

# CADMIUM NITRATE TETRAHYDRATE EXTRA PURE MSDS



CAS-No.: 10022-68-1 MSDS

## MATERIAL SAFETY DATA SHEET (MSDS)

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

#### 1.1. Product identifier

Product form : Substance  
:  
CAS-No. : 10022-68-1  
Product code : 02422  
Chemical structure :  $\text{Cd}(\text{NO}_3)_2 \cdot 4\text{H}_2\text{O}$

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

##### 1.2.1. Relevant identified uses

Use of the substance/mixture : Laboratory chemicals, Manufacture of substances

##### 1.2.2. Uses advised against

No additional information available

#### 1.3. Details of the supplier of the safety data sheet

Labogens Fine Chem Industries  
1st Floor , Above Bank of India, Guru Vihar , Rahon Road,  
Ludhiana Pb. (141007)  
+91 9316777775, +91 7707855700  
[sales@labogens.com](mailto:sales@labogens.com) - [www.Labogens.com](http://www.Labogens.com)

#### 1.4. Emergency telephone number

Emergency number : +91 7707855700 (9:00am - 6:00 pm)

### SECTION 2: Hazards identification

#### 2.1. Classification of the substance or mixture

##### Classification according to Regulation (EC) No. 1272/2008 [CLP]

Oxidising Solids, H272  
Category 2  
Acute toxicity (oral), H302  
Category 4  
Acute toxicity (dermal), H312  
Category 4  
Acute toxicity (inhal.), H332  
Category 4  
Hazardous to the aquatic H410  
environment — Chronic  
Hazard, Category 1

Full text of H statements : see section 16

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### Classification according to Directive 67/548/EEC [DSD] or 1999/45/EC [DPD]

Carc. Cat. 1; R45

O; R8

Xn; R20

Xn; R21

Xn; R22

N; R50/53

Full text of R-phrases: see section 16

### Adverse physicochemical, human health and environmental effects

No additional information available

## 2.2. Label elements

### Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP) :



GHS03



GHS07



GHS09

Signal word (CLP) :

Danger

Hazard statements (CLP) :

H272 - May intensify fire; oxidiser.

H302+H312+H332 - Harmful if swallowed, in contact with skin or if inhaled

H410 - Very toxic to aquatic life with long lasting effects.

Precautionary statements (CLP) :

P220 - Keep/Store away from clothing and other combustible materials.

P273 - Avoid release to the environment.

P280 - Wear protective gloves, protective clothing, eye protection, face protection.

P501 - Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation

## 2.3. Other hazards

This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII

This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

## SECTION 3: Composition/information on ingredients

### 3.1. Substances

Name : CADMIUM NITRATE TETRAHYDRATE Extra Pure

CAS-No. : 10022-68-1

Full text of R- and H-statements: see section 16

### 3.2. Mixtures

Not applicable

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### SECTION 4: First aid measures

#### 4.1. Description of first aid measures

- First-aid measures after inhalation : Assure fresh air breathing. If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing.
- First-aid measures after skin contact : Immediately call a POISON CENTER/doctor. Wash with plenty of water/.... Wash contaminated clothing before reuse.
- First-aid measures after eye contact : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical advice/attention.
- First-aid measures after ingestion : Rinse mouth. Call a POISON CENTER/doctor if you feel unwell.

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

- Symptoms/effects after inhalation : Harmful if inhaled.
- Symptoms/effects after skin contact : Harmful in contact with skin.
- Symptoms/effects after ingestion : Harmful if swallowed.

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

Treat symptomatically.

### SECTION 5: Firefighting measures

#### 5.1. Extinguishing media

- Suitable extinguishing media : Carbon dioxide. Dry powder. Foam. Water spray.
- Unsuitable extinguishing media : Do not use a heavy water stream.

#### 5.2. Special hazards arising from the substance or mixture

- Fire hazard : May intensify fire; oxidiser.

#### 5.3. Advice for firefighters

- Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection.

### SECTION 6: Accidental release measures

#### 6.1. Personal precautions, protective equipment and emergency procedures

##### 6.1.1. For non-emergency personnel

- Emergency procedures : Evacuate unnecessary personnel.

##### 6.1.2. For emergency responders

- Protective equipment : Use personal protective equipment as required.
- Emergency procedures : Ventilate area.

#### 6.2. Environmental precautions

Very toxic to aquatic life with long lasting effects.

#### 6.3. Methods and material for containment and cleaning up

- Methods for cleaning up : Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. On land, sweep or shovel into suitable containers.

#### 6.4. Reference to other sections

No additional information available

### SECTION 7: Handling and storage

#### 7.1. Precautions for safe handling

- Precautions for safe handling : Avoid contact with skin and eyes. Do not breathe vapours.
- Hygiene measures : Do not eat, drink or smoke when using this product. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

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### 7.2. Conditions for safe storage, including any incompatibilities

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

### 7.3. Specific end use(s)

No additional information available

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

No additional information available

### 8.2. Exposure controls

Hand protection : Protective gloves  
Eye protection : Chemical goggles or safety glasses  
Skin and body protection : Wear suitable protective clothing  
Respiratory protection : [In case of inadequate ventilation] wear respiratory protection.

## SECTION 9: Physical and chemical properties

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

Physical state : Solid  
Molecular mass : 308.47 g/mol  
Colour : Colorless crystals.  
Odour : No data available  
Odour threshold : No data available  
pH : No data available  
Relative evaporation rate (butylacetate=1) : No data available  
Melting point : 59.5 °C  
Freezing point : No data available  
Boiling point : No data available  
Flash point : No data available  
Auto-ignition temperature : No data available  
Decomposition temperature : No data available  
Flammability (solid, gas) : No data available  
Vapour pressure : No data available  
Relative vapour density at 20 °C : No data available  
Relative density : No data available  
Solubility : Water: Soluble in water

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Log Pow	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidising properties	: The substance or mixture is classified as oxidizing with the subcategory 2.
Explosive limits	: No data available

### 9.2. Other information

No additional information available

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

No additional information available

### 10.2. Chemical stability

Stable under normal conditions.

### 10.3. Possibility of hazardous reactions

No additional information available

### 10.4. Conditions to avoid

Air contact. Direct sunlight. Moisture.

### 10.5. Incompatible materials

No additional information available

### 10.6. Hazardous decomposition products

No additional information available

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

Acute toxicity	: Oral: Harmful if swallowed. Dermal: Harmful in contact with skin. Inhalation: Harmful if inhaled.
Skin corrosion/irritation	: Not classified
Serious eye damage/irritation	: Not classified
Respiratory or skin sensitisation	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified
STOT-single exposure	: Not classified
STOT-repeated exposure	: Not classified
Aspiration hazard	: Not classified

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Potential adverse human health effects and symptoms : Harmful if swallowed. Harmful in contact with skin.

### SECTION 12: Ecological information

#### 12.1. Toxicity

Ecology - water : Very toxic to aquatic life.

#### 12.2. Persistence and degradability

No additional information available

#### 12.3. Bioaccumulative potential

No additional information available

#### 12.4. Mobility in soil

No additional information available

#### 12.5. Results of PBT and vPvB assessment

##### CADMIUM NITRATE TETRAHYDRATE Extra Pure (10022-68-1)

This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII

This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

#### 12.6. Other adverse effects

No additional information available

### SECTION 13: Disposal considerations

#### 13.1. Waste treatment methods

Product/Packaging disposal recommendations : Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

### SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

#### 14.1. UN number

UN-No. (ADR) : 3087  
UN-No. (IMDG) : 3087  
UN-No. (IATA) : 3087  
UN-No. (ADN) : 3087  
UN-No. (RID) : 3087

#### 14.2. UN proper shipping name

Proper Shipping Name (ADR) : OXIDIZING SOLID, TOXIC, N.O.S.  
Proper Shipping Name (IMDG) : OXIDIZING SOLID, TOXIC, N.O.S.  
Proper Shipping Name (IATA) : Oxidizing solid, toxic, n.o.s.  
Proper Shipping Name (ADN) : OXIDIZING SOLID, TOXIC, N.O.S.  
Proper Shipping Name (RID) : OXIDIZING SOLID, TOXIC, N.O.S.

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Transport document description (ADR)	: UN 3087 OXIDIZING SOLID, TOXIC, N.O.S., 5.1 (6.1), II, (E), ENVIRONMENTALLY HAZARDOUS
Transport document description (IMDG)	: UN 3087 OXIDIZING SOLID, TOXIC, N.O.S., 5.1 (6.1), II, MARINE POLLUTANT/ENVIRONMENTALLY HAZARDOUS
Transport document description (IATA)	: UN 3087 Oxidizing solid, toxic, n.o.s., 5.1, II, ENVIRONMENTALLY HAZARDOUS
Transport document description (ADN)	: UN 3087 OXIDIZING SOLID, TOXIC, N.O.S., 5.1 (6.1), II, ENVIRONMENTALLY HAZARDOUS
Transport document description (RID)	: UN 3087 OXIDIZING SOLID, TOXIC, N.O.S., 5.1 (6.1), II, ENVIRONMENTALLY HAZARDOUS

### 14.3. Transport hazard class(es)

#### ADR

Transport hazard class(es) (ADR)	: 5.1 (6.1)
Danger labels (ADR)	: 5.1, 6.1



#### IMDG

Transport hazard class(es) (IMDG)	: 5.1 (6.1)
Danger labels (IMDG)	: 5.1, 6.1



#### IATA

Transport hazard class(es) (IATA)	: 5.1 (6.1)
Hazard labels (IATA)	: 5.1, 6.1



#### ADN

Transport hazard class(es) (ADN)	: 5.1 (6.1)
Danger labels (ADN)	: 5.1, 6.1



#### RID

Transport hazard class(es) (RID)	: 5.1 (6.1)
Danger labels (RID)	: 5.1, 6.1

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### 14.4. Packing group

Packing group (ADR)	: II
Packing group (IMDG)	: II
Packing group (IATA)	: II
Packing group (ADN)	: II
Packing group (RID)	: II

### 14.5. Environmental hazards

Dangerous for the environment	: Yes
Marine pollutant	: Yes
Other information	: No supplementary information available

### 14.6. Special precautions for user

#### - Overland transport

Classification code (ADR)	: OT2
Special provisions (ADR)	: 274
Limited quantities (ADR)	: 1kg
Excepted quantities (ADR)	: E2
Packing instructions (ADR)	: P002, IBC06
Mixed packing provisions (ADR)	: MP2
Portable tank and bulk container instructions (ADR)	: T3
Portable tank and bulk container special provisions (ADR)	: TP33
Tank code (ADR)	: SGAN
Tank special provisions (ADR)	: TU3
Vehicle for tank carriage	: AT
Transport category (ADR)	: 2
Special provisions for carriage - Packages (ADR)	: V11
Special provisions for carriage - Loading, unloading and handling (ADR)	: CV24, CV28
Hazard identification number (Kemler No.)	: 56
Orange plates	:



Tunnel restriction code (ADR)	: E
EAC code	: 1W

#### - Transport by sea

Special provisions (IMDG)	: 274, 900
Packing instructions (IMDG)	: P002
IBC packing instructions (IMDG)	: IBC06
IBC special provisions (IMDG)	: B21
Tank instructions (IMDG)	: T3
Tank special provisions (IMDG)	: TP33
EmS-No. (Fire)	: F-A
EmS-No. (Spillage)	: S-Q



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Stowage category (IMDG)	: B
Segregation (IMDG)	: SG38, SG49, SG60
Properties and observations (IMDG)	: Toxic if swallowed, by skin contact or by dust inhalation. Should be handled with care to minimize exposure, particularly to dust.
MFAG-No	: 141

### - Air transport

PCA Excepted quantities (IATA)	: E2
PCA Limited quantities (IATA)	: Y543
PCA limited quantity max net quantity (IATA)	: 1kg
PCA packing instructions (IATA)	: 558
PCA max net quantity (IATA)	: 5kg
CAO packing instructions (IATA)	: 562
CAO max net quantity (IATA)	: 25kg
Special provisions (IATA)	: A3
ERG code (IATA)	: 5P

### - Inland waterway transport

Classification code (ADN)	: OT2
Special provisions (ADN)	: 274, 802
Limited quantities (ADN)	: 1 kg
Excepted quantities (ADN)	: E2
Equipment required (ADN)	: PP, EP
Number of blue cones/lights (ADN)	: 2

### - Rail transport

Classification code (RID)	: OT2
Special provisions (RID)	: 274
Excepted quantities (RID)	: E2
Packing instructions (RID)	: P002, IBC06
Mixed packing provisions (RID)	: MP2
Portable tank and bulk container instructions (RID)	: T3
Portable tank and bulk container special provisions (RID)	: TP33
Tank codes for RID tanks (RID)	: SGAN
Special provisions for RID tanks (RID)	: TU3
Transport category (RID)	: 2
Special provisions for carriage – Packages (RID)	: W11
Special provisions for carriage - Loading, unloading and handling (RID)	: CW24, CW28
Colis express (express parcels) (RID)	: CE10
Hazard identification number (RID)	: 56

### 14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

## SECTION 15: Regulatory information

### 15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

#### 15.1.1. EU-Regulations

No REACH Annex XVII restrictions

Cadmium nitrate is on the REACH Candidate List

CADMIUM NITRATE TETRAHYDRATE Extra Pure is not on the REACH Annex XIV List

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### 15.1.2. National regulations

#### Germany

12th Ordinance Implementing the Federal Immission Control Act - 12.BImSchV : Is not subject of the 12. BImSchV (Hazardous Incident Ordinance)

#### Netherlands

SZW-lijst van kankerverwekkende stoffen : The substance is not listed

SZW-lijst van mutagene stoffen : The substance is not listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Borstvoeding : The substance is not listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Vruchtbaarheid : The substance is not listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Ontwikkeling : The substance is not listed

#### Denmark

Recommendations Danish Regulation : Young people below the age of 18 years are not allowed to use the product  
Pregnant/breastfeeding women working with the product must not be in direct contact with the product  
The requirements from the Danish Working Environment Authorities regarding work with carcinogens must be followed during use and disposal

### 15.2. Chemical safety assessment

No additional information available

## SECTION 16: Other information

Full text of R-, H- and EUH-statements:

Acute Tox. 4 (Dermal)	Acute toxicity (dermal), Category 4
Acute Tox. 4 (Inhalation)	Acute toxicity (inhal.), Category 4
Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
Aquatic Chronic 1	Hazardous to the aquatic environment — Chronic Hazard, Category 1
Ox. Sol. 2	Oxidising Solids, Category 2
H272	May intensify fire; oxidiser.
H302	Harmful if swallowed.
H312	Harmful in contact with skin.
H332	Harmful if inhaled.
H410	Very toxic to aquatic life with long lasting effects.
R20	Harmful by inhalation
R21	Harmful in contact with skin

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R22	Harmful if swallowed
R45	May cause cancer
R50/53	Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment
R8	Contact with combustible material may cause fire
N	Dangerous for the environment
O	Oxidising
Xn	Harmful

*This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product*