxic to aquatic life

H410 Very toxic to aquatic life with long lasting effects

### 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:<br>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 available.

#### 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 ingestion:

Rinse mouth thoroughly

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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

### Most important symptoms and effects, both acute and delayed

#### Acute symptoms and effects:

Not determined or not available.

#### Delayed symptoms and effects:

Not determined or not available.

### Immediate medical attention and special treatment

#### Specific treatment:

Not determined or not available.

#### Notes for the doctor:

Not determined or not available.

## SECTION 5: Fire-fighting 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.

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### 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.

### 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 <sup>3</sup> as Cd (0.002 mg/m <sup>3</sup> as Cd, respirable fraction) |
| United States (OSHA)  | Cadmium Metal | 7440-43-9  | OSHA PEL TWA 0.005 mg/m <sup>3</sup> as Cd  |
| NIOSH                 | Cadmium Metal | 7440-43-9  | NIOSH IDLH 9 mg/m <sup>3</sup> 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 (physical state, color): | Silver-white granules            |
| Odor:                               | Odorless                         |
| Odor threshold:                     | Not determined or not available. |
| pH-value:                           | Not determined or not available. |

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|   |                                  |
|---|----------------------------------|
| <b>Melting/Freezing point:</b>                  | 321°C                            |
| <b>Boiling point/range:</b>                     | 765°C                            |
| <b>Flash point:</b>                             | Not determined or not available. |
| <b>Evaporation rate:</b>                        | Not determined or not available. |
| <b>Flammability (solid, gaseous):</b>           | Not determined or not available. |
| <b>Explosion limit upper:</b>                   | Not determined or not available. |
| <b>Explosion limit lower:</b>                   | Not determined or not available. |
| <b>Vapor pressure:</b>                          | Not determined or not available. |
| <b>Vapor density:</b>                           | Not determined or not available. |
| <b>Density:</b>                                 | 8.64 g/cm <sup>3</sup> at 25°C   |
| <b>Relative density:</b>                        | Not determined or not available. |
| <b>Solubilities:</b>                            | Insoluble in water.              |
| <b>Partition coefficient (n-octanol/water):</b> | Not determined or not available. |
| <b>Auto/Self-ignition temperature:</b>          | Not determined or not available. |
| <b>Decomposition temperature:</b>               | Not determined or not available. |
| <b>Dynamic viscosity:</b>                       | Not determined or not available. |
| <b>Kinematic viscosity:</b>                     | Not determined or not available. |
| <b>Explosive properties</b>                     | Not determined or not available. |
| <b>Oxidizing properties</b>                     | Not determined or not available. |

### Other information

|                         |        |
|-------------------------|--------|
| <b>Molecular weight</b> | 112.40 |
|-------------------------|--------|

## 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 |
|------|-------|--------|
|------|-------|--------|

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| Name          | Route      | Result                                     |
|---------------|------------|--|
| Cadmium Metal | inhalation | LC50 - Rat - 25 mg/m <sup>3</sup> /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.

**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.

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### 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.

## 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)

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### SECTION 14: Transport information



#### Canadian Transportation of Dangerous Goods (TDG)

|                               |   |
|-------------------------------|---|
| 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  |
| 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

#### Canada regulations

##### Domestic substances list (DSL):

|           |               |        |
|-----------|---------------|--------|
| 7440-43-9 | Cadmium Metal | Listed |
|-----------|---------------|--------|

Non-domestic substances list (NDSL): Not determined.

### SECTION 16: Other information

Abbreviations and Acronyms: None



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#### 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**