

# Safety Data Sheet

## Cobalt Chloride, 6-Hydrate

**CAROLINA**<sup>®</sup>  
www.carolina.com

### Section 1 Product Description

**Product Name:** Cobalt Chloride, 6-Hydrate  
**Recommended Use:** Science education applications  
**Synonyms:** Cobalt (II) chloride, hexahydrate: cobalt dichloride  
**Distributor:** Carolina Biological Supply Company  
2700 York Road, Burlington, NC 27215  
1-800-227-1150  
**Chemical Information:** 800-227-1150 (8am-5pm (ET) M-F)  
**Chemtrec:** 800-424-9300 (Transportation Spill Response 24 hours)

### Section 2 Hazard Identification

Classification of the chemical in accordance with paragraph (d) of §1910.1200;

**DANGER**



Toxic if swallowed. Causes severe skin burns and eye damage. May cause an allergic skin reaction. Causes serious eye damage. May cause cancer. Very toxic to aquatic life.

**GHS Classification:**

Skin Corrosion/Irritation Category 1A, Serious Eye Damage/Eye Irritation Category 1, Skin Sensitisation Category 1, Carcinogenicity Category 1B, Reproductive Toxicity Category 1B, Hazardous to the aquatic environment - Acute Category 1, Acute Toxicity - Oral Category 3, Acute Toxicity - Dermal Category 5

**Other Safety Precautions:** IF exposed or concerned: Get medical advice/attention.

### Section 3 Composition / Information on Ingredients

| <u>Chemical Name</u>            | <u>CAS #</u> | <u>%</u> |
|---------------------------------|--------------|----------|
| Cobalt (II) Chloride, 6-hydrate | 7791-13-1    | 100      |

### Section 4 First Aid Measures

**Emergency and First Aid Procedures**

**Inhalation:** IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.  
**Eyes:** IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
**Skin Contact:** IF ON SKIN: Gently wash with plenty of soap and water. Remove/Take off immediately all contaminated clothing. Wash contaminated clothing before reuse. IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. If skin irritation or rash occurs: Get medical advice/attention.  
**Ingestion:** IF SWALLOWED: rinse mouth. Do NOT induce vomiting. Immediately call a POISON CENTER or doctor/physician.

### Section 5 Firefighting Procedures

**Extinguishing Media:** Use media suitable to extinguish surrounding fire.  
**Fire Fighting Methods and Protection:** Firefighters should wear full protective equipment and NIOSH approved self-contained breathing apparatus.  
**Fire and/or Explosion Hazards:** N/A

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**Hazardous Combustion Products:** Carbon dioxide, Carbon monoxide, Hydrogen chloride

## Section 6 Spill or Leak Procedures

**Steps to Take in Case Material Is Released or Spilled:** Avoid the generation of dusts during clean-up.

**Environmental Precautions:** Do not allow the spilled product to enter public drainage system or open waterways. Prevent the spread of any spill to minimize harm to human health and the environment if safe to do so. Wear complete and proper personal protective equipment following the recommendation of Section 8 at a minimum. Dike with suitable absorbent material like granulated clay. Gather and store in a sealed container pending a waste disposal evaluation. Collect spillage.

## Section 7 Handling and Storage

**Handling:** 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. Avoid breathing dust/fume/gas/mist/vapors/spray. Do not get in eyes, on skin, or on clothing. Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Contaminated work clothing should not be allowed out of the workplace. Avoid release to the environment. Wear protective gloves/protective clothing/eye protection/face protection. Use personal protective equipment as required. Store in a secure area suitable for toxic material.

**Storage:** Store locked up. Keep container tightly closed in a cool, well-ventilated place.

**Storage Code:** White - Corrosive. Separate acids from bases; separate oxidizer acids from organic acids.

## Section 8 Protection Information

| <u>Chemical Name</u>            | <u>ACGIH</u>                       | <u>OSHA PEL</u> |              |               |
|---------------------------------|------------------------------------|-----------------|--------------|---------------|
|                                 | <u>(TWA)</u>                       | <u>(STEL)</u>   | <u>(TWA)</u> | <u>(STEL)</u> |
| Cobalt (II) Chloride, 6-hydrate | 0.02 mg/m <sup>3</sup> TWA (as Co) | N/A             | N/A          | N/A           |

### Control Parameters

**Engineering Measures:** Local exhaust ventilation or other engineering controls are normally required when handling or using this product to avoid overexposure.

**Personal Protective Equipment (PPE):** Lab coat, apron, eye wash, safety shower.

**Respiratory Protection:** Respiratory protection may be required to avoid overexposure when handling this product. General or local exhaust ventilation is the preferred means of protection. Use a respirator if general room ventilation is not available or sufficient to eliminate symptoms. NIOSH approved air purifying respirator with dust/mist filter.

**Respirator Type(s):** Wear safety glasses with side shields and a Face shield

**Eye Protection:** Avoid skin contact by wearing chemically resistant gloves, an apron and other protective equipment depending upon conditions of use. Inspect gloves for chemical break-through and replace at regular intervals. Clean protective equipment regularly. Wash hands and other exposed areas with mild soap and water before eating, drinking, and when leaving work.

**Skin Protection:**

**Gloves:** Nitrile

## Section 9 Physical Data

|                                                       |                                                     |
|-------------------------------------------------------|-----------------------------------------------------|
| <b>Formula:</b> CoCl <sub>2</sub> * 6H <sub>2</sub> O | <b>Vapor Pressure:</b> 40 mmHg at 770 °C            |
| <b>Molecular Weight:</b> 237.93 g/mol                 | <b>Evaporation Rate (BuAc=1):</b> N/A               |
| <b>Appearance:</b>                                    | <b>Vapor Density (Air=1):</b> N/A                   |
| <b>Odor:</b> No data available                        | <b>Specific Gravity:</b> 1.92                       |
| <b>Odor Threshold:</b> No data available              | <b>Solubility in Water:</b> Slightly Soluble        |
| <b>pH:</b> No data available                          | <b>Log Pow (calculated):</b> No data available      |
| <b>Melting Point:</b> No data available               | <b>Autoignition Temperature:</b> No data available  |
| <b>Boiling Point:</b> No data available               | <b>Decomposition Temperature:</b> No data available |
| <b>Flash Point:</b> No data available                 | <b>Viscosity:</b> No data available                 |
| <b>Flammable Limits in Air:</b> N/A                   | <b>Percent Volatile by Volume:</b> 0% (21 °C)       |

## Section 10 Reactivity Data

**Reactivity:** No data available

**Chemical Stability:** Stable under normal conditions.

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**Conditions to Avoid:** None known.  
**Hazardous Decomposition Products:** Hydrogen chloride, Carbon dioxide, Carbon monoxide  
**Hazardous Polymerization:** Will not occur

## Section 11 Toxicity Data

**Routes of Entry:** Inhalation, ingestion, eye or skin contact.  
**Symptoms (Acute):** Respiratory disorders  
**Delayed Effects:** No data available

### Acute Toxicity:

| Chemical Name                   | CAS Number | Oral LD50                                                                                        | Dermal LD50                     | Inhalation LC50 |
|---------------------------------|------------|--------------------------------------------------------------------------------------------------|---------------------------------|-----------------|
| Cobalt (II) Chloride, 6-hydrate | 7791-13-1  | Oral LD50<br>GUINEA PIG 55<br>mg/kg<br>Oral LD50 Mouse<br>80 mg/kg<br>Oral LD50 Rat 766<br>mg/kg | Dermal LD50 Rat<br>> 2000 mg/kg | Not determined  |

### Carcinogenicity:

| Chemical Name                   | CAS Number | IARC   | NTP        | OSHA   |
|---------------------------------|------------|--------|------------|--------|
| Cobalt (II) Chloride, 6-hydrate | 7791-13-1  | Listed | Not listed | Listed |

### Chronic Effects:

**Mutagenicity:** No evidence of a mutagenic effect.  
**Teratogenicity:** No evidence of a teratogenic effect (birth defect).  
**Sensitization:** Evidence of a sensitization effect.  
**Reproductive:** No evidence of negative reproductive effects.  
**Target Organ Effects:**  
**Acute:** See Section 2  
**Chronic:** Tests on laboratory animals indicate material may produce adverse mutagenic and reproductive effects., Mutation data cited., Reproductive data cited., Tumorigenic data cited.

## Section 12 Ecological Data

**Overview:** This material is not expected to be harmful to the ecology.  
**Mobility:** No data  
**Persistence:** No data  
**Bioaccumulation:** No data  
**Degradability:** No data  
**Other Adverse Effects:** No data

| Chemical Name                   | CAS Number | Eco Toxicity                                                                       |
|---------------------------------|------------|------------------------------------------------------------------------------------|
| Cobalt (II) Chloride, 6-hydrate | 7791-13-1  | Not available<br>Aquatic EC50 (48h) Daphnia = 1.1 - 1.6 MG/L<br>Aquatic EC50 (48h) |

## Section 13 Disposal Information

**Disposal Methods:** Dispose in accordance with all applicable Federal, State and Local regulations. Always contact a permitted waste disposer (TSD) to assure compliance.  
**Waste Disposal Code(s):** Not Determined

## Section 14 Transport Information

| Ground - DOT Proper Shipping Name: | Air - IATA Proper Shipping Name:                                                                                                                     |
|------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------|
| N/A                                | UN number: 3077 Class: 9 Packing group: III Proper shipping name: Environmentally hazardous substance, solid, n.o.s. (Cobalt dichloride hexahydrate) |

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## Section 15

## Regulatory Information

### TSCA Status:

A component (or components) of this product is not listed on the TSCA Inventory of Existing Chemical Substances. Product is for research and development use only.

### Chemical Name

### CAS Number

### § 313 Name

### § 304 RQ

### CERCLA RQ

### § 302 TPQ

### CAA 112(2) TQ

No data available

7791-13-1

No

No

No

No

No

### California Prop 65:

WARNING: This product contains a chemical known to the state of California to cause cancer.

## Section 16

## Additional Information

Revised: 09/09/2015

Replaces: 08/11/2015

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The information provided in this (Material) Safety Data Sheet represents a compilation of data drawn directly from various sources available to us. Carolina Biological Supply makes no representation or guarantee as to the suitability of this information to a particular application of the substance covered in the (Material) Safety Data Sheet.

### Glossary

ACGIH

American Conference of Governmental Industrial Hygienists

CAS

Chemical Abstract Service Number

CERCLA

Comprehensive Environmental Response, Compensation, and Liability Act

DOT

U.S. Department of Transportation

IARC

International Agency for Research on Cancer

N/A

Not Available

NTP

National Toxicology Program

OSHA

Occupational Safety and Health Administration

PEL

Permissible Exposure Limit

ppm

Parts per million

RCRA

Resource Conservation and Recovery Act

SARA

Superfund Amendments and Reauthorization Act

TLV

Threshold Limit Value

TSCA

Toxic Substances Control Act

IDLH

Immediately dangerous to life and health