

## SAFETY DATA SHEET

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

#### 1.1 Product identifiers

Product name	Cadmium nitrate tetrahydrate
CAS number	10022-68-1
Synonyms	Nitric acid, cadmium salt, tetrahydrate.

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

Identified uses

#### 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

<b>Emergency Phone #</b>	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 oral toxicity	Category 3
Acute dermal toxicity	Category 4
Acute Inhalation Toxicity - Dusts and Mists	Category 2
Germ Cell Mutagenicity	Category 1B
Carcinogenicity	Category 1A
Reproductive Toxicity	Category 1B
Specific target organ toxicity - (repeated exposure)	Category 1
Target Organs - Kidney, Bone	

## 2.2 GHS Label elements, including precautionary statements

Pictogram	
Signal Word	Danger
Hazard statements	Toxic if swallowed. Harmful in contact with skin. Fatal if inhaled. May cause genetic defects. May cause cancer. May damage fertility or 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. Wash face, hands and any exposed skin thoroughly after handling. Do not eat, drink or smoke when using this product. Do not breathe dust/fumes/gas/mist/vapors/spray. Use only outdoors or in a well-ventilated area. Wear respiratory protection.
Response	IF exposed or concerned: Get medical attention/advice.
Inhalation	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.
Skin	IF ON SKIN: Wash with plenty of soap and water. Call a POISON CENTER or doctor/physician if you feel unwell. Wash contaminated clothing before reuse.
Ingestion	IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician. Rinse mouth.
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
Cadmium nitrate tetrahydrate	Nitric acid, cadmium salt, tetrahydrate.	10022-68-1	>95%
Cadmium nitrate	-	10325-94-7	-

## SECTION 4: First aid measures

### 4.1 Description of first-aid measures

#### General advice

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

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

None reasonably foreseeable.

### 4.3 Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

<b>Suitable extinguishing media</b>	Water spray, carbon dioxide, dry chemical, chemical foam.
<b>Unsuitable extinguishing media</b>	No information available.

### 5.2 Specific hazards arising from the substance or mixture

Oxidizer: Contact with combustible/organic material may cause fire. May ignite combustibles (wood, paper, oil, clothing, etc). Do not allow run-off from fire-fighting to enter drains or water courses. Hazardous combustion products: nitrogen oxides.

### 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. Thermal decomposition can lead to release of irritating gases and vapors.

### 5.4 Further information

**Flash Point** No data 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	3	1	OX

**SECTION 6: Accidental release measures**

**6.1 Personal precautions, protective equipment and emergency procedures**

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

**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. Soak up with inert absorbent material. Keep in suitable, closed containers for disposal. Sweep up and shovel into suitable containers for disposal.

**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**

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

**Hygiene measures**

Handle in accordance with good industrial hygiene and safety practice.

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

### Storage conditions

Do not store near combustible materials. Store under an inert atmosphere. Protect from moisture.

### Incompatibilities

Organic materials, metals, copper, reducing agents, strong reducing agents, combustible material.

## SECTION 8: Exposure controls/personal protection

### 8.1 Occupational exposure limits

#### US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

No information available.

#### US. ACGIH Threshold Limit Values

Component	Type	Value
Cadmium nitrate tetrahydrate	TWA	0.01 mg/m <sup>3</sup>
	TWA	0.002 mg/m <sup>3</sup>
Cadmium nitrate	TWA	0.01 mg/m <sup>3</sup>
	TWA	0.002 mg/m <sup>3</sup>

#### US. NIOSH: Pocket Guide to Chemical Hazards

Component	Type	Value
Cadmium nitrate tetrahydrate	IDLH	9 mg/m <sup>3</sup>
Cadmium nitrate	IDLH	9 mg/m <sup>3</sup>

#### Biological occupational exposure limits

No information available.

### 8.2 Exposure controls

#### Appropriate engineering controls

Ensure adequate ventilation, especially in confined areas. 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 19 CFR 1910.133 or European Standard EN166.

##### Skin and 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 EN149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

#### **Control of environmental exposure**

Handle in accordance with good industrial hygiene and safety practice.

## **SECTION 9: Physical and chemical properties**

### **9.1 Information on basic physical and chemical properties**

Physical State	Solid
Appearance	White
Odor	Odorless
Odor Threshold	No information available
pH	3.9 50% aq.solution
Melting Point/Range	59 °C / 138.2 °F
Boiling Point/Range	132 °C / 269.6 °F @ 760 mmHg
Evaporation Rate	No information available
Flammability (solid)	No information available
Flammability or explosive limit	
Upper	No data available.
Lower	No data available.
Vapor Pressure	No information available.
Vapor Density	No information available.
Density	No information available.
Solubility	2150 g/L @ 20 °C
Partition coefficient; n-octanol/water	No data available.
Autoignition Temp	No information available.
Decomposition Temp	No information available.
Viscosity	No information available.
Molecular Formula	CdN2O6 . 4 H2O
Molecular Weight	308.46
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**

Yes

### **10.2 Chemical stability**

Hygroscopic

### 10.3 Possibility of hazardous reactions

None under normal processing.

### 10.4 Conditions to avoid

Incompatible materials. Exposure to moist air or water. Combustible materials. Excess heat.

### 10.5 Incompatible materials

Organic materials, metals, copper, reducing agent, strong reducing agents, combustible materials.

### 10.6 Hazardous decomposition products

Nitrogen oxides.

## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

#### Product Information, Component Information

##### Acute toxicity

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Cadmium nitrate tetrahydrate	300 mg/kg (rat)	-	-
Cadmium nitrate	300 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

Ames test: positive.

##### Carcinogenicity

Component	CAS	IARC	NTP	ACGIH	OSHA	Mexico
Cadmium nitrate tetrahydrate	10022-68-1	Not listed	Not listed	Not listed	Not listed	Not listed
Cadmium nitrate	10325-94-7	Not listed	Not listed	Not listed	Not listed	Not listed

##### Specific target organ toxicity - single exposure

None known.

##### Specific target organ toxicity - repeated exposure

Kidney, Bone.

**Reproductive toxicity**

No information available.

**Chronic effects**

No information available.

**11.2 Additional Information**

No information available.

**SECTION 12: Ecological information****12.1 Toxicity**

Product		Species	Test Results
Cadmium nitrate tetrahydrate	EC50	Microtox	1.62 mg/L 30 min

**12.2 Persistence and degradability**

Soluble in water. Persistence is unlikely based on information available.

**12.3 Bio accumulative potential**

No information available.

**12.4 Mobility in soil**

Will likely be mobile in the environment due to its 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**

The toxicological properties have not been fully investigated.

**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 COMPOUNDS  
**Hazard Class** 6.1  
**Packing Group** II

**IMDG**

**UN-No** UN2570  
**Proper Shipping Name** CADMIUM COMPOUNDS  
**Hazard Class** 6.1  
**Packing Group** II

**IATA**

**UN-No** UN2570  
**Proper Shipping Name** CADMIUM COMPOUNDS  
**Hazard Class** 6.1  
**Packing Group** II

**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 listed.

**CERCLA Hazardous Substance List (40 CFR 302.4)**

Not listed.

**SARA 304 Emergency release notification**

Not listed.

**OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)**

Not listed.

**Superfund Amendments and Reauthorization Act of 1986 (SARA)**

**SARA 302 Extremely hazardous substance**

Not listed.

**SARA 311/312 Hazardous**

See section 2 for more information.

**SARA 313 (TRI reporting)**

Listed, (CADMIUM NITRATE TETRAHYDRATE) Weight: >95%, Threshold Value

Listed, (CADMIUM NITRATE) Threshold Value %: 0.1 - 1.0

**Other federal regulations**

**Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List**

Listed, (CADMIUM NITRATE TETRAHYDRATE)

Listed, (CADMIUM NITRATE)

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

Not regulated.

**Safe Drinking Water Act**

Listed, (CADMIUM NITRATE TETRAHYDRATE) Toxic Pollutants.

Listed, (CADMIUM NITRATE) Toxic Pollutants.

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

Not listed

**US state regulations**

**US. Massachusetts RTK - Substance List**

Not listed.

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

Listed, (CADMIUM NITRATE TETRAHYDRATE)

Listed, (CADMIUM NITRATE)

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

Listed, (CADMIUM NITRATE TETRAHYDRATE)

Listed, (CADMIUM NITRATE)

**California Proposition 65**

Listed, (CADMIUM NITRATE TETRAHYDRATE) Carcinogen

Listed, (CADMIUM NITRATE) Carcinogen

**SECTION 16: Other information**

Issue date: 07/31/2024

Revision: 0

**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.



















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