

SAFETY DATA SHEET

Version: v1

Revision Date: 2025-09-12

Print Date: 2025-09-16

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

1.1 Product identifiers

Product name : cobalt(ii) sulfate heptahydrate
Product Number : C431138
Brand : aladdin
CAS-No. : 10026-24-1

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)

Acute toxicity, Oral (Category 4), H302

Eye irritation (Category 2), H319

Respiratory sensitization (Category 1), H334

Skin sensitization (Category 1), H317

Germ cell mutagenicity (Category 2), H341

Carcinogenicity, Inhalation (Category 1B), H350i

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)

H302	Harmful if swallowed
H317	May cause an allergic skin reaction
H319	Causes serious eye irritation
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled
H341	Suspected of causing genetic defects
H351	Suspected of causing cancer
H360	May damage fertility or the unborn child
H410	Very toxic to aquatic life with long lasting effects

Precautionary statement(s)

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.
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.
P362+P364	Take off contaminated clothing and wash it before reuse.
P405	Store locked up.
P501	Dispose of contents/container to an approved waste disposal plant.
P203	Obtain, read and follow all safety instructions before use.
P301+P316	IF SWALLOWED: Get emergency medical help immediately.
P301+P317	IF SWALLOWED: Get medical help.
P318	if exposed or concerned, get medical advice.
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	: no data available
Formula	: $\text{CoSO}_4 \cdot 7\text{H}_2\text{O}$
Molecular weight	: 281.10
CAS No.	: 10026-24-1
EC-NO.	: 233-334-2

Component	Classification	Concentration
cobalt(ii) sulfate heptahydrate	Acute Tox. 4; Eye Irrit. 2; Resp. Sens. 1; Skin Sens. 1; Muta. 2; Carc. 1B; Repr. 1B; Aquatic Acute 1; Aquatic Chronic 1; H302, H319, H334, H317, H341, H350i, H360F, H400, H410 Concentration limits: $\geq 0,01\%$; Carc. 1B, H350i; M-Factor - Aquatic Acute: 10 - Aquatic Chronic: 10	Reagent grade

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. Move out of dangerous area.

If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact

In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower. Consult a physician.

In case of eye contact

After eye contact: rinse out with plenty of water. 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

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media

Water spray. Carbon dioxide (CO_2). Dry chemical. Chemical foam

Unsuitable extinguishing media

no data available

5.2 Special hazards arising from the substance or mixture

Sulfur oxides, Cobalt/cobalt oxides. Not combustible. Ambient fire may liberate hazardous vapours.

5.3 Advice for firefighters

Wear self contained breathing apparatus for fire fighting if necessary.

5.4 Further information

no data available

SECTION 6: Accidental release measures**6.1 Personal precautions, protective equipment and emergency procedures**

Avoid generation and inhalation of dusts in all circumstances. Avoid substance contact. Ensure adequate ventilation. Evacuate the danger area, observe emergency procedures, consult an expert.

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

Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

6.4 Reference to other sections

For disposal see section 13.

SECTION 7: Handling and storage**7.1 Precautions for safe handling**

Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Further processing of solid materials may result in the formation of combustible dusts. The potential for combustible dust formation should be taken into consideration before additional processing occurs. Provide appropriate exhaust ventilation at places where dust is formed.

7.2 Conditions for safe storage, including any incompatibilities

Tightly closed. Dry. Keep in a well-ventilated place. Keep locked up or in an area accessible only to qualified or authorized persons.

7.3 Specific end use(s)

no data available

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 gloves 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.

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 a full-face particle respirator type N100(US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a 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	96.8°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

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l) Vapour density	no data available
m) Relative density	no data available
n) Water solubility	Soluble in water and methanol, insoluble in ammonia, slightly soluble in ethanol.
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

no data available

10.5 Incompatible materials

no data available

10.6 Hazardous decomposition products

no data available

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

LD50 Oral - Rat - male and female - 1.330 mg/kg

(OECD Test Guideline 401)

Skin corrosion/irritation

Skin - In vitro study Result: No skin irritation - 15 min (OECD Test Guideline 439)

Serious eye damage/eye irritation

Eyes - Rabbit Result: Eye irritation (OECD Test Guideline 405)

Respiratory or skin sensitisation

Patch test: - Guinea pig (OECD Test Guideline 406)

Germ cell mutagenicity

Suspected of causing genetic defects. Test Type: In vitro mammalian cell gene mutation test Test system: Mouse lymphoma test Metabolic activation: with and without metabolic activation Method: OECD Test Guideline 476 Result: negative

Carcinogenicity

no data available

Reproductive toxicity

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 Days - NOAEL (No observed adverse effect level) - 3 mg/kg

RTECS: GG3200000

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.

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)

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

(US-EPA)

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

(OECD Test Guideline 201)

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

(OECD Test Guideline 209)

12.2 Persistence and degradability

Biotic/Aerobic Result: - Not readily biodegradable.

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

no data available

SECTION 13:

13.1 Disposal considerations

Product

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

Contaminated packaging

Dispose of as unused product.

SECTION 14: Transport information

DOT (US)

UN number: 3077

Packing group: III

Class: 9

Proper shipping name:

Reportable Quantity(RQ): no data

Poison Inhalation Hazard: no data

ENVIRONMENTALLY HAZARDOUS

available

available

SUBSTANCE, SOLID, N.O.S. (Cobalt(II)

sulfate heptahydrate)

Environmental Hazards: Yes

IMDG

UN number: 3077

Packing group: III

EMS-No: no data available

Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Cobalt(II) sulfate heptahydrate)

IATA

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

UN number: 3077 Packing group: III Class: 9

Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Cobalt(II) sulfate heptahydra

SECTION 15: Regulatory information

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

SECTION 16: Other information

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