



## Safety Data Sheet

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

**Product identifier:**

Product name: Cobalt(II)nitrate,6-hydrate

SDS No. : 1760E-2

**Details of the supplier of the safety data sheet**

Manufacturer/Supplier: KISHIDA CHEMICAL CO., LTD.

Address: 3-1, Honmachibashi, Chuo-ku, Osaka, JAPAN

Division: Safety Management Dept. of Chemicals

Telephone number: +81-6-6946-8061

FAX: +81-6-6946-1607

e-mail address: kagakuhinanzenkanri@kishida.co.jp

### 2. Hazards identification

**GHS classification and label elements of the product****Classification of the substance or mixture****HEALTH HAZARDS**

Respiratory sensitization: Category 1

Skin sensitization: Category 1

Carcinogenicity: Category 2

Reproductive toxicity: Category 1B

Specific target organ toxicity – repeated exposure: Category 1 (respiratory apparatus/system; heart)

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

**Label elements**

Signal word: Danger

**HAZARD STATEMENT**

May cause allergy or asthma symptoms or breathing difficulties if inhaled

May cause an allergic skin reaction

Suspected of causing cancer

May damage fertility or the unborn child

Causes damage to organs through prolonged or repeated exposure (respiratory apparatus/system; heart)

**PRECAUTIONARY STATEMENT****Prevention**

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

In case of inadequate ventilation wear respiratory protection. (as specified by the manufacturer/supplier or the competent authority.)

Wash contaminated parts thoroughly after handling.

Wear protective gloves.

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

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.



If experiencing respiratory symptoms: Call a POISON CENTER or 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.

**Disposal**

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

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**3. Composition/information on ingredients****Mixture/Substance selection:****Substance**

Ingredient name:Cobalt nitrate, 6-hydrate

Content (%):97(min)

Chemical formula:CoH<sub>12</sub>N<sub>2</sub>O<sub>12</sub>

Chemicals No, Japan:1-266

CAS No.:10026-22-9

MW:291.03

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

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**4. First-aid measures****Descriptions of first-aid measures****General measures**

Get medical attention/advice if you feel unwell.

**IF INHALED**

Remove person to fresh air and keep comfortable for breathing.

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

Call a POISON CENTER or doctor/physician if you feel unwell.

**IF ON SKIN (or hair)**

Take off immediately all contaminated clothing. Rinse skin with water/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.

Call a POISON CENTER or doctor/physician if you feel unwell.

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

Use appropriate extinguishing media suitable for surrounding facilities.

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.

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

Evacuate non-essential personnel to safe area.

Special protective equipment and precautions for fire-fighters



Wear fire/flame resistant/retardant clothing.  
Wear protective gloves/protective clothing/eye protection/face protection.  
Firefighters should wear self-contained breathing apparatus with full face piece operated positive pressure mode.

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## 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

Prevent spills from entering sewers, watercourses or low areas.

Methods and materials for containment and cleaning up

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

Preventive measures for secondary accident

Collect spillage.

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## 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/sparks/open flames/hot surfaces. – No smoking.

(Exhaust/ventilator)

Exhaust/ventilator should be available.

(Safety treatments)

Avoid contact with skin.

Avoid contact with eyes.

Safety Measures

Wear protective gloves, protective clothing or face protection.

When using do not eat, drink or smoke.

Any incompatibilities

See "10.Stability and Reactivity"

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

Keep container tightly closed.

Store in a cool, dry place. Do not store in direct sunlight.

Container and packaging materials for safe handling

Glass

Polyethylene



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## 8. Exposure controls/personal protection

### Control parameters

#### Adopted value

(Cobalt nitrate, 6-hydrate)

ACGIH(2018) TWA: 0.02mg-Co/m<sup>3</sup>(I) (Pulm func changes)

#### Notation

(Cobalt nitrate, 6-hydrate)

DSEN; RSEN

### 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

Wear respiratory protection.

##### Hand protection

Wear protective gloves.

##### Eye protection

Wear eye/face protection.

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## 9. Physical and Chemical Properties

### Information on basic physical and chemical properties

Physical state: Crystals

Color: Reddish brown

Odor: None

pH:  $\geq 3.0$ (50g/L,25°C)

Boiling point or initial boiling point: (decomposes) 74°C

Boiling range data is not available.

Melting point/Freezing point: 55°C

Decomposition temperature data is not available.

Flammability (gases, liquids and solids) data is not available.

Flash point data is not available.

Auto-ignition temperature data is not available.

Lower and upper explosion limit/flammability limit data is not available.

Vapor pressure data is not available.

Relative vapor density (Air=1) data is not available.

Density and/or relative density: 1.88g/cm<sup>3</sup>

Kinematic viscosity data is not available.

#### Solubility:

Solubility in water: 133.8 g/100 ml (0 °C)

n-Octanol/water partition coefficient data is not available.

No Particle characteristics data is not available.

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## 10. Stability and Reactivity

### Reactivity

Not available.

### Chemical stability

Deliquescent material.

### Possibility of hazardous reactions

Decomposes on heating. This produces toxic gases including nitrogen oxides. Reacts with



combustible substances. This generates fire hazard. (ICSC 0784)

Conditions to avoid

Contact with incompatible materials.

Contact with fire source.

Incompatible materials

Combustible substances

Hazardous decomposition products

Nitrogen oxides

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## 11. Toxicological Information

Information on toxicological effects

Acute toxicity data is not available.

Irritant properties

Skin corrosion/irritation data is not available.

Serious eye damage/irritation data is not available.

Sensitization

Respiratory sensitization

[GHS Cat. Japan, base data]

(Cobalt nitrate, 6-hydrate)

cat. 1; CICADs 69, 2006

Skin sensitization

[GHS Cat. Japan, base data]

(Cobalt nitrate, 6-hydrate)

cat. 1; JSOH, 2008

Mutagenic effects data is not available.

Carcinogenicity

[GHS Cat. Japan, base data]

(Cobalt nitrate, 6-hydrate)

cat.2; IARC Gr. 2A (IARC, 1991 et al.)

(Cobalt nitrate, 6-hydrate)

IARC-Gr.2B : Possibly carcinogenic to humans

(Cobalt nitrate, 6-hydrate)

ACGIH-A3(2018) : Confirmed Animal Carcinogen with Unknown Relevance to Humans

Reproductive toxicity

[GHS Cat. Japan, base data]

(Cobalt nitrate, 6-hydrate)

cat. 1B; (Cobalt sulfate heptahydrate) MOE risk assessment vol11., 2013 et al.

STOT

STOT-single exposure data is not available.

STOT-repeated exposure

[cat.1]

[GHS Cat. Japan, base data]

(Cobalt nitrate, 6-hydrate)

respiratory apparatus/system; heart (CICAD 69, 2006)

Aspiration hazard data is not available.

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## 12. Ecological Information

Ecotoxicity

Ecotoxicity data is not available.

Water solubility

(Cobalt nitrate, 6-hydrate)

133.8 g/100 ml (0°C) (ICSC, 2001)



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.

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### 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.

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### 14. Transport Information

Not applicable to UN No., UN CLASS  
Not applicable to IMDG Code  
Not applicable to IATA Dangerous Goods Regulations  
Environmental hazards  
MARPOL Annex III – Prevention of pollution by harmful substances  
Marine pollutants (yes/no) : no  
MARPOL Annex V – Prevention of pollution by garbage discharge  
Reproductive toxicity: cat.1, 1A, 1B  
Cobalt nitrate, 6-hydrate  
Specific target organ toxicity – repeated exposure: cat.1  
Cobalt nitrate, 6-hydrate

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### 15. Regulatory Information

Safety, health and environmental regulations/legislation specific for the substance or mixture  
US major regulations  
Chemicals listed in TSCA Inventory  
Cobalt nitrate, 6-hydrate  
Other regulatory information  
Ensure this material in compliance with federal requirements and ensure conformity to local regulations.

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### 16. Other information

GHS classification and labelling  
Resp. Sens. 1: H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled  
Skin Sens. 1: H317 May cause an allergic skin reaction  
Carc. 2: H351 Suspected of causing cancer  
Repr. 1B: H360 May damage fertility or the unborn child  
STOT RE 1: H372 Causes damage to organs through prolonged or repeated exposure  
Reference Book  
Globally Harmonized System of classification and labelling of chemicals, (6th ed., 2015), UN Recommendations on the TRANSPORT OF DANGEROUS GOODS 20th edit., 2017 UN IMDG Code, 2018 Edition (Incorporating Amendment 39-18)  
IATA Dangerous Goods Regulations (60th Edition) 2019



Classification, labelling and packaging of substances and mixtures (table3-1 ECNO6182012)  
2016 EMERGENCY RESPONSE GUIDEBOOK (US DOT)  
2019 TLVs and BEIs. (ACGIH)  
<http://monographs.iarc.fr/ENG/Classification/index.php>  
Supplier's data/information

**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 Japan official data (NITE published in 2018).