

ALADDIN SCIENTIFIC CORPORATION  
14078 Meridian Parkway, Riverside, CA. 92518

# SAFETY DATA SHEET

Version: v1  
Revision Date: 2024-08-08  
Print Date: 2024-08-08

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

### 1.1 Product identifiers

Product name : Cobalt nitrate hexahydrate  
Product Number : C112731  
Brand : aladdin  
CAS-No. : 10026-22-9

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

Identified uses : Laboratory chemicals, Manufacture of substances.

### 1.3 Company

Company : ALADDIN SCIENTIFIC CORPORATION  
Address : 14078 Meridian Parkway,  
Riverside, CA. 92518  
Telephone : +1 (833) 552-7181  
Fax : no data available

### 1.4 Emergency telephone number

CHEMTREC®, Inside the USA : 1-800-424-9300  
CHEMTREC®, Outside the USA :

## SECTION 2: Hazards identification

### 2.1 Classification of the substance or mixture

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

Oxidizing solids (Category 2), H272

Acute toxicity, Oral (Category 4), H302

Acute toxicity, Inhalation (Category 4), H332

Serious eye damage (Category 1), H318

Respiratory sensitization (Category 1), H334

Skin sensitization (Category 1), H317

Germ cell mutagenicity (Category 2), H341

Carcinogenicity (Category 1B), H350

Reproductive toxicity (Category 1B), H360F

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



Danger

Signal word

Hazard statement(s)

H272

May intensify fire; oxidizer

H317

May cause an allergic skin reaction

H318

Causes serious eye damage

H334

May cause allergy or asthma symptoms or breathing difficulties if inhaled

H341

Suspected of causing genetic defects

H350

May cause cancer

H360

May damage fertility or the unborn child

H410

Very toxic to aquatic life with long lasting effects

H302+H332

Harmful if swallowed or if inhaled

Precautionary statement(s)

P210

Keep away from heat, hot surface, sparks, open flames and other ignition sources. - No smoking.

P221

Take any precaution to avoid mixing with combustibles/...

P261

Avoid breathing dust/fume/gas/mist/vapors/spray.

P264

Wash hands [and ...] thoroughly after handling.

P270

Do not eat, drink or smoke when using this product.

P271

Use only outdoors or in a well-ventilated area.

P272

Contaminated work clothing should not be allowed out of the workplace.

P280

Wear protective gloves/protective clothing/eye protection/face protection.

P284

[In case of inadequate ventilation] Wear respiratory protection.

P310

Immediately call a POISON CENTER or doctor/physician.

P391

Collect spillage.

P302+P352

IF ON SKIN: wash with plenty of water.

P305+P351+P338

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do - continue rinsing.

P308+P313

IF exposed or concerned: Get medical advice/attention.

P333+P313

IF SKIN irritation or rash occurs: Get medical advice/attention.

P370+P378

In case of fire: Use ... to extinguish.

P405

Store locked up.

P501

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

P301+P312+P330

IF SWALLOWED: Call a POISON CENTER/ doctor if you feel unwell. Rinse mouth.

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P304+P340+P312

IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor. if you feel unwell.

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

**SECTION 3: Composition/information on ingredients**

**3.1 Substances**

Synonyms : Cobalfous nitrate; Cobaltous nitrate hexahydrate; Cobalt(II) nitrate hexahydrate; Nitric acid,cobalt(II) salt; Cobalt nitrate  
 Formula : CoN2O6.6H2O  
 Molecular weight : 291.03  
 CAS No. : 10026-22-9  
 EC-NO. : no data available

Component	Classification	Concentration
Cobalt nitrate hexahydrate	Ox. Sol. 2; Acute Tox. 4; Eye Dam. 1; Resp. Sens. 1; Skin Sens. 1; Muta. 2; Carc. 1B; Repr. 1B; Aquatic Acute 1; Aquatic Chronic 1; H272, H302, H318, H334, H317, H341, H350i, H360FD, H360F, H400, H410 Concentration limits: >= 0,01 %: Carc. 1B, H350i; M-Factor - Aquatic Acute: 10 - Aquatic Chronic: 1	99.99% metals basis

**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.  
 If inhaled  
 If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.  
 In case of skin contact  
 Wash off with soap and plenty of water. Consult a physician.  
 In case of eye contact  
 After eye contact: rinse out with plenty of water. Immediately call in ophthalmologist. Remove contact lenses.  
 If swallowed  
 Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

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

no data available

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

no data available

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## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

Suitable extinguishing media

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

Unsuitable extinguishing media

no data available

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

Nitrogen oxides (NO<sub>x</sub>), Cobalt/cobalt oxides. Not combustible. Has a fire-promoting effect due to release of oxygen.

Ambient fire may liberate hazardous vapours.

### 5.3 Advice for firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

### 5.4 Further information

Use water spray to cool unopened containers.

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## SECTION 6: Accidental release measures

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

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. Discharge into the environment must be avoided.

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

Sweep up and shovel. Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations (see section 13). Keep in suitable, closed containers for disposal.

### 6.4 Reference to other sections

For disposal see section 13.

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## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

Work under hood. Do not inhale substance/mixture. Keep away from open flames, hot surfaces and sources of ignition.

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

Keep locked up or in an area accessible only to qualified or authorized persons. Do not store near combustible

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Phone: +1 (833) 552-7181 Email: [QualityAssurance@aladdinsci.com](mailto:QualityAssurance@aladdinsci.com) Website: <https://www.aladdinsci.com/>

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materials. Moisture sensitive.

### 7.3 Specific end use(s)

no data available

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## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

### 8.2 Exposure controls

Appropriate engineering controls

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

Personal protective equipment

Eye/face protection

Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove 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. The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it

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.

Respiratory protection

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

Control of environmental exposure

no data available

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## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

- |  |  |
|--|--|
| a) Appearance                              | form: Granules, Crystals, Powder or chunks color: Red to Brown |
| b) Odour                                   | no data available  |
| c) Odour Threshold                         | no data available  |
| d) pH                                      | no data available  |
| e) Melting point/freezing point            | 55-56°C  |
| f) Initial boiling point and boiling range | no data available  |

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g) Flash point	no data available
h) Evaporation rate	no data available
i) Flammability (solid, gas)	no data available
j) Upper/lower flammability or explosive limits	no data available
k) Vapour pressure	no data available
l) Vapour density	no data available
m) Relative density	no data available
n) Water solubility	no data available
o) Partition coefficient: n-octanol/water	no data available
p) Auto-ignition temperature	no data available
q) Decomposition temperature	no data available
r) Viscosity	no data available
s) Explosive properties N	no data available
t) Oxidizing properties N	no data available

## 9.2 Other safety information

no data available

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## SECTION 10: Stability and reactivity

### 10.1 Reactivity

no data available

### 10.2 Chemical stability

Stable under recommended storage conditions.

### 10.3 Possibility of hazardous reactions

no data available

### 10.4 Conditions to avoid

Heat. Exposure to moisture.

### 10.5 Incompatible materials

Organic materials, Reducing agents

### 10.6 Hazardous decomposition products

no data available

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## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

Acute toxicity

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Acute toxicity estimate Oral - 434 mg/kg

(Calculation method)

LD50 Oral - Rat - male and female - 978 mg/kg

(OECD Test Guideline 401)

Skin corrosion/irritation

Skin - Rabbit Result: No skin irritation - 4 h (OECD Test Guideline 404) Remarks: (anhydrous substance) The value is given in analogy to the following substances: Cobalt(II) nitrate

Serious eye damage/eye irritation

Eyes - Rabbit Result: Causes serious eye damage. (OECD Test Guideline 405) Remarks: (anhydrous substance) The value is given in analogy to the following substances: Cobalt(II) nitrate

Respiratory or skin sensitisation

May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause allergic skin reaction.

Germ cell mutagenicity

Suspected of causing genetic defects.

Carcinogenicity

no data available

Reproductive toxicity

May damage the unborn child. May damage fertility.

Specific target organ toxicity - single exposure

no data available

Specific target organ toxicity - repeated exposure

no data available

Aspiration hazard

no data available

Additional Information

Repeated dose toxicity - Rat - male and female - Oral - 90 d - NOAEL (No observed adverse effect level) - 3 mg/kg

RTECS: QU7355500

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Symptoms of an acute cobalt intoxication: diarrhoea, loss of appetite, drop in body temperature, drop in blood pressure. Toxic effect on kidneys (proteinuria, anuria), heart, and pancreas.

The following applies to nitrites/nitrates in general: methaemoglobinaemia after the uptake of large quantities.

somnolence

Other dangerous properties can not be excluded.

This substance should be handled with particular care.

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## SECTION 12: Ecological information

### 12.1 Toxicity

Toxicity to fish semi-static test LC50 - Pimephales promelas (fathead minnow) -1,866 mg/l - 96 h

(US-EPA)

Remarks: (anhydrous substance)

The value is given in analogy to the following substances: Cobalt(II)

nitrate

Toxicity to daphnia and other aquatic invertebrates static test LC50 - Ceriodaphnia dubia (water flea) - 0,39 mg/l - 48 h

(US-EPA)

Remarks: (anhydrous substance)

The value is given in analogy to the following substances: Cobalt(II)

nitrate

Toxicity to algae static test ErC50 - Pseudokirchneriella subcapitata - 0,095 mg/l - 72h

(OECD Test Guideline 201)

Remarks: (anhydrous substance)

The value is given in analogy to the following substances: Cobalt(II)

nitrate

Toxicity to bacteria static test EC50 - activated sludge - 120 mg/l - 30 min

(OECD Test Guideline 209)

Remarks: (anhydrous substance)

The value is given in analogy to the following substances: Cobalt(II)

nitrate

### 12.2 Persistence and degradability

no data available

### 12.3 Bioaccumulative potential



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no data available

## 12.4 Mobility in soil

no data available

## 12.5 Results of PBT and vPvB assessment

no data available

## 12.6 Other adverse effects

Discharge into the environment must be avoided.

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## SECTION 13:

### 13.1 Disposal considerations

Product

Offer surplus and non-recyclable solutions to a licensed disposal company.

Contaminated packaging

no data available

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## SECTION 14: Transport information

DOT (US)

UN number: 1477

Packing group: II

Class: 5.1

Proper shipping name: NITRATES,

Reportable Quantity(RQ): no data

Poison Inhalation Hazard: no data

INORGANIC, N.O.S. (Cobaltous nitrate,

available

available

hexahydrate)

Environmental Hazards: No

IMDG

UN number: 1477

Packing group: II

EMS-No: no data available

Proper shipping name: NITRATES, INORGANIC, N.O.S. (Cobaltous nitrate, hexahydrate)

IATA

UN number: 1477

Packing group: II

Class: 5.1

Proper shipping name: NITRATES, INORGANIC, N.O.S. (Cobaltous nitrate, hexahydrate)

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## SECTION 15: Regulatory information

The following laws, regulations, and standards provide corresponding provisions for the safe use, storage, transportation, loading and unloading, classification, and labeling of chemicals:

Catalogue of Hazardous Chemicals (2015 Edition): Listed

Classification and Variety Catalogue of Precursor Chemicals (2015 Edition): Not included

List of Hazardous Chemicals for Explosive Production (2017 Edition): Not included

List of Existing Chemical Substances in China: Listed

National Standards for Classification and Labeling of Chemicals (GB [30000.2-2013~30000.29-2013](#))

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If applicable, the chemical meets the requirements of the Regulations on the Safety Management of Hazardous Chemicals.

## SECTION 16: Other information

**Prepared By**

Regulatory Affairs

ALADDIN SCIENTIFIC CORPORATION

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**Revision Summary**

SDS sections updated v1

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