Shanghai Aladdin Biochemical Technology Co., Ltd.
No. 809, Chuhua Branch Road, Fengxian District, Shanghai

SAFETY DATA SHEET

Version: v1
Revision Date: 2024-01-16
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SECTION 1:Identification of the substance/mixture and of the company/undertaking

1.1 Product identifiers

Product name	: Cobalt chloride hexahydrate
Product Number	: C116457
Brand	: aladdin
CAS-No.	: 7791-13-1

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

Identified uses	: Laboratory chemicals,Manufacture of substances.

1.3 Details of the supplier of the safety data sheet

Company	: Shanghai Aladdin Biochemical Tech Co.,Ltd
Address	: 36 Xinjinqiao Road, Shanghai
Telephone	: 400-620-6333
Fax	: no data available

1.4 Emergency telephone number

Emergency Phone	: 0532-83889090

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

Serious eye damage/eye irritation (Category 1), H318

Respiratory sensitization (Category 1), H334

Skin sensitization (Category 1), H317

Germ cell mutagenicity (Category 2), H341

Carcinogenicity (Category 2), H351

Reproductive toxicity (Category 1B), H360

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

Signal word Danger

Hazard statement(s)

H302	Harmful if swallowed
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
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)

P201	Obtain special instructions before use.
P202	Do not handle until all safety precautions have been read and understood.
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.
P284	[In case of inadequate ventilation] Wear respiratory protection.
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.
P308+P313	IF exposed or concerned: Get medical advice/attention.
P333+P313	IF SKIN irritation or rash occurs: Get medical advice/attention.
P342+P311	IF experiencing respiratory symptoms: Call a POISON CENTER/doctor/...
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.
P305+P351+P338+P310	IF IN EYES: Rinse cautiously with water for several minutes. If contact lenses are worn and can be easily removed, remove Contact lenses. Continue rinsing. Immediately call an emergency center/doctor.

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

SECTION 3: Composition/information on ingredients

3.1 Substances

Synonyms	: Chlorek cobaltawy; Cobaltous chloride, hexahydrate; Cobalt chloride, hexahydrate; cobalt chloride hydrate
Formula	: CoCl2 · 6H2O
Molecular weight	: 237.93
CAS No.	: 7791-13-1
EC-NO.	: 231-589-4

Component	Classification	Concentration
Cobalt chloride hexahydrate		
	Acute Tox. 4; Resp. Sens. 1; Skin Sens. 1; Muta. 2; Carc. 1B; Repr. 1B; Aquatic Acute 1; Aquatic Chronic 1; H302, H334, H317, H341, H350i, H360F, H400, H410 Concentration limits: >= 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
Show this material 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
In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower.
In case of eye contact
After eye contact: rinse out with plenty of water. Remove contact lenses.
If swallowed
After swallowing: make victim drink water (two glasses at most). Consult doctor if feeling unwell.

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
Extinguish fires with water mist, alcohol-resistant foam, dry powder or carbon dioxide
Unsuitable extinguishing media
no data available

5.2 Special hazards arising from the substance or mixture

Hydrogen chloride gas Cobalt/cobalt oxides Not combustible. 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.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Advice for non-emergency personnel: Avoid inhalation of dusts. Evacuate the danger area, observe emergency procedures, consult an expert.

6.2 Environmental precautions

If safety is ensured, measures can be taken to prevent further leakage or spillage. Don't let the product go down the drain.

6.3 Methods and materials for containment and cleaning up

Take up dry. Dispose of properly. Clean up affected area. Avoid generation of dusts.

6.4 Reference to other sections

For disposal see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Work under hood. Do not inhale substance/mixture. Avoid generation of vapours/aerosols.Keep away from open flames, hot surfaces and sources of ignition.Take precautionary measures against static discharge.Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with substance.

7.2 Conditions for safe storage, including any incompatibilities

Keep the container closed and store it in a dry, ventilated and cool place.Hygroscopic.

7.3 Specific end use(s)

no data available

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Component	CAS No.	value	Control parameter	foundation
Cobalt dichloride hexahydrate	7791-13-1	PC-TWA	0.05 mg/m3	Occupational exposure limits for occupational hazards in the workplace-chemical hazards
	tip	G2B - Suspected human carcinogen		
		PC-STEL	0.1 mg/m3	Occupational exposure limits for occupational hazards in the workplace-chemical hazards
		G2B - Suspected human carcinogen		

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 EN166(EU).

Skin protection

Gloves must be checked before use. Please use proper methods to remove the gloves (do not touch the outer surface of the gloves), and avoid any skin parts contacting the product. After use, please handle the contaminated gloves carefully according to relevant laws and regulations and effective laboratory rules and procedures. Please clean and blow dry the protective gloves selected for your hands must meet the specifications given in regulation (EU) 2016 / 425 and the en 374 standard derived from it.

Body Protection

Complete suit protecting against chemicals, Flame retardant antistatic protective clothing., 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 fullface respirator with multi-purpose combination (US) or type ABEK (EN 14387) 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

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

a) Appearance	form: powder color: White to light yellow
b) Odour	no data available
c) Odour Threshold	no data available
d) pH	no data available
e) Melting point/freezing point	86°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	1.92
n) Water solubility	Soluble in water (970 g/ml at 20 °C), acetone, ether, and alcohols.
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

Risk of explosion with: Alkali metals

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 - 537 mg/kg (OECD Test Guideline 401) Inhalation: No data available

LD50 Dermal - Rat - > 2,000 mg/kg Remarks: (RTECS) The value is given in analogy to the following substances: Tricobalt tetraoxide

Skin corrosion/irritation
no data available
Serious eye damage/eye irritation
Eyes - Rabbit Result: Irreversible effects on the eye (OECD Test Guideline 405) Remarks: (in analogy to similar products) The value is given in analogy to the following substances: Cobalt(II) chloride
Respiratory or skin sensitisation
May cause allergic respiratory and skin reactions
Germ cell mutagenicity
Suspected of causing genetic defects.
Carcinogenicity
May cause cancer by inhalation.
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
Registration of toxic effects of chemical substances: GG0200000

The substance is extremely damaging to mucosal tissues and the upper respiratory tract, eyes and skin.

To our knowledge, this chemical, physical and toxic properties have not been fully studied.

Symptoms of acute cobalt poisoning: diarrhea, loss of appetite, decreased body temperature, decreased blood pressure. Toxic to the kidneys (proteinuria, anuria), heart and pancreas.

Other dangers cannot be ruled out.

The substance must be handled with particular caution

SECTION 12: Ecological information

12.1 Toxicity

Toxicity to fish(Chronic toxicity) flow-through test NOEC - Pimephales promelas (fathead minnow) - 0.21 mg/l
Remarks: (ECHA) The value is given in analogy to the following substances: Cobalt(II) chloride

Toxicity to daphnia and other aquatic invertebrates(Chronic toxicity) Remarks: (ECHA) The value is given in analogy to the following substances: Cobalt(II) chloride (Cobalt dichloride hexahydrate)

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

no data available

SECTION 13:

13.1 Disposal considerations

Product
Recycle to process, if possible. Consult your local regional authorities and an expert of disposal. You may be able to dissolve or mix material with a combustible solvent and little by little burn in a chemical incinerator equipped with an afterburner and scrubber system. If a large amount of the substance is burned at a time, an explosion may occur. Observe all federal, state and local regulations when disposing of the substance.
Contaminated packaging
Dispose of as unused product.

SECTION 14: Transport information

DOT (US)

UN number: 3077	Packing group: III	Class: 9
Proper shipping name: Environmentally hazardous substance, solid, n.o.s. (Cobalt dichloride hexahydrate)	Reportable Quantity(RQ): no data available	Poison Inhalation Hazard: no data available
Environmental Hazards: yes		

IMDG

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UN number: 3077 Packing group: III EMS-No: no data available

Proper shipping name: Environmentally hazardous substance, solid, n.o.s. (Cobalt dichloride hexahydrate)

IATA

UN number: 3077 Packing group: III Class: 9

Proper shipping name: Environmentally hazardous substance, solid, n.o.s. (Cobalt dichloride hexahydrate)

SECTION 15: Regulatory information

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

SECTION 16: Other information

Further information

 The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Aladdin Co. Ltd. and its Affiliates shall not be held liable for any damage resulting from handling or from contact with the above product.

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