

## SAFETY DATA SHEET

### Section 1: Identification

Product name: Cadmium oxide  
Product use: For laboratory research purposes.  
Supplier: Trace Sciences International  
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Richmond Hill, ON L4B 3N6  
CANADA  
Telephone: +1 905-770-1100  
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### Section 2: Hazard(s) Identification

#### 2.1 GHS Classification

Acute toxicity, Inhalation (Category 2), H330  
Germ cell mutagenicity (Category 2), H341  
Carcinogenicity (Category 1B), H350  
Reproductive toxicity (Category 2), H361  
Specific target organ toxicity - repeated exposure (Category 1), H372  
Short-term (acute) aquatic hazard (Category 1), H400  
Long-term (chronic) aquatic hazard (Category 1), H410

#### 2.2 GHS Label elements, including precautionary statements

##### Pictogram



##### Signal word

Danger

##### Hazard statement(s):

H301 Toxic if swallowed.  
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.  
H410 Very toxic to aquatic life with long lasting effects.

##### Precautionary statement(s):

P201 Obtain special instructions before use.  
P202 Do not handle until all safety precautions have been read and understood.  
P260 Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.  
P264 Wash skin thoroughly after handling.  
P270 Do not eat, drink or smoke when using this product.  
P271 Use only outdoors or in a well-ventilated area.  
P273 Avoid release to the environment.  
P281 Use personal protective equipment as required.  
P284 Wear respiratory protection.  
P301 + P310 + P330 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.  
P304 + P340 + P310 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER or doctor/ physician.  
P308 + P313 IF exposed or concerned: Get medical advice/ attention.  
P391 Collect spillage.  
P403 + P233 Store in a well-ventilated place. Keep container tightly closed.

P405 Store locked up.  
P501 Dispose of contents/ container to an approved waste disposal plant.

### Section 3: Composition/ Information on Ingredients

**Formula** : CdO  
**Molecular Weight** : 128.41 g/mol

Material	CAS-No.	EC-No.	Index-No.	Concentration
Cadmium Oxide	1306-19-0	215-146-2	048-002-00-0	<=100%

### Section 4: First-Aid Measures

#### 4.1 Description of first aid measures

##### General advice

Consult a physician. Show this safety data sheet to the doctor in attendance. Move person out of dangerous area if safe to do so.

##### If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

##### In case of skin contact

Take off contaminated clothing and shoes immediately. Wash off with soap and plenty of water for at least 15 minutes. Use chemical shower if available. Consult a physician.

##### In case of eye contact

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician. Remove contacts if possible.

##### If swallowed

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

### Section 5: Fire-Fighting Measures

#### 5.1 Conditions of flammability

Not flammable or combustible.

#### 5.2 Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

#### 5.3 Hazardous combustion products

Hazardous decomposition products formed under fire conditions: Cadmium/cadmium oxides

#### 5.4 Special protective equipment for firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

#### 5.5 Further information

No data available

## Section 6: Accidental Release Measures

### 6.1 Personal precautions

Use personal protective equipment. Avoid dust formation. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust.

### 6.2 Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

### 6.3 Methods and materials for containment and cleaning up

Sweep up and shovel. Keep in suitable, closed containers for disposal.

## Section 7: Handling and Storage

### 7.1 Precautions for safe handling

Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Provide appropriate exhaust ventilation at places where dust is formed.

### 7.2 Conditions for safe storage

Keep container tightly closed in a dry and well-ventilated place.  
 Keep in a dry place. Handle under nitrogen, protect from moisture.

## Section 8: Exposure Controls/Personal Protection

### 8.1 Components with workplace control parameters

Components	CAS-No.	Value	Control parameters	Basis
Cadmium oxide (non-pyrophoric)	1306-19-0	TWA	0.002 mg/m <sup>3</sup>	Canada. Alberta, Occupational Health and Safety Code
		TWAEV	0.025 mg/m <sup>3</sup>	Québec. Regulation respecting occupational health and safety, Schedule 1, Part 1: Permissible exposure values for airborne contaminants
		TWA	0.002 mg/m <sup>3</sup>	Canada. British Columbia OEL
		TWA	0.01 mg/m <sup>3</sup>	USA. ACGIH Threshold Limit Values (TLV)

### Remarks

Carcinogenic effect suspected in humans

IARC '1' applies to substances categorized as carcinogenic to humans, and used when there is sufficient evidence of carcinogenicity in humans.

ACGIH 'A2' applies to those substances that are considered suspected human carcinogens.

### 8.2 Personal protective equipment

#### Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

#### Hand protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

#### Eye protection

Safety glasses with side-shields conforming to EN166. Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

#### Skin and body protection

Complete suit protecting against chemicals. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

#### Hygiene measures

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

#### Specific engineering controls

Use mechanical exhaust or laboratory fume hood to avoid exposure.

### Section 9: Physical and Chemical Properties

#### Appearance

Form	Powder
Colour	Red

#### Safety Data

pH	No data available
Melting point/freezing point	870 - 950 °C (1598 - 1742 °F)
Boiling point	No data available
Flash point	Not applicable
Flammability (solid, gas)	No data available
Ignition temperature	No data available
Auto-ignition temperature	No data available
Lower explosion limit	No data available
Upper explosion limit	No data available
Vapour pressure	No data available
Density	8.15 g/cm <sup>3</sup> at 25 °C (77 °F)
Water solubility	0.0021 g/l at 20 °C (68 °F) - OECD Test Guideline 105 - insoluble
Partition coefficient: n-octanol/water	No data available
Relative vapour density	No data available
Odour	Odourless
Odour Threshold	No data available
Evaporation rate	No data available

### Section 10: Stability and Reactivity

#### 10.1 Chemical stability

Stable under recommended storage conditions

#### 10.2 Possibility of hazardous reactions

Violent reactions possible with:

Light metals

Risk of explosion with:

Aluminum, perchlorates, hydrogen sulphide, hydrogen peroxide, salts of hydrazine, magnesium

**10.3 Conditions to avoid**

No data available

**10.4 Materials to avoid**

Oxidizing agents

**10.5 Hazardous decomposition products**

See section 5

**Section 11: Toxicological Information**

**Acute toxicity**

**Oral**

No data available

**Inhalation**

LC50 Inhalation - Rat - male and female - 4 h - 0.056 mg/l

**Dermal**

No data available

**Other information on acute toxicity**

No data available

**Skin corrosion/irritation**

No data available

**Serious eye damage/eye irritation**

No data available

**Respiratory or skin sensitization**

No data available

**Germ cell mutagenicity**

No data available

**Carcinogenicity**

Possible human carcinogen

IARC: 1 - Group 1: Carcinogenic to humans (Cadmium oxide non-pyrophoric)

**Reproductive toxicity**

Suspected of damaging the unborn child.

Suspected of damaging fertility.

**Specific target organ toxicity - single exposure (Globally Harmonized System)**

No data available

**Specific target organ toxicity - repeated exposure (Globally Harmonized System)**

No data available

**Aspiration hazard**

No data available

**Signs and Symptoms of Exposure**

Kidney injury may occur, Damage to the lungs.

**Additional Information**

RTECS: EV1925000

**Section 12: Ecological Information**

**12.1 Toxicity**

Toxicity to daphnia and other aquatic invertebrates      Growth inhibition EC50 - Pseudokirchneriella subcapitata (algae) - 0.018 mg/l - 72 h Method: OECD Test Guideline 201

Toxicity to algae      static test EC50 - Pseudokirchneriella subcapitata (algae) - 0.018 mg/l - 72 h (OECD Test Guideline 201)

Toxicity to bacteria      Respiration inhibition NOEC - Sludge Treatment - 0.353 mg/l - 3 h Method: OECD Test Guideline 209

**12.2 Persistence and degradability**

No data available

**12.3 Bioaccumulative potential**

No data available

**12.4 Mobility in soil**

No data available

**12.5 PBT and vPvB assessment**

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

**12.6 Other adverse effects**

An environmental hazard cannot be excluded in the event of unprofessional handling or disposal. Very toxic to aquatic life with long lasting effects.

**Section 13: Disposal Considerations**

**Product**

Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

**Contaminated packaging**

Dispose of as unused product.

**Section 14: Transport Information**

**IATA**

UN number: UN2570      Class: 6.1      Packing group: I  
Proper shipping name: Cadmium compounds (Cadmium oxide)

### Section 15: Regulatory Information

This product has been classified in accordance with the hazard criteria of the Hazardous Products Regulations (HPR) and the SDS contains all the information required by the HPR

### Section 16: Other Information

#### **Further information**

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