

# SAFETY DATA SHEETS

According to the UN GHS revision 8

Version: 1.0

Creation Date: July 15, 2019

Revision Date: July 15, 2019



YATAI CHEMICAL CORP

## 1. SECTION 1: Identification

### 1.1. GHS Product identifier

**Product name** COBALT SULFATE HEPTAHYDRATE

### 1.2. Other means of identification

**Other names** cobalt(2+),sulfate,heptahydrate;Cobalt(II) sulfate heptahydrate;Cobalt sulfate heptahydrate

### 1.3. Recommended use of the chemical and restrictions on use

**Identified uses** Industrial and scientific research uses.

**Uses advised against** no data available

### 1.4. Supplier's details

**Company** Yatai Chemical Corp  
**Address** Room 20A5, No.585, Longhua West Road, Shanghai, China

**Telephone** 0086-21-64563115

### 1.5. Emergency phone number

**Emergency phone number** 0086-21-64563115

**Service hours** Monday to Friday, 9am-5pm (Standard time zone: UTC/GMT +8 hours).

## 2. SECTION 2: Hazard identification

### 2.1. Classification of the substance or mixture

Acute toxicity - Category 4, Oral

Skin sensitization, Category 1

Respiratory sensitization, Category 1

Germ cell mutagenicity, Category 2

Carcinogenicity, Category 1B

Reproductive toxicity, Category 1B

Hazardous to the aquatic environment, short-term (Acute) - Category Acute 1

Hazardous to the aquatic environment, long-term (Chronic) - Category Chronic 1

### 2.2. GHS label elements, including precautionary statements

**Pictogram(s)**



**Signal word**

Danger

<b>Hazard statement(s)</b>	H302 Harmful if swallowedH317 May cause an allergic skin reactionH334 May cause allergy or asthma symptoms or breathing difficulties if inhaledH341 Suspected of causing genetic defectsH350 May cause cancerH360 May damage fertility or the unborn childH410 Very toxic to aquatic life with long lasting effects
<b>Precautionary statement(s)</b>	
<b>Prevention</b>	P264 Wash ... thoroughly after handling.P270 Do not eat, drink or smoke when using this product.P261 Avoid breathing dust/fume/gas/mist/vapours/spray.P272 Contaminated work clothing should not be allowed out of the workplace.P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection/...P284 [In case of inadequate ventilation] wear respiratory protection.P203 Obtain, read and follow all safety instructions before use.P273 Avoid release to the environment.
<b>Response</b>	P301+P317 IF SWALLOWED: Get medical help.P330 Rinse mouth.P302+P352 IF ON SKIN: Wash with plenty of water/...P333+P317 If skin irritation or rash occurs: Get medical help.P321 Specific treatment (see ... on this label).P362+P364 Take off contaminated clothing and wash it before reuse.P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.P342+P316 If experiencing respiratory symptoms: Get emergency medical help immediately.P318 IF exposed or concerned, get medical advice.P391 Collect spillage.
<b>Storage</b>	P405 Store locked up.
<b>Disposal</b>	P501 Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

**2.3. Other hazards which do not result in classification**

no data available

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### **3. SECTION 3: Composition/information on ingredients**

#### **3.1. Substances**

<b>Chemical name</b>	<b>Common names and</b>	<b>CAS</b>	<b>EC</b>	<b>Concentration</b>
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	<b>synonyms</b>	<b>number</b>	<b>number</b>	
COBALT SULFATE HEPTAHYDRATE	COBALT SULFATE HEPTAHYDRATE	10026- 24-1	600- 050-9	100%

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## **4. SECTION 4: First-aid measures**

### **4.1. Description of necessary first-aid measures**

Medical attention is required. Consult a doctor. Show this safety data sheet (SDS) to the doctor in attendance.

#### **If inhaled**

Fresh air, rest. Artificial respiration may be needed. Refer for medical attention.

#### **Following skin contact**

Remove contaminated clothes. Rinse and then wash skin with water and soap.

#### **Following eye contact**

First rinse with plenty of water for several minutes (remove contact lenses if easily possible), then refer for medical attention.

#### **Following ingestion**

Rinse mouth. Give one or two glasses of water to drink. Refer for medical attention .

### **4.2. Most important symptoms/effects, acute and delayed**

no data available

### **4.3. Indication of immediate medical attention and special treatment needed, if necessary**

no data available

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## **5. SECTION 5: Fire-fighting measures**

### **5.1. Suitable extinguishing media**

Use dry chemical, carbon dioxide or alcohol-resistant foam.

### **5.2. Specific hazards arising from the chemical**

Not combustible. Gives off irritating or toxic fumes (or gases) in a fire.

### **5.3. Special protective actions for fire-fighters**

In case of fire in the surroundings, use appropriate extinguishing media.

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## **6. SECTION 6: Accidental release measures**

### **6.1. Personal precautions, protective equipment and emergency procedures**

Personal protection: particulate filter respirator adapted to the airborne concentration of the substance. Do NOT let this chemical enter the environment. Sweep spilled substance into covered containers. If appropriate, moisten first to prevent dusting. Carefully collect remainder. Then store and dispose of according to local regulations.

### **6.2. Environmental precautions**

Prevent further spillage or leakage if it is safe to do so. Do not let the chemical enter drains. Discharge into the environment must be avoided.

### **6.3. Methods and materials for containment and cleaning up**

Collect and arrange disposal. Keep the chemical in suitable and closed containers for disposal. Remove all sources of ignition. Use spark-proof tools and explosion-proof equipment. Adhered or collected material should be promptly disposed of, in accordance with appropriate laws and regulations.

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## **7. SECTION 7: Handling and storage**

### **7.1. Precautions for safe handling**

Handling in a well ventilated place. Wear suitable protective clothing. Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Use non-sparking tools. Prevent fire caused by electrostatic discharge steam.

### **7.2. Conditions for safe storage, including any incompatibilities**

Separated from strong oxidants.

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## **8. SECTION 8: Exposure controls/personal protection**

### **8.1. Control parameters**

#### **Occupational Exposure limit values**

TLV: 0.02 mg/m<sup>3</sup>, as TWA; A3 (confirmed animal carcinogen with unknown relevance to humans); BEI issued.MAK: (as Co, inhalable fraction): skin absorption (H); sensitization of respiratory tract and skin (SAH); carcinogen category: 2; germ cell mutagen group: 3A

#### **Biological limit values**

no data available

### **8.2. Appropriate engineering controls**

Ensure adequate ventilation. Handle in accordance with good industrial hygiene and safety practice. Set up emergency exits and the risk-elimination area.

### **8.3. Individual protection measures, such as personal protective equipment (PPE)**

#### **Eye/face protection**

Wear safety goggles or eye protection in combination with breathing protection if powder.

#### **Skin protection**

Protective gloves. Protective clothing.

#### **Respiratory protection**

Use local exhaust or breathing protection.

#### **Thermal hazards**

no data available

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## **9. SECTION 9: Physical and chemical properties and safety characteristics**

<b>Physical state</b>	Solid. Crystalline.
<b>Colour</b>	Rose.
<b>Odour</b>	no data available
<b>Melting point/freezing point</b>	> 700 °C.
<b>Boiling point or initial boiling point and boiling range</b>	735°C
<b>Flammability</b>	no data available
<b>Lower and upper explosion limit/flammability limit</b>	no data available
<b>Flash point</b>	no data available
<b>Auto-ignition temperature</b>	no data available
<b>Decomposition temperature</b>	no data available
<b>pH</b>	no data available
<b>Kinematic viscosity</b>	no data available
<b>Solubility</b>	In water: 376.7 g/L. Temperature:20 °C. pH:>= 6 - <= 6.3. Remarks:(+7.7 g/L).;391.5 g/L. Temperature:37 °C. pH:>= 6.19 - <= 6.32. Remarks:(+14.2 g/L).
<b>Partition coefficient n-octanol/water</b>	no data available
<b>Vapour pressure</b>	no data available
<b>Density and/or relative density</b>	3.71. Temperature:25 °C.
<b>Relative vapour density</b>	no data available
<b>Particle characteristics</b>	no data available

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## 10. SECTION 10: Stability and reactivity

### 10.1. Reactivity

no data available

### 10.2. Chemical stability

no data available

### 10.3. Possibility of hazardous reactions

Decomposes above 100°C . This produces toxic fumes of sulfur oxides. The dust reacts with strong oxidants. This generates fire and explosion hazard.

### 10.4. Conditions to avoid

no data available

### 10.5. Incompatible materials

no data available

### 10.6. Hazardous decomposition products

no data available

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## 11. SECTION 11: Toxicological information

### Acute toxicity

- Oral: LD50 - rat (male/female) - 768 mg/kg bw. Remarks: This is the LD50 for the cobalt compound tested.
- Inhalation: no data available
- Dermal: LD50 - rat (male/female) - > 2 000 mg/kg bw.

### Skin corrosion/irritation

no data available

### Serious eye damage/irritation

no data available

### Respiratory or skin sensitization

no data available

### Germ cell mutagenicity

no data available

### Carcinogenicity

no data available

### Reproductive toxicity

no data available

### STOT-single exposure

The substance is irritating to the eyes, skin and respiratory tract.

### STOT-repeated exposure

Repeated or prolonged contact may cause skin sensitization. Repeated or prolonged inhalation may cause asthma. The substance may have effects on the heart, thyroid and bone marrow. This may result in cardiomyopathy, goiter and polycythemia. This substance is possibly carcinogenic to humans. Animal tests show that this substance possibly causes toxic effects upon human reproduction. Animal tests show that this substance possibly causes malformations in human babies.

### Aspiration hazard

Evaporation at 20°C is negligible; a harmful concentration of airborne particles can, however, be reached quickly when dispersed.

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## 12. SECTION 12: Ecological information

### 12.1. Toxicity

- Toxicity to fish: LC50 - Pimephales promelas - 54.1 mg/L - 96 h.
- Toxicity to daphnia and other aquatic invertebrates: NOEC - Chironomus tentans - 72.3 mg/L - 96 h.
- Toxicity to algae: NOEC - Dunaliella tertiolecta - 4 671.8 µg/L - 96 h.
- Toxicity to microorganisms: EC10 - activated sludge - 3.73 mg/L - 30 min.

### 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. Other adverse effects

no data available

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# 13. SECTION 13: Disposal considerations

## 13.1. Disposal methods

### Product

The material can be disposed of by removal to a licensed chemical destruction plant or by controlled incineration with flue gas scrubbing. Do not contaminate water, foodstuffs, feed or seed by storage or disposal. Do not discharge to sewer systems.

### Contaminated packaging

Containers can be triply rinsed (or equivalent) and offered for recycling or reconditioning. Alternatively, the packaging can be punctured to make it unusable for other purposes and then be disposed of in a sanitary landfill. Controlled incineration with flue gas scrubbing is possible for combustible packaging materials.

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# 14. SECTION 14: Transport information

## 14.1. UN Number

ADR/RID: UN3077 (For reference only, please check.)

IMDG: UN3077 (For reference only, please check.)

IATA: UN3077 (For reference only, please check.)

## 14.2. UN Proper Shipping Name

ADR/RID:  
ENVIRONMENTALLY  
HAZARDOUS  
SUBSTANCE, SOLID,  
N.O.S. (For reference  
only, please check.)

IMDG:  
ENVIRONMENTALLY  
HAZARDOUS  
SUBSTANCE, SOLID,  
N.O.S. (For reference  
only, please check.)

IATA:  
ENVIRONMENTALLY  
HAZARDOUS  
SUBSTANCE, SOLID,  
N.O.S. (For reference  
only, please check.)

## 14.3. Transport hazard class(es)

ADR/RID: 9 (For reference only, please check.)

IMDG: 9 (For reference only, please check.)

IATA: 9 (For reference only, please check.)

## 14.4. Packing group, if applicable

ADR/RID: III (For reference only, please check.)

IMDG: III (For reference only, please check.)

IATA: III (For reference only, please check.)

## 14.5. Environmental hazards

ADR/RID: Yes

IMDG: Yes

IATA: Yes

## 14.6. Special precautions for user

no data available

## 14.7. Transport in bulk according to IMO instruments

no data available

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## 15. SECTION 15: Regulatory information

### 15.1. Safety, health and environmental regulations specific for the product in question

Chemical name	Common names and synonyms	CAS number	EC number
COBALT SULFATE HEPTAHYDRATE	COBALT SULFATE HEPTAHYDRATE	10026-24-1	600-050-9
<b>European Inventory of Existing Commercial Chemical Substances (EINECS)</b>			Not Listed.
<b>EC Inventory</b>			Not Listed.
<b>United States Toxic Substances Control Act (TSCA) Inventory</b>			Not Listed.
<b>China Catalog of Hazardous chemicals 2015</b>			Not Listed.
<b>New Zealand Inventory of Chemicals (NZIoC)</b>			Listed.
<b>Philippines Inventory of Chemicals and Chemical Substances (PICCS)</b>			Listed.
<b>Vietnam National Chemical Inventory</b>			Listed.
<b>Chinese Chemical Inventory of Existing Chemical Substances (China IECSC)</b>			Listed.
<b>Korea Existing Chemicals List (KECL)</b>			Not Listed.

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## 16. SECTION 16: Other information

### Information on revision

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### Abbreviations and acronyms

- CAS: Chemical Abstracts Service
- ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road
- RID: Regulation concerning the International Carriage of Dangerous Goods by Rail
- IMDG: International Maritime Dangerous Goods
- IATA: International Air Transportation Association
- TWA: Time Weighted Average
- STEL: Short term exposure limit
- LC50: Lethal Concentration 50%
- LD50: Lethal Dose 50%
- EC50: Effective Concentration 50%

### References

- IPCS - The International Chemical Safety Cards (ICSC), website: <http://www.ilo.org/dyn/icsc/showcard.home>



- HSDB - Hazardous Substances Data Bank, website:  
<https://toxnet.nlm.nih.gov/newtoxnet/hsdb.htm>
- IARC - International Agency for Research on Cancer, website:  
<http://www.iarc.fr/>
- eChemPortal - The Global Portal to Information on Chemical Substances by OECD, website:  
[http://www.echemportal.org/echemportal/index?pageID=0&request\\_locale=en](http://www.echemportal.org/echemportal/index?pageID=0&request_locale=en)
- CAMEO Chemicals, website: <http://cameochemicals.noaa.gov/search/simple>
- ChemIDplus, website: <http://chem.sis.nlm.nih.gov/chemidplus/chemidlite.jsp>
- ERG - Emergency Response Guidebook by U.S. Department of Transportation, website: <http://www.phmsa.dot.gov/hazmat/library/erg>
- Germany GESTIS-database on hazard substance, website:  
<http://www.dguv.de/ifa/gestis/gestis-stoffdatenbank/index-2.jsp>
- ECHA - European Chemicals Agency, website: <https://echa.europa.eu/>

#### **Other Information**

Anyone who has shown symptoms of asthma due to this substance should avoid all further contact with this substance. Depending on the degree of exposure, periodic medical examination is suggested. Environmental effects from the substance have not been investigated but data on cobalt ion suggest that it may be hazardous to aquatic organisms. See ICSC 0783.

**Any questions regarding this SDS, Please send your inquiry to [ydcl@yataichemical.com](mailto:ydcl@yataichemical.com)**

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*Disclaimer: 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. We as supplier shall not be held liable for any damage resulting from handling or from contact with the above product.*