



LTS Research Laboratories, Inc.
Safety Data Sheet
Cadmium Oxide

1. Product and Company Identification

Trade Name: Cadmium oxide
Chemical Formula: CdO
Recommended Use: Scientific research and development

Manufacturer/Supplier: LTS Research Laboratories, Inc.
Street: 37 Ramland Road
City: Orangeburg
State: New York
Zip Code: 10962
Country: USA
Tel #: 855-587-2436 / 855-lts-chem

24-Hour Emergency Contact: 800-424-9300 (US & Canada)
+1-703-527-3887 (International)

2. Hazards Identification

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

Precautionary Statements: P260: Do not breathe dust/fume/gas/mist/vapours/spray
P284: Wear respiratory protection
P281: Use personal protective equipment as required
P320: Specific treatment is urgent
P405: Store locked up
P501: Dispose of contents/container in accordance with local/regional/national/international regulations

HMIS Health Ratings (0-4):

Health: 3
Flammability: 0
Physical: 1

3. Composition

Chemical Family: Ceramic
Additional Names: Cadmium(II) oxide, Cadmium monoxide

Cadmium oxide (CdO):
Percentage: 100 wt%
CAS #: 1306-19-0
EC #: 215-146-2

4. First Aid Procedures

General Treatment:	Seek medical attention if symptoms persist.
Special Treatment:	None
Important Symptoms:	None
Inhalation:	Remove victim to fresh air. Supply oxygen if breathing is difficult.
Ingestion:	Seek medical attention
Skin:	Wash affected area with mild soap and water. Remove any contaminated clothing.
Eyes:	Flush eyes with water, blinking often for several minutes. Remove contact lenses if present and easy to do. Continue rinsing

5. Firefighting Measures

Flammability:	Non-flammable, except as powder
Extinguishing Media:	No special restrictions – use suitable extinguishing agent for surrounding material and type of fire.
Spec. Fire Fighting Procedure:	Use full-face, self-contained breathing apparatus with full protective clothing to prevent contact with skin and eyes. See section 10 for decomposition products.

6. Accidental Release Measures

If Material Is Released/Spilled:	Wear appropriate respiratory and protective equipment specified in special protection information. Isolate spill area and provide ventilation. Vacuum up spill using a high efficiency particulate absolute (HEPA) air filter and place in a closed container for disposal. Take care not to raise dust.
Environmental Precautions:	Isolate runoff to prevent environmental pollution.

7. Handling and Storage

Handling Conditions:	Wash thoroughly after handling.
Storage Conditions:	Store in a cool dry place in a tightly sealed container. Store apart from materials and conditions listed in section 10.
Work/Hygienic Maintenance:	Do not use tobacco or food in work area. Wash thoroughly before eating and smoking. Do not blow dust off clothing or skin with compressed air.
Ventilation:	Provide sufficient ventilation to maintain concentration at or below threshold limit.

8. Exposure Controls and Personal Protection

Permissible Exposure Limits:	0.005 mg/m ³ as Cd, long-term value
Threshold Limit Value:	0.01 mg/m ³ as Cd, long-term value 0.002 mg/m ³ as Cd, respirable fraction, long-term value
Special Equipment:	None
Respiratory Protection:	Use a respirator with type P100 (USA) or P3 (EN143) cartridges as a backup to engineering controls. Risk assessment should be performed to determine if air-purifying respirators are appropriate. Only use equipment tested and approved under appropriate government standards.
Protective Gloves:	Nitrile rubber, NBR gloves
Eye Protection:	Safety glasses or goggles
Body Protection:	Protective work clothing. Wear close-toed shoes and long sleeves/pants.

9. Physical and Chemical Characteristics

Color	Red-brown
Form:	Powder, Granules, Pellets, Sputtering target, Custom parts
Odor:	Odorless
Water Solubility:	Insoluble
Boiling Point:	N/A
Melting Point:	1430 °C
Sublimation point:	1559 °C
Flash Point:	N/A
Autoignition Temperature:	N/A
Density:	8.15 g/cc
Molecular weight:	128.41 g/mol

10. Reactivity

Stability:	Stable under recommended storage conditions
Reacts With:	Oxidizing agents, Magnesium/magnesium alloys
Incompatible Conditions:	None
Hazardous Decomposition Products:	Cadmium oxide

11. Toxicological Information

Potential Health Effects:

Eyes:	May cause irritation
Skin:	May cause irritation
Ingestion:	May cause irritation
Inhalation:	Fatal
Chronic:	Causes damage to organs through prolonged or repeated exposure

Signs & Symptoms:

N/A

Aggravated Medical Conditions:

N/A

Median Lethal Dose:

72 mg/kg for rat by mouth

Median Lethal Concentration:

45 mg/m³/1hr for rat by inhalation

Carcinogen:

May cause cancer.

IARC-1: carcinogenic to humans: sufficient evidence of carcinogenicity.

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

ACGIH A2: Suspected human carcinogen: Agent is carcinogenic in experimental animals at dose levels, by routes of administration, at sites, of histologic types, or by mechanisms 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:

Suspected of damaging fertility or the unborn child

12. Ecological Information

Aquatic Toxicity:

High

Persistent Bioaccumulation Toxicity:

No

Very Persistent, Very Bioaccumulative:

No

Notes:

Very toxic for aquatic organism.

May cause long lasting harmful effect on aquatic life.

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

Do not allow product to reach any water sources.

Danger to drinking water if even extremely small quantities leak into the ground.

13. Disposal Considerations

Dispose of in accordance with local, state, national, and international regulations.

14. Transportation Data

Hazardous:

Hazardous for transportation.



Hazard Class:
Packing Group:
UN Number:
Proper Shipping Name:

6.1 Toxic substances.
III
UN2570
Cadmium compounds (Cadmium oxide)

15. Regulatory Information

Sec 302 Extremely Hazardous: No
Sec 304 Reportable Quantities: N/A
Sec 313 Toxic Chemicals: Yes

16. Other Information

This safety data sheet should be used in conjunction with technical sheets. It does not replace them. The information given is based on our knowledge of this product, at the time of publication. It is given in good faith. The attention of the user is drawn to the possible risks incurred by using the product for any other purpose other than that for which it was intended. This does not in any way excuse the user from knowing and applying all the regulations governing his activity. It is the sole responsibility of the user to take all precautions required in handling the product. The aim of the mandatory regulations mentioned is to help the user to fulfill his obligations regarding the use of hazardous products.

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