

Safety Data Sheet

1. Product and Company Information

Product name	: Cobalt Chloride Paper
Company	: Toyo Roshi Kaisha, Ltd.
Head office	: 1-18-10 Otowa, Bunkyo-ku, Tokyo, 112-0013 Japan
Section in charge	: Quality Assurance Room
Phone	: 81-(0)3-5981-0577
Fax	: 81-(0)3-5981-0583
Emergency contact number	: Same as above
Recommended application and limitation	: Detection of moisture
Reference No.	: MC-1030J-10

2. Hazard Summary


GHS Classification

Physical hazard	: Not applicable.
Human health hazard	
Acute toxicity (Oral)	: Category 4.
(Dermal)	: Not classified.
(Inhalation: gas)	: Not applicable.
(Inhalation: vapour)	: Not applicable.
Respiratory/ Skin sensitization	: Respiratory, Skin sensitization Category 1.
Carcinogenicity	: Category 2.
Reproductive toxicity	: Category 2.

Environmental hazard

Hazardous to the aquatic environment (acute)	: Category 2.
Hazardous to the aquatic environment (chronic)	: Category 2.

Label element

Pictograms or symbols	: 
-----------------------	---

Signal words

: Danger.

Hazard statements

: Harmful if swallowed.
May cause allergy or asthma symptoms or breathing difficulties if inhaled.
May cause an allergic skin reaction.
Limited carcinogenic concerns.
Suspected of damaging fertility or the unborn child.
Toxic to aquatic life.
Toxic to aquatic life with long lasting effects.

Precautionary statements

Safety measure

: Wash hands thoroughly after handling.
Do not eat, drink, or smoke when using this product.
In case of inadequate ventilation wear respiratory protection.
Avoid breathing dust.
Wear protective gloves, protective clothing, and eye protective.
Contaminated work clothing should not be allowed out of the work place.
Do not handle until notes have been read and understood.
Avoid releasing to the environment.

First aid measures : If ingested, and feeling ill, consult with a physician.
 Make sure to rinse mouth thoroughly.
 If experiencing respiratory symptoms: Contact a doctor.
 In case of skin contact, wash with plenty of soap and water.
 In case of skin irritation or eruptions, consult with a physician for treatment.
 Wash contaminated clothing before reuse.
 In case of exposure or care for exposure, consult with a physician for treatment.
 Collect spillage.

3. Composition and Information on ingredients

Single substance/Mixtures	: Mixtures	
Chemical name or general name	: Test Paper	
Ingredients and Content	: Cellulose	(Base paper)
	: Cobalt(II) chloride · hexahydrate	(Reagent)
Chemical formula or structural formula	: Cellulose	$[C_6H_{10}O_5]_n$
	: Cobalt(II) chloride · hexahydrate	$CoCl_2 \cdot 6H_2O$
Reference Number in Gazetted List in Japan		
Law Concerning the Evaluation of Chemical Substances and Regulation of Their		
Manufacture, etc.	: Cobalt(II) chloride · hexahydrate	(1) -207
Japan's Industrial Safety and Health Law	: Cobalt(II) chloride · hexahydrate	172
CAS No.	: Cellulose	9004-34-6
	: Cobalt(II) chloride · hexahydrate	7791-13-1
UN Classification	: Cobalt(II) chloride · hexahydrate	Class9
UN No.	: Cobalt(II) chloride · hexahydrate	3077
	This mixture is not applicable to the U.N. classification.	

4. First Aid Measures

Eye contact	: Immediately wash thoroughly with clean running water. Then, consult with a physician.
Skin contact	: Wash with plenty soap and water.
Inhalation	: Not applicable.
Ingestion	: When feeling ill, contact a doctor. Make sure to rinse mouth thoroughly. If experiencing respiratory symptoms: Contact a doctor.

5. Fire Fighting Measures

Extinguishing procedure	: Take the same procedure as a general fire.
Unacceptable extinguishing media	: No data available.
Extinguishing media	: Plenty of water (spray), dry chemicals, carbon dioxide, foam chemicals, and halogen media.

6. Accidental Release Measures

Personal precautions	: No data available.
Protective equipment and emergency procedures	: No data available.
Precautions for environment	: No data available.
Collection/neutralization	: No data available.
Follow [Disposal Considerations] when disposing of the collected material.	

7. Handling and Storage

Handling	: _____
Storage	: In order to prevent the alteration and/or deterioration caused by moisture absorption, seal the container tightly and store the container at a cool and dark place. Do not store with oxides and/or organic peroxides.

8. Exposure controls / Personal protection

Administrative concentration	: _____
Acceptable concentration	
Japan Society for Occupational Health	: _____
ACGIH	: _____
Facility provision	: _____
Protective equipment	: Use appropriate protective tools if necessary.

9. Physical and Chemical Properties

Appearance (Physical property, shape, color, etc.)	: Blue - light red.
Odour	: None.
pH	: No data available.
Melting point /Freezing point	: No data available.
Flash point	: No data available.
Explosive limit	Upper limit : No data available.
	Lower limit : No data available.
Relative density	: No data available.
Solubility	: No data available.
Spontaneous ignition point	: No data available.
Decomposition temperature	: No data available.
Flammability (Solid, gas)	: Yes.

10. Stability and Reactivity

Stability, Reactivity	: Stable under normal handling.
Possibility of hazardous reactions	: No data available.
Conditions to avoid	: Direct sunlight, ultraviolet light, wetting, high temperature, high humidity, open-air storage.
Incompatible materials	: Oxidizers.
Hazardous decomposition products	: Carbon monoxide, carbon dioxide, Cobalt oxide, Chlorine, Chlorine oxide.

11. Toxicological Information

Acute toxicity	
(Oral)	: Category 4. (as mixtures) Due to added result, acute toxicity estimated value (ATE) of above component in composite is determined. (as a single substance) Category 4 RAT ORL LD ₅₀ =766mg/kg (Cobalt(II) chloride · hexahydrate)
(Dermal)	: Not classified. (as mixtures) Due to added result, acute toxicity estimated value (ATE) of above component in composite is determined.
(Inhalation: gas)	: Not applicable. (as mixtures) Determined due to component concentration of mixture.
(Inhalation: vapour)	: Not applicable. (as mixtures) Determined due to component concentration of mixture.
(Inhalation: dust, mist)	: Classification is not possible due to lack of data.

Skin corrosion/ Irritation	: Classification is not possible due to lack of data.
Serious eye damage and eye irritation	: Classification is not possible due to lack of data.
Respiratory/ Skin sensitization	: Category 1. Respiratory, Skin sensitization. (as mixtures) (as a single substance) Category 1. Respiratory, Skin sensitization. Cobalt compound is categorized in skin sensitization material and respiratory sensitization material of a first group by Japan Society of Occupational Health. Skin disorders · Airway / lung injuries might be caused by the occupational disease chemical (cobalt and its compound) as reported by the Japanese Labor Standards Act. (Cobalt(II) chloride · hexahydrate)
Germ cell mutagenicity	: Classification is not possible due to lack of data.
Carcinogenicity	: Category 2. (as mixtures) (as a single substance) Category 2 Limited carcinogenic concerns. IRAC 2B. (Cobalt(II) chloride · hexahydrate)
Reproductive toxicity	: Category 2. (as mixtures) (as a single substance) Category 2 There is description about reproductive toxicity test results. (CICAD , 2006) (Cobalt(II) chloride · hexahydrate)
Specific target organ toxicity - Single exposure	: Classification is not possible due to lack of data.
Specific target organ toxicity - Repeated exposure	: Classification is not possible due to lack of data.
Aspiration hazard	: Classification is not possible due to lack of data.

12. Ecological Information

Ecotoxicity	
Hazardous to the aquatic environment (acute)	: Category 2. (as mixtures) (as a single substance) Category 2 Freshwater fish LC ₅₀ =5.7~1344mg/L/96H (as Cobalt(II) chloride · hexahydrate)
Hazardous to the aquatic environment (chronic)	: Category 2. (as mixtures) (as a single substance) Category 2 (as Cobalt(II) chloride · hexahydrate)
Persistence and Degradability	: No data available.
Bioaccumulative potential	: No data available.
Mobility in soil	: No data available.
Ozone layer hazard	: Classification is not possible due to lack of data.
Other	: Do not dispose or release to ocean or any other water area preventing environmental contamination and intake by marine and bird life.

13. Disposal Considerations

Dispose in accordance with federal, state and local regulations.

Just like disposal of general industrial waste, ask for industrial waste disposer accepted by prefectural governors or for a local public agency for disposal.

When incinerating the material, use the specific incineration facility. Take appropriate procedure that satisfies Clean Air Act, Waste Disposal and Public Cleaning Law, and Clean Water Law. (We recommend disposing the material as industrial waste.)

14. Transport Information

15. Regulatory Information

Industrial Safety and Health Law : Article 57-1 Cabinet order 18, "Hazardous substances that names are to be viewed" (Cobalt(II) chloride · hexahydrate)
Article 57-2 Cabinet order 18-2, Appendix 9 "Hazardous substances that names are to be reported" (Cabinet order 172 cobalt and its compounds)

Law concerning Pollutant Release and Transfer Register

: Class 1 designated
(Cabinet order 132 Cobalt(II) chloride · hexahydrate)

16. Other information

Handling of written contents

Contents of this data sheet are based on materials, information, and data acquirable at this point and are subject to revision due to new knowledge.

In addition, contents such as contained amount, physical and chemical properties, and hazards identification are not subject of any guarantee. These precautions are applied only during standard handling. If the material is used in a special way, take appropriate safety measures that correspond to actual applications and usages.

Each user is responsible to take appropriate measures with due consideration of contents in this sheet.

Please note that this Material Safety Data Sheet is created according to Japanese law.

List of references

- Hazard communication of chemicals based on GHS - Labelling and Safety Data Sheet(SDS) (JIS Z 7253: 2012)
-