

# Safety Data Sheet

## Cobalt Nitrate, 6-Hydrate

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

### Section 1 Product Description

**Product Name:** Cobalt Nitrate, 6-Hydrate  
**Recommended Use:** Science education applications  
**Synonyms:** Nitric Acid Cobalt (II), Hexahydrate; cobalt dinitrate Hexahydrate; Cobalt nitrate hexahydrate  
**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**



May intensify fire; oxidizer. Harmful if swallowed. May cause an allergic skin reaction. May cause allergy or asthma symptoms or breathing difficulties if inhaled. Suspected of causing genetic defects. May cause cancer. May damage fertility or the unborn child. Very toxic to aquatic life. Very toxic to aquatic life with long lasting effects.

#### GHS Classification:

Respiratory Sensitisation Category 1, Skin Sensitisation Category 1, Carcinogenicity Category 1B, Reproductive Toxicity Category 1B, Hazardous to the aquatic environment - Acute Category 1, Hazardous to the aquatic environment - Chronic Category 1, Oxidizing Solid Category 2, Germ Cell Mutagenicity Category 2, Acute Toxicity - Oral Category 4

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

**Acute Toxicity Dermal Contains** 100 % of the mixture consists of ingredient(s) of unknown toxicity  
**Acute Toxicity Inhalation Gas Contains** 100 % of the mixture consists of ingredient(s) of unknown toxicity  
**Acute Toxicity Inhalation Vapor Contains** 100 % of the mixture consists of ingredient(s) of unknown toxicity  
**Acute Toxicity Inhalation Dust/Mist Contains** 100 % of the mixture consists of ingredient(s) of unknown toxicity

### Section 3 Composition / Information on Ingredients

<u>Chemical Name</u>	<u>CAS #</u>	<u>%</u>
Cobalt (II) Nitrate, 6-Hydrate	10026-22-9	100

### Section 4 First Aid Measures

#### Emergency and First Aid Procedures

**Inhalation:** IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician.

**Eyes:** In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

**Skin Contact:** IF ON SKIN: Wash with plenty of soap and water. If skin irritation or rash occurs: Get medical advice/attention. Wash contaminated clothing before reuse.

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

### Section 5 Firefighting Procedures

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<b>Extinguishing Media:</b>	Use alcohol foam, carbon dioxide, or water spray when fighting fires involving this material.
<b>Fire Fighting Methods and Protection:</b>	Firefighters should wear full protective equipment and NIOSH approved self-contained breathing apparatus.
<b>Fire and/or Explosion Hazards:</b>	Contact with combustible materials, flammable materials, or powdered metals can cause fire or explosion. Can react violently with reducing agents. Product is a strong oxidizer.
<b>Hazardous Combustion Products:</b>	Nitrogen oxides

## Section 6 Spill or Leak Procedures

<b>Steps to Take in Case Material Is Released or Spilled:</b>	Exposure to the spilled material may be severely irritating or toxic. Follow personal protective equipment recommendations found in Section 8 of this SDS. Personal protective equipment needs must be evaluated based on information provided on this sheet and the special circumstances created by the spill including; the material spilled, the quantity of the spill, the area in which the spill occurred, and the expertise of employees in the area responding to the spill. Never exceed any occupational exposure limits. Isolate area. Keep unnecessary personnel away. Avoid the generation of dusts during clean-up. 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. Vacuum or sweep up material and place in a disposal container Do not allow the spilled product to enter public drainage system or open waterways. Collect spillage. Avoid breathing dust/fume/gas/mist/vapors/spray.
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## Section 7 Handling and Storage

<b>Handling:</b>	Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Keep away from heat/sparks/open flames/hot surfaces. – No smoking. Keep/Store away from clothing/.../combustible materials. Take any precaution to avoid mixing with combustibles. Avoid breathing dust/fume/gas/mist/vapors/spray. 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. In case of inadequate ventilation wear respiratory protection. Keep container tightly closed in a cool, well-ventilated place. Keep away from ... (incompatible materials to be indicated by the manufacturer). Keep away from combustible material.
<b>Storage:</b>	Store locked up. Keep container tightly closed in a cool, well-ventilated place.
<b>Storage Code:</b>	Yellow - Reactive. Store separate and away from incompatible material.

## Section 8 Protection Information

<b>Chemical Name</b>	<b>ACGIH</b>		<b>OSHA PEL</b>	
	<b>(TWA)</b>	<b>(STEL)</b>	<b>(TWA)</b>	<b>(STEL)</b>
Cobalt (II) Nitrate, 6-Hydrate	0.02 mg/m3 TWA (as Co)	N/A	N/A	N/A

<b>Control Parameters</b>	
<b>Engineering Measures:</b>	Local exhaust ventilation or other engineering controls are normally required when handling or using this product to avoid overexposure.
<b>Personal Protective Equipment (PPE):</b>	Lab coat, apron, eye wash, safety shower.
<b>Respiratory Protection:</b>	No respiratory protection required under normal conditions of use. Wear a NIOSH approved respirator if any exposure is possible.
<b>Respirator Type(s):</b>	NIOSH approved air purifying respirator with dust/mist filter.
<b>Eye Protection:</b>	Wear chemical splash goggles when handling this product. Have an eye wash station available.
<b>Skin Protection:</b>	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. Wash hands and other exposed areas with mild soap and water before eating, drinking, and when leaving work. Where use can result in skin contact, practice good personal hygiene. Use impervious gloves. Inspect gloves for chemical break-through and replace at regular intervals. Clean protective equipment regularly.
<b>Gloves:</b>	No information available

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## Section 9

## Physical Data

**Formula:** Co(NO<sub>3</sub>)<sub>2</sub> \* 6H<sub>2</sub>O  
**Molecular Weight:** 291.04  
**Appearance:** Red Crystalline Solid  
**Odor:** No data available  
**Odor Threshold:** No data available  
**pH:** 4.0 at 100 g/l at 20 °C  
**Melting Point:** 56 C  
**Boiling Point:** No data available  
**Flash Point:** No data available  
**Flammable Limits in Air:** N/A

**Vapor Pressure:** N/A  
**Evaporation Rate (BuAc=1):** N/A  
**Vapor Density (Air=1):** N/A  
**Specific Gravity:** 1.54  
**Solubility in Water:** Soluble  
**Log Pow (calculated):** No data available  
**Autoignition Temperature:** No data available  
**Decomposition Temperature:** No data available  
**Viscosity:** No data available  
**Percent Volatile by Volume:** 0%

## Section 10

## Reactivity Data

**Reactivity:** No data available  
**Chemical Stability:** Stable under normal conditions.  
**Conditions to Avoid:** Sparks, open flame, other ignition sources, and elevated temperatures.  
**Incompatible Materials:** Strong reducing agents, Organics,  
**Hazardous Decomposition Products:** Nitrogen oxides, COx,  
**Hazardous Polymerization:** Will not occur

## Section 11

## Toxicity Data

**Routes of Entry:** N/A  
**Symptoms (Acute):** N/A  
**Delayed Effects:** No data available

### Acute Toxicity:

Chemical Name	CAS Number	Oral LD50	Dermal LD50	Inhalation LC50
Cobalt (II) Nitrate, 6-Hydrate	10026-22-9	Oral LD50 Rat 691 mg/kg	Not determined	Not determined

### Carcinogenicity:

Chemical Name	CAS Number	IARC	NTP	OSHA
Cobalt (II) Nitrate, 6-Hydrate	10026-22-9	Listed	Not listed	Listed

### Chronic Effects:

**Mutagenicity:** Evidence of a mutagenic effect.  
**Teratogenicity:** Evidence of a teratogenic effect (birth defect).  
**Sensitization:** Evidence of a sensitization effect.  
**Reproductive:** Evidence of negative reproductive effects.  
**Target Organ Effects:**  
**Acute:** See Section 2  
**Chronic:** Not listed as a carcinogen by IARC, NTP or OSHA., Reproductive data cited., Tumorigenic data cited.

## Section 12

## Ecological Data

**Overview:** Severe ecological hazard. This product may be toxic to plants and/or wildlife. Highly/very toxic to fish and other water organisms.  
**Mobility:** No data  
**Persistence:** No data  
**Bioaccumulation:** No data  
**Degradability:** No data  
**Other Adverse Effects:** No data

Chemical Name	CAS Number	Eco Toxicity
N/A	10026-22-9	

## 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

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## Section 14

## Transport Information

**Ground - DOT Proper Shipping Name:**UN1477, Nitrates, Inorganic, n.o.s. (Cobalt Nitrate, 6-Hydrate), 5.1  
II**Air - IATA Proper Shipping Name:**UN number: 1477 Class: 5.1 Packing group: II Proper shipping  
name: Nitrates, inorganic, n.o.s.

## 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	10026-22-9	No	No	No	No	No

## Section 16

## Additional Information

**Revised: 09/03/2014****Replaces: 08/27/2014****Printed: 04-21-2015**

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	NTP	National Toxicology Program
CAS	Chemical Abstract Service Number	OSHA	Occupational Safety and Health Administration
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act	PEL	Permissible Exposure Limit
DOT	U.S. Department of Transportation	ppm	Parts per million
IARC	International Agency for Research on Cancer	RCRA	Resource Conservation and Recovery Act
N/A	Not Available	SARA	Superfund Amendments and Reauthorization Act
		TLV	Threshold Limit Value
		TSCA	Toxic Substances Control Act
		IDLH	Immediately dangerous to life and health