

Cobalt(II) acetate tetrahydrate,
JUNSEI CHEMICAL CO., LTD.,31125jis_J_E1-2,06/Oct/2025

Date of issue for the 1st edition : 19/Dec/2013

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Safety Data Sheet

Section 1. Identification of the substance/mixture and of the company/undertaking

Product identifier:

Product name: Cobalt(II) acetate tetrahydrate

Reference number(SDS):31125jis_J_E1-2

Product type :

Reagent

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

Relevant identified uses of the product: Research and Development

Uses advised against: Do not use for other purposes.

Details of the supplier of the safety data sheet

Manufacturer/Supplier: JUNSEI CHEMICAL CO., LTD.

Address: 1-6, Ohmano-cho, Koshigaya-shi, Saitama 343-0844, Japan

Division: Quality Assurance Department

Telephone number: +81-48-986-6161

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e-mail address: shiyaku-t@junsei.co.jp

Section 2. Hazards identification

GHS classification and label elements of the product

Classification of the substance or mixture

HEALTH HAZARDS

Acute toxicity (Oral): Category 4

Respiratory sensitization: Category 1A

Skin sensitization: Category 1A

Carcinogenicity: Category 1B

Reproductive toxicity: Category 1B

Specific target organ toxicity – single exposure: Category 2 (central nervous system, gastrointestinal tract)

Specific target organ toxicity – single exposure: Category 3 (Respiratory tract irritation)

Specific target organ toxicity – repeated exposure: Category 1 (nervous system, respiratory organs, cardiovascular system, thyroid, blood system)

Specific target organ toxicity – repeated exposure: Category 2 (reproductive organs (male))

(Note) GHS classification without description: Not classified/Classification not possible

Label elements



Signal word: Danger

HAZARD STATEMENT

H302-Harmful if swallowed

H334-May cause allergy or asthma symptoms or breathing difficulties if inhaled

H317-May cause an allergic skin reaction

H350-May cause cancer

H360-May damage fertility or the unborn child

H371-May cause damage to organs

H335-May cause respiratory irritation

H372-Causes damage to organs through prolonged or repeated exposure

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H373-May cause damage to organs through prolonged or repeated exposure

PRECAUTIONARY STATEMENT

Prevention

- Obtain special instructions before use.
- Do not handle until all safety precautions have been read and understood.
- Do not breathe dust/fume/gas/mist/vapors/spray.
- In case of inadequate ventilation wear respiratory protection.
- Use only outdoors or in a well-ventilated area.
- Wash contaminated parts thoroughly after handling.
- Contaminated work clothing should not be allowed out of the workplace.
- Wear protective gloves/protective clothing/eye protection/face protection.
- Do not eat, drink or smoke when using this product.

Response

- Get medical advice/attention if you feel unwell.
- IF exposed or concerned: Get medical advice/attention.
- Call a POISON CENTER/doctor/physician if you feel unwell.
- IF exposed or concerned: Call a POISON CENTER/doctor/physician.
- If experiencing respiratory symptoms: Call a POISON CENTER/doctor/physician.
- IF INHALED: Remove person to fresh air and keep comfortable for breathing.
- IF ON SKIN: Wash with plenty of soap and water.
- If skin irritation or rash occurs: Get medical advice/attention.
- Take off contaminated clothing and wash it before reuse.
- IF SWALLOWED: Rinse mouth. Call a POISON CENTER/doctor/physician if you feel unwell.

Storage

- Store in a well-ventilated place. Keep container tightly closed.
- Store locked up.

Disposal

- Dispose of contents/container in accordance with local/national regulation.

Section 3. Composition/information on ingredients

Mixture/Substance selection:

Substance

Ingredient name:Cobalt(II) acetate tetrahydrate

Content (%): (GR) 99.0 <

(EP) 98.0 <

※GR...Guaranteed Reagent; EP...Extra Pure

Chemical formula:C4H6CoO4•4H2O

ENCS:2-693

CAS No.:6147-53-1 [71-48-7(anh)]

MW: 249.08

EC No.:200-755-8(anh)

Note : The figures shown above are not the specifications of the product.

Components contributing to the hazard

Carcinogenic (Article 57a) in REACH SVHC candidate list

Cobalt(II) acetate (anh)

Toxic for reproduction (Article 57c) in REACH SVHC candidate list

Cobalt(II) acetate (anh)

Section 4. First-aid measures

Descriptions of first-aid measures

General measures

- Get medical advice/attention if you feel unwell.

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IF INHALED

Remove person to fresh air and keep comfortable for breathing.

If experiencing respiratory symptoms: Call a POISON CENTER/doctor/physician.

IF INHALED: Call a POISON CENTER/doctor/physician if you feel unwell.

IF ON SKIN (or hair)

Take off immediately all contaminated clothing. Rinse skin with water or shower.

Wash with plenty of soap and water.

If skin irritation or rash occurs: Get medical advice/attention.

IF IN EYES

Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

If eye irritation persists: Get medical advice/attention.

IF SWALLOWED

Rinse mouth.

If victim is conscious, give 1 – 2 glasses of water.

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

Most important symptoms and effects, both acute and delayed

(Symptoms when inhalation or ingestion)

Nausea. Abdominal pain. Cough. Shortness of breath. Sore throat. Vomiting.

(Symptoms when skin and/or eye contact)

Conjunctival redness of the eyes. Redness of the skin. Pain of the eyes.

Indication of any immediate medical attention and special treatment needed

Specific treatment is required.

Section 5. Fire-fighting measures**Extinguishing media****Suitable extinguishing media**

Use appropriate extinguishing media suitable for surrounding facilities.

The product is non-flammable.

Unsuitable extinguishing media

Unsuitable extinguishing media data is not available.

Specific hazards arising from the substance or mixture

Containers may explode when heated.

Fire may produce irritating, corrosive and/or toxic gases.

Runoff from fire control or dilution water may cause pollution.

Advice for firefighters**Specific fire-fighting measures**

Evacuate non-essential personnel to safe area.

Special protective equipment and precautions for fire-fighters

Wear fire resistant or flame retardant clothing.

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

Firefighters should wear self-contained breathing apparatus with a full facepiece operated in the positive pressure mode.

Section 6. Accidental release measures**Personnel precautions, protective equipment and emergency procedures**

Ventilate area until material pick up is complete.

Wear proper protective equipment.

Environmental precautions

Avoid release to headsprings, rivers, lakes, ocean and groundwater.

Methods and materials for containment and cleaning up

Sweep up, place in a bag and hold for waste disposal.

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If appropriate, moisten first to prevent dusting.

Preventive measures for secondary accident

Collect spillage.

Section 7. Handling and storage

Precautions for safe handling

Preventive measures

(Exposure Control for handling personnel)

Do not breathe dust/fume/gas/mist/vapors/spray.

(Protective measures against fire and explosion)

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

(Exhaust/ventilator)

Exhaust/ventilator should be available.

(Precautions)

Avoid contact with skin.

Avoid contact with eyes.

Safety Measures

Obtain special instructions before use.

Do not handle until all safety precautions have been read and understood.

Use only outdoors or in a well-ventilated area.

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

Use personal protective equipment as required.

When using do not eat, drink or smoke.

Any incompatibilities

Strong oxidizing agents should not be mixed with the chemicals.

Advice on general occupational hygiene

Wash contaminated parts thoroughly after handling.

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

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

Take off contaminated clothing and wash it before reuse.

Storage

Conditions for safe storage

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

Keep cool. Protect from sunlight.

Store in accordance with local/national regulation.

Store locked up.

Container and packaging materials for safe handling

Keep only in original packaging.

Specific end use(s)

See information in Section 7.1 and 7.2 for handling and storage recommendations. See

Section 8 for exposure controls and personal protection recommendations.

Section 8. Exposure controls/personal protection

Control parameters

Control value and Concentration standard value under ISHA

Not established

Occupational Exposure Limit

JSOH

0.05mg-Co/m³

ACGIH

Not established

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Exposure controls

Appropriate engineering controls

- Do not use in areas without adequate ventilation.
- Eye wash station should be available.
- Washing facilities should be available.

Individual protection measures

Respiratory protection

- Select and wear respiratory protection in accordance with approved standards (e.g. JIS T8150).
- Recommended respiratory protection: Dust mask

Hand protection

- Wear protective gloves.
- Inspect before use and replace worn or damaged gloves.
- Contact the glove manufacturer for specific advice on glove selection and breakthrough times for your use conditions.
- Chemical-resistant, impervious gloves complying with an approved standard (e.g. JIS T8116) should be used.

Eye protection

- Wear safety glasses with side-shields.
- Wear eye/face protection in accordance with approved standards (e.g. JIS T8147).

Skin and body protection

- Wear impervious clothing and boots in case of repeated or prolonged treatment.
- Personal protective equipment for the body and skin should be selected based on the task being performed and the risks involved.

Section 9. Physical and Chemical Properties

Information on basic physical and chemical properties

- Physical state: Crystals
- Color: Red~Reddish-violet
- Odor data is not available.
- Odor threshold data is not available.
- Melting point/Freezing point: 140°C
- Boiling point or initial boiling point data is not available.
- Boiling range data is not available.
- Flammability: Non-flammable
- Lower and upper explosion limit/flammability limit data is not available.
- Flash point: Non-flammable
- Auto-ignition temperature data is not available.
- Decomposition temperature data is not available.
- pH data is not available.
- Kinematic viscosity data is not available.
- Solubility:
 - Solubility in water: Soluble
 - Solubility in solvent: Soluble in alcohol.
- Partition coefficient n-octanol/water data is not available.
- Vapor pressure data is not available.
- Density and/or relative density: 1.70g/cm³(20°C)
- Relative vapor density (Air=1) data is not available.
- Particle characteristics data is not available.

Section 10. Stability and Reactivity

Reactivity

- Reactivity data is not available.

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Chemical stability

Stable under normal storage/handling conditions.

Possibility of hazardous reactions

Decomposes on heating. This produces irritating fumes.

Reacts with strong oxidants. This generates fire and explosion hazard.

Conditions to avoid

Contact with incompatible materials.

Heating.

Incompatible materials

Strong oxidizing agents

Hazardous decomposition products

Carbon oxides, Cobalt oxides

Section 11. Toxicological Information

Information on toxicological effects

Acute toxicity

Acute toxicity (Oral)

[Product]

Category 4, Harmful if swallowed

[Data for components of the product]

[NITE-CHRIP]

rat LD50: 708 mg/kg (source: NITE)

Acute toxicity (Dermal)

[Product]

Classification not possible (Insufficient data available or no data available).

[Data for components of the product]

No data available.

Acute toxicity (Inhalation)

[Product]

Classification not possible (Insufficient data available or no data available).

[Data for components of the product]

No data available.

Irritant properties

Skin corrosion/irritation

[Product]

Classification not possible (Insufficient data available or no data available).

[Data for components of the product]

No data available.

Serious eye damage/irritation

[Product]

Classification not possible (Insufficient data available or no data available).

[Data for components of the product]

No data available.

Sensitization

Respiratory sensitization

[Product]

Category 1A, May cause allergy or asthma symptoms or breathing difficulties if inhaled

[Data for components of the product]

[NITE-CHRIP]

Category 1A (source: NITE)

Skin sensitization

[Product]

Category 1A, May cause an allergic skin reaction

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[Data for components of the product]

[NITE-CHRIP]

Category 1A (source: NITE)

Germ cell mutagenicity

[Product]

Classification not possible (Insufficient data available or no data available).

[Data for components of the product]

No data available.

Carcinogenicity

[Product]

Category 1B, May cause cancer

[Data for components of the product]

[NITE-CHRIP]

Category 1B (source: NITE)

[JSOH]

Group 2B: The agents which are probably or possibly carcinogenic to humans

[EU]

Category 1B; Substances presumed to have carcinogenic potential for humans

Reproductive toxicity

[Product]

Category 1B, May damage fertility or the unborn child

[Data for components of the product]

[NITE-CHRIP]

Category 1B (source: NITE)

Specific target organ toxicity (STOT)

STOT-single exposure

[Product]

Category 2, May cause damage to organs

Category 3, May cause respiratory irritation

[Data for components of the product]

[NITE-CHRIP]

Category 2 (gastrointestinal tract, central nervous system),

Category 3 (Respiratory tract irritation) (source: NITE)

STOT-repeated exposure

[Product]

Category 1, Causes damage to organs through prolonged or repeated exposure

Category 2, May cause damage to organs through prolonged or repeated exposure

[Data for components of the product]

[NITE-CHRIP]

Category 1 (blood system, cardiovascular system, thyroid, nervous system, respiratory system),

Category 2 (male genitalia) (source: NITE)

Aspiration hazard

[Product]

Classification not possible (Insufficient data available or no data available).

[Data for components of the product]

No data available.

Section 12. Ecological Information

Ecotoxicity

Aquatic toxicity

[Product]

Classification not possible (Insufficient data available or no data available).

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[Data for components of the product]

No data available.

Persistence and degradability

Persistence and degradability data is not available.

Bioaccumulative potential

Bioaccumulative potential data is not available.

Mobility in soil

Mobility in soil data is not available.

Other adverse effects

Ozone depleting chemical data is not available.

Section 13. Disposal considerations

Description of waste residues and information on their safe handling and methods of disposal, including the disposal of any contaminated packaging

Waste treatment methods

Dispose of contents/container in accordance with local/national regulation.

Section 14. Transport Information

UN No., UN CLASS

UN Number or ID Number : Not regulated

UN Proper Shipping Name : Not regulated

Class or division (Transport hazard class) : Not regulated

Packing group : Not regulated

IMDG Code (International Maritime Dangerous Goods Regulations)

UN Number or ID Number : Not regulated

UN Proper Shipping Name : Not regulated

Class or division (Transport hazard class) : Not regulated

Packing group : Not regulated

IATA (Dangerous Goods Regulations)

UN Number or ID Number : Not regulated

UN Proper Shipping Name : Not regulated

Class or division (Transport hazard class) : Not regulated

Packing group : Not regulated

Environmental hazards

Marine pollutants (yes/no) : no

Special precautions for user

Special precautions for user is not applicable.

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

Not applicable to Transport in bulk according to Annex II of MARPOL and the IBC Code

MARPOL Annex V – HME (Harmful to the Marine Environment)

Reproductive toxicity: cat.1, 1A, 1B

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Specific target organ toxicity – repeated exposure: cat.1

Cobalt(II) acetate tetrahydrate

Section 15. Regulatory Information

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

Mutagenic Chemical Substances [MHLW_J Notice]

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Labor Standards Act, Japan

Chemical substances or compounds (including alloys) causing disease (item (iv)-1 of Appended Table 1-2 of Regulation)

Cobalt(II) acetate tetrahydrate

Sensitization [MHLW_J Notice]

Cobalt(II) acetate tetrahydrate

List of substances subject to authorisation (REACH, Annex XIV)/SVHC – candidate list

Carcinogenic (Article 57a)

Cobalt(II) acetate (anh)

Toxic for reproduction (Article 57c)

Cobalt(II) acetate (anh)

U.S. Toxic Substances Control Act (TSCA) Inventory

Chemicals listed in TSCA Inventory

6147-53-1 [71-48-7(anh)]

All components are listed or exempted.

Other regulatory information

We are not able to check up the regulatory information with regard to the substances in your country or region, therefore, we request this matter would be filled by your responsibility.

Regulatory information with regard to this substance in your country or in your region should be examined by your own responsibility.

Ensure this material in compliance with federal requirements and ensure conformity to local regulations.

Regulatory information in this section are limited to intentional ingredient(s), but does not contain information on non-intentional ingredients or impurities which are not informed by supplier(s).

Chemical safety assessment

Advice on safe handling for this product can be found in sections 7 and 8 of this SDS.

Section 16. Other information

GHS classification and labelling

H302-Acute toxicity, Category 4: H302 Harmful if swallowed

H334-Respiratory sensitization, Category 1A: H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled

H317-Skin sensitization, Category 1A: H317 May cause an allergic skin reaction

H350-Carcinogenicity, Category 1B: H350 May cause cancer

H360-Reproductive toxicity, Category 1B: H360 May damage fertility or the unborn child

H371-STOT – single exposure, Category 2: H371 May cause damage to organs

H335-STOT – single exposure, Category 3, Respiratory tract irritation: H335 May cause respiratory irritation.

H372-STOT – Repeated exposure, Category 1: H372 Causes damage to organs through prolonged or repeated exposure

H373-STOT – Repeated exposure, Category 2: H373 May cause damage to organs through prolonged or repeated exposure

References and sources for data

Globally Harmonized System of classification and labelling of chemicals, UN

Recommendations on the TRANSPORT OF DANGEROUS GOODS 23rd edit., 2023 UN

IMDG Code, 2024 Edition (Incorporating Amendment 42-24)

IATA Dangerous Goods Regulations (66th Edition) 2025

2024 EMERGENCY RESPONSE GUIDEBOOK (US DOT)

2025 TLVs and BEIs. (ACGIH)

JIS Z 7252 : 2019

JIS Z 7253 : 2019

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Recommendation of occupational exposure limits (2023–2024) (JSOH)

Notification No. 0111–1 (January 11, 2022), Chemical Hazards Control Division, Industrial Safety and Health Department, Labour Standards Bureau, MHLW in Japan

Supplier's data/information

Chemicals safety data management system "GHS Assistant" Version 4.34 (<https://www.asahi-ghs.com/>)

NITE Chemical Risk Information Platform "NITE-CHRIIP"

(https://www.chem-info.nite.go.jp/chem/chrip/chrip_search/systemTop)

GHS Classification Guidance for Enterprises 2019 Revised Edition (Ver. 2.1) (May. 2024, METI)

Abbreviations and acronyms

SDS (Safety Data Sheet)

LD50 (Lethal Dose, 50%)

LC50 (Lethal Concentration, 50%)

IARC (International Agency for Research on Cancer)

ACGIH (American Conference of Governmental Industrial Hygienists)

EPA (US Environmental Protection Agency)

NTP (US National Toxicology Program)

METI (Ministry of Economy, Trade and Industry in Japan)

MHLW (Ministry of Health, Labour and Welfare in Japan)

MOE (Ministry of the Environment in Japan)

JSOH (Japan Society for Occupational Health)

ISHA (Industrial Safety and Health Act in Japan)

CSCL (Chemical Substances Control Law in Japan)

EU (European Union)

EC50 (Effective Concentration, 50%)

NOEC (No Observed Effect Concentration)

BOD (Biochemical Oxygen Demand)

COD (Chemical Oxygen Demand)

BCF (Bioconcentration Factor)

anh (anhydride)

General Disclaimer

This data sheet was created based on the information we currently have and may be revised according to new information. In addition, the precautions apply only to normal handling, and in the case of special handling, please make adequate countermeasure to maintain your safety.

The data given here is based on current knowledge and experience. The purpose of this Safety Data Sheet is to describe the products in terms of their safety requirements. The data does not signify any warranty with regard to the products' properties.

The GHS classification data given here is based on current Data published in Japan (National Institute of Technology and Evaluation (NITE) Chemical Risk Information Platform (NITE-CHRIIP), up to FY2024).