

ALADDIN SCIENTIFIC CORPORATION

14078 Meridian Parkway, Riverside, CA. 92518

# SAFETY DATA SHEET

Version: v1

Revision Date: 2025-09-16

Print Date: 2025-09-22

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

### 1.1 Product identifiers

Product name : Cobalt(II) nitrate hexahydrate  
Product Number : C431137  
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                                              |
| H302 | Harmful if swallowed                                                      |
| H317 | May cause an allergic skin reaction                                       |
| H318 | Causes serious eye damage                                                 |
| H332 | Harmful if inhaled                                                        |
| H334 | May cause allergy or asthma symptoms or breathing difficulties if inhaled |
| H335 | May cause respiratory irritation                                          |
| H341 | Suspected of causing genetic defects                                      |
| H350 | May cause cancer                                                          |
| H360 | May damage fertility or the unborn child                                  |
| H400 | Very toxic to aquatic life                                                |
| H410 | Very toxic to aquatic life with long lasting effects                      |

### Precautionary statement(s)

|           |                                                                                                 |
|-----------|-------------------------------------------------------------------------------------------------|
| P210      | Keep away from heat, hot surface, sparks, open flames and other ignition sources. - No smoking. |
| P220      | Keep away from clothing and other combustible materials.                                        |
| 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.                          |
| P273      | Avoid release to the environment.                                                               |
| P280      | Wear protective gloves/protective clothing/eye protection/face protection.                      |
| P281      | Use personal protective equipment as required.                                                  |
| P284      | [In case of inadequate ventilation] Wear respiratory protection.                                |
| P321      | Specific treatment (see ... on this label).                                                     |
| P330      | Rinse mouth.                                                                                    |
| P391      | Collect spillage.                                                                               |
| P302+P352 | IF ON SKIN: wash with plenty of water.                                                          |
| P304+P340 | IF INHALED: Remove person to fresh air and keep comfortable for breathing.                      |
| P333+P313 | IF SKIN irritation or rash occurs: Get medical advice/attention.                                |

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|                |                                                                                                                                  |
|----------------|----------------------------------------------------------------------------------------------------------------------------------|
| P362+P364      | Take off contaminated clothing and wash it before reuse.                                                                         |
| P370+P378      | In case of fire: Use ... to extinguish.                                                                                          |
| P405           | Store locked up.                                                                                                                 |
| P403+P233      | Store in a well-ventilated place. Keep container tightly closed.                                                                 |
| P501           | Dispose of contents/container to an approved waste disposal plant.                                                               |
| P203           | Obtain, read and follow all safety instructions before use.                                                                      |
| P264+P265      | Wash hands [and ...] thoroughly after handling. Do not touch eyes.                                                               |
| P301+P317      | IF SWALLOWED: Get medical help.                                                                                                  |
| P305+P354+P338 | IF IN EYES: Immediately rinse with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing. |
| P318           | if exposed or concerned, get medical advice.                                                                                     |
| P317           | Get emergency medical help.                                                                                                      |
| P319           | Get medical help if you feel unwell.                                                                                             |
| P342+P316      | If experiencing respiratory symptoms: Get emergency medical help immediately.                                                    |

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

## SECTION 3: Composition/information on ingredients

### 3.1 Substances

|                  |                                                      |
|------------------|------------------------------------------------------|
| Synonyms         | : Cobalt(II) nitrate hexahydrate                     |
| Formula          | : $\text{CoN}_2\text{O}_6 \cdot 6\text{H}_2\text{O}$ |
| Molecular weight | : 291.03                                             |
| CAS No.          | : 10026-22-9                                         |
| EC-NO.           | : no data available                                  |

| Component                             | Classification                                                                                                                                                                                                                                                                                                    | Concentration                       |
|---------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------|
| <b>Cobalt(II) nitrate hexahydrate</b> | 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: $\geq 0,01\%$ : Carc. 1B, H350i; M-Factor - Aquatic Acute: 10 - Aquatic Chronic: 1 | Suitable for Analysis, Premium pure |

## 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 materials.

### 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 th 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

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

|                                                 |                   |
|-------------------------------------------------|-------------------|
| a) Appearance                                   | no data available |
| 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 |
| 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

## 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.

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## 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

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

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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.

## 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)

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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**

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.

**SECTION 13:****13.1 Disposal considerations****Product**

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

**Contaminated packaging**

no data available

**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

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

### SECTION 15: Regulatory information

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

### SECTION 16: Other information

|                  |                                                                                                                                                     |
|------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|
| Prepared By      | Regulatory Affairs<br>ALADDIN SCIENTIFIC CORPORATION<br>Email: <a href="mailto:QualityAssurance@aladdinsci.com">QualityAssurance@aladdinsci.com</a> |
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| Revision Date    | 16-Sep-2025                                                                                                                                         |
| Print Date       | 22-Sep-2025                                                                                                                                         |
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