

SAFETY DATA SHEET

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifiers

Product name	Cadmium oxide
CAS number	1306-19-0
Synonyms	Cadmium monoxide

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

Identified uses	Laboratory chemicals.
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1.3 Details of the supplier of the safety data sheet

Company	Lab Alley, LLC 12501 Pauls Valley Road Austin, Texas 78737 U.S.A.
Telephone	512-668-9918
Fax	512-886-4008

1.4 Emergency telephone

Emergency Phone #	US & Canada: 1-800-535-5053	INFOTRAC
	International 1-352-323-3500	INFOTRAC

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

Acute Inhalation Toxicity	Category 2
Germ Cell Mutagenicity	Category 2
Carcinogenicity	Category 1A
Reproductive Toxicity	Category 2
Specific Target Organ Toxicity (single exposure)	Category 3
Target Organ(s) - Respiratory system	

Specific Target Organ Toxicity (repeated exposure)
Target Organ(s) - Kidney, Blood

Category 1

2.2 GHS Label elements, including precautionary statements

Pictogram



Signal Word

Danger

Hazard statements

Fatal if inhaled.
May cause respiratory irritation.
Suspected of causing genetic defects.
May cause cancer.
Suspected of damaging fertility. Suspected of damaging the unborn child.
Causes damage to organs through prolonged or repeated exposure.

Precautionary statements

Prevention: Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Use personal protective equipment as required. Do not breathe dust/fume/gas/mist/vapors/spray. Use only outdoors or in a well-ventilated area. Wash face, hands, and any exposed skin thoroughly after handling. Do not eat, drink, or smoke when using this product.

Response: IF exposed or concerned: Get medical attention/advice.

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.

Storage: Store locked up. Store in a well-ventilated place. Keep container tightly closed.

Disposal: Dispose of contents/container to an approved waste disposal plant.

2.3 Hazards not otherwise classified (HNOC) or not covered by GHS

Very toxic to aquatic life with long lasting effects.
WARNING: Cancer - <https://www.p65warnings.ca.gov/>.

SECTION 3: Composition/information on ingredients

3.1 Components

Chemical name	Common name and synonyms	CAS number	Concentration
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Cadmium oxide	Cadmium monoxide	1306-19-0	>95%
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SECTION 4: First aid measures

4.1 Description of first-aid measures

General advice

If inhaled	Remove to fresh air. Immediate medical attention is required. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. If not breathing, give artificial respiration.
In case of skin contact	Wash off immediately with plenty of water for at least 15 minutes. Get medical attention.
In case of eye contact	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention.
If swallowed	Do NOT induce vomiting. Call a physician or poison control center immediately.

4.2 Most important symptoms and effects, both acute and delayed

No information available.

4.3 Indication of any immediate medical attention and special treatment needed

Show this safety data sheet to the doctor in attendance. Immediate medical attention is required. Treat symptomatically.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media	Dry chemical, CO ₂ , water spray or alcohol-resistant foam.
Unsuitable extinguishing media	No information available.

5.2 Specific hazards arising from the substance or mixture

May be fatal if inhaled. Do not allow run-off from fire-fighting to enter drains or water courses. Keep product and empty container away from heat and sources of ignition.

5.3 Special protective equipment and precautions for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

5.4 Further information

Flash Point No information available.

Autoignition Temperature No information available.

Explosion limits

Upper No data available.

Lower No data available.

Sensitivity to Mechanical Impact No information available.

Sensitivity to Static Discharge No information available.

NFPA

Health	Flammability	Instability	Physical hazards
4	0	0	N/A

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Ensure adequate ventilation. Use personal protective equipment as required. Keep people away from and upwind of spill/leak. Evacuate personnel to safe areas. Avoid dust formation.

6.2 Environmental precautions

Do not flush into surface water or sanitary sewer system. Do not allow material to contaminate ground water system. Prevent product from entering drains. Local authorities should be advised if significant spillages cannot be contained.

6.3 Methods and materials for containment and cleaning up

Sweep up and shovel into suitable containers for disposal. Avoid dust formation.

6.4 Reference to other sections

See Section 2 for full list of hazard and precaution statements.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Precautions on safe handling

Use only under a chemical fume hood. Wear personal protective equipment/face protection. Do not breathe (dust, vapor, mist, gas). Do not ingest. If swallowed, seek immediate medical assistance. Do not get in eyes, on skin, or on clothing. Avoid dust formation.

Hygiene measures

Handle in accordance with good industrial hygiene and safety practice.

7.2 Conditions for safe storage, including any incompatibilities**Storage conditions**

Keep containers tightly closed in a dry, cool, and well-ventilated place.

Incompatibilities

Acids. Strong oxidizing agents.

SECTION 8: Exposure controls/personal protection**8.1 Occupational exposure limits****US. ACGIH Threshold Limit Values**

Component	Type	Value
Cadmium oxide	TWA	0.01 mg/m3
	TWA	0.002 mg/m3

US. NIOSH: Pocket Guide to Chemical Hazards

Component	Type	Value
Cadmium oxide	IDLH	9 mg/m3

Biological occupational exposure limits

No information available.

8.2 Exposure controls**Appropriate engineering controls**

Use only under a chemical fume hood. Ensure that eyewash stations and safety showers are close to the workstation location.

Personal protective equipment**Eye/face protection**

Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

Skin protection

Wear appropriate protective gloves and clothing to prevent skin exposure.

Body Protection

Wear appropriate protective gloves and clothing to prevent skin exposure.

Respiratory protection

Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

Control of environmental exposure

No information available.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical State	Solid powder
Appearance	Dark brown to reddish-brown
Odor	Odorless
Odor Threshold	No information available
pH	No data available
Melting Point/Range	950 °C / 1742 °F
Boiling Point/Range	1559 °C / 2838.2 °F
Evaporation Rate	No data available
Flammability (solid)	No data available
Flammability or explosive limit	No data available
Upper	
Lower	
Vapor Pressure	No data available
Vapor Density	No data available
Density	8.15
Solubility	Insoluble in cold water
Partition coefficient; n-octanol/water	No data available
Autoignition Temp	No data available
Decomposition Temp	No data available
Viscosity	No data available
Molecular Formula	CdO
Molecular Weight	128.4 g/mol
VOC Content(%)	No information available
Oxidizing properties	No information available

9.2 Other safety information

No information available.

SECTION 10: Stability and reactivity

10.1 Reactivity

No information available.

10.2 Chemical stability

Stable under normal conditions.

10.3 Possibility of hazardous reactions

None under normal processing.

10.4 Conditions to avoid

Incompatible products. Excess heat.

10.5 Incompatible materials

Acids, Strong oxidizing agents.

10.6 Hazardous decomposition products

None under normal use conditions.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Product Information, Component Information

Acute toxicity

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Cadmium oxide	72 mg/kg (Rat)	-	-

Skin corrosion/irritation

No information available.

Serious eye damage/eye irritation

No information available.

Respiratory or skin sensitization

No information available.

Germ cell mutagenicity

Animal experiments showed mutagenic and teratogenic effects.

Carcinogenicity

Component	CAS	IARC	NTP	ACGIH	OSHA	Mexico
Cadmium oxide	1306-19-0	Group 1	Known	A2	X	A1

Specific target organ toxicity - single exposure

Respiratory system.

Specific target organ toxicity - repeated exposure

Kidney, blood.

Reproductive toxicity

Experiments have shown reproductive toxicity effects on laboratory animals.

Chronic effects

No information available.

11.2 Additional Information

The toxicological properties have not been fully investigated.

SECTION 12: Ecological information**12.1 Toxicity**

Very toxic to aquatic organisms; may cause long-term adverse effects in the aquatic environment.

12.2 Persistence and degradability

Insoluble in water.

12.3 Bio accumulative potential

No information available.

12.4 Mobility in soil

Is not likely mobile in the environment due its low water solubility.

12.5 Results of PBT and vPvB assessment

No information available.

12.6 Endocrine disrupting properties

No information available.

12.7 Other adverse effects

No information available.

SECTION 13: Disposal considerations**13.1 Waste Disposal Methods**

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.

SECTION 14: Transport information**DOT (US)**

UN-no

UN2570

Proper Shipping Name

CADMIUM COMPOUND

Hazard Class 6.1
Packing Group I

IMDG

UN-no UN2570
Proper Shipping Name CADMIUM COMPOUND
Hazard Class 6.1
Packing Group I

IATA

UN-no UN2570
Proper Shipping Name CADMIUM COMPOUND
Hazard Class 6.1
Packing Group I

SECTION 15: Regulatory information

US federal regulations This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)
Not applicable.

CERCLA Hazardous Substance List (40 CFR 302.4)
Not listed.

SARA 304 Emergency release notification
Listed, Cadmium oxide (CAS #1306-19-0), RQ: 100 lb.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)
Listed, Cadmium oxide (CAS #1306-19-0).

Superfund Amendments and Reauthorization Act of 1986 (SARA)

SARA 302 Extremely hazardous substance
Listed, Cadmium oxide (CAS #1306-19-0), TPQ: 100/10000 lb.

SARA 311/312 Hazardous
See Section 2 for more information.

SARA 313 (TRI reporting)
Listed, Cadmium oxide (CAS #1306-19-0).

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List
Listed, Cadmium oxide (CAS #1306-19-0).

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Clean Water Act (CWA) - Toxic Pollutants

Listed, Cadmium oxide (CAS #1306-19-0).

FEMA Priority Substances Respiratory Health and Safety in the Flavor Manufacturing Workplace

Not listed.

US state regulations

US. Massachusetts RTK - Substance List

Listed, Cadmium oxide (CAS #1306-19-0).

US. New Jersey Worker and Community Right-to-Know Act

Listed, Cadmium oxide (CAS #1306-19-0).

US. Pennsylvania Worker and Community Right-to-Know Law

Listed, Cadmium oxide (CAS #1306-19-0).

California Proposition 65

Listed, Cadmium oxide (CAS #1306-19-0).

SECTION 16: Other information

Issue date: 01/23/2024

Revision 1: 12/19/2024

SECTION 17: 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.