

SAFETY DATA SHEET

Creation Date 09-March-2004

Revision Date 19-December-2025

Revision Number 6

This safety data sheet was created pursuant to the requirements of: Canada WHMIS 2015 which includes the amended Hazardous Products Act (HPA) and the Hazardous Products Regulation (HPR) - SOR 2022-272

1. Identification

Product Name Cobalt(II) nitrate hexahydrate

Cat No. : AC423580000; AC423580025; AC423580050; AC423581000; AC423585000

CAS-No 10026-22-9
Synonyms Cobaltous nitrate hexahydrate

Recommended Use Laboratory chemicals.
Uses advised against Food, drug, pesticide or biocidal product use.

Details of the supplier of the safety data sheet

Company

Importer/Distributor

Fisher Scientific
112 Colonnade Road,
Ottawa, ON K2E 7L6,
Canada
Tel: 1-800-234-7437

Acros Organics
One Reagent Lane
Fair Lawn, NJ 07410

Manufacturer

Fisher Scientific Company
One Reagent Lane
Fair Lawn, NJ 07410
Tel: (201) 796-7100

Emergency Telephone Number

For information **US** call: 001-800-227-6701 / **Europe** call: +32 14 57 52 11
Emergency Number **US**:001-201-796-7100 / **Europe**: +32 14 57 52 99
CHEMTREC Tel. No. **US**:001-800-424-9300 / **Europe**:001-703-527-3887

2. Hazard(s) identification

Classification

WHMIS 2015 Classification

This product is hazardous in accordance with the Canada Hazardous Products Act (HPA) and Hazardous Products Regulation (HPR), as amended (SOR/2022-272)

Oxidizing solids	Category 2
Acute oral toxicity	Category 4
Acute Inhalation Toxicity	Category 4
Serious Eye Damage/Eye Irritation	Category 1
Respiratory Sensitization	Category 1
Skin Sensitization	Category 1
Germ Cell Mutagenicity	Category 2
Carcinogenicity	Category 1B
Reproductive Toxicity	Category 1B

Label Elements

Signal Word

Danger

Hazard Statements

May intensify fire; oxidizer
 Harmful if swallowed or if inhaled
 May cause an allergic skin reaction
 Causes serious eye damage
 May cause allergy or asthma symptoms or breathing difficulties if inhaled
 Suspected of causing genetic defects
 May cause cancer by inhalation
 May damage fertility
 Harmful if inhaled

**Precautionary Statements****Prevention**

Obtain special instructions before use
 Do not handle until all safety precautions have been read and understood
 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking
 Keep away from clothing and other combustible materials.
 Take any precaution to avoid mixing with combustibles
 Avoid breathing dust/fume/gas/mist/vapors/spray
 Wash face, hands and any exposed skin thoroughly after handling
 Do not eat, drink or smoke when using this product
 Use only outdoors or in a well-ventilated area
 Contaminated work clothing should not be allowed out of the workplace
 Wear protective gloves/protective clothing/eye protection/face protection
 Wear respiratory protection

Response

IF ON SKIN: Wash with plenty of soap and water
 IF INHALED: Remove person to fresh air and keep comfortable for breathing
 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
 Immediately call a POISON CENTER/doctor
 Rinse mouth
 If experiencing respiratory symptoms: Call a POISON CENTER/doctor
 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish
 Take off contaminated clothing and wash it before reuse

Storage

Store locked up

Disposal

Dispose of contents/container to an approved waste disposal plant

Other Hazards

Very toxic to aquatic life with long lasting effects

3. Composition/Information on Ingredients

Component	CAS-No	Weight %
Cobalt(II) nitrate, hexahydrate	10026-22-9	>95

Nitric acid, cobalt(2+) salt	10141-05-6	-
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4. First-aid measures

General Advice	Show this safety data sheet to the doctor in attendance. Immediate medical attention is required.
Eye Contact	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
Skin Contact	Wash off immediately with plenty of water for at least 15 minutes. Immediate medical attention is required.
Inhalation	Remove to fresh air. If not breathing, give artificial respiration. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Immediate medical attention is required.
Ingestion	Do NOT induce vomiting. Call a physician or poison control center immediately.
Most important symptoms/effects	Causes eye burns. May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause allergic skin reaction. Causes severe eye damage. Symptoms of allergic reaction may include rash, itching, swelling, trouble breathing, tingling of the hands and feet, dizziness, lightheadedness, chest pain, muscle pain or flushing
Notes to Physician	Treat symptomatically

5. Fire-fighting measures

Suitable Extinguishing Media	Water spray, carbon dioxide (CO ₂), dry chemical, alcohol-resistant foam.
Unsuitable Extinguishing Media	No information available
Flash Point	No information available
Method -	No information available
Autoignition Temperature	No information available
Explosion Limits	
Upper	No data available
Lower	No data available
Oxidizing Properties	Oxidizer
Sensitivity to Mechanical Impact	No information available
Sensitivity to Static Discharge	No information available

Specific Hazards Arising from the Chemical

Oxidizer: Contact with combustible/organic material may cause fire. Do not allow run-off from fire-fighting to enter drains or water courses. May ignite combustibles (wood paper, oil, clothing, etc.).

Hazardous Combustion Products

Nitrogen oxides (NO_x). Cobalt oxides.

Protective Equipment and Precautions for Firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Thermal decomposition can lead to release of irritating gases and vapors.

NFPA

Health
3

Flammability
1

Instability
1

Physical hazards
OX

6. Accidental release measures

Personal Precautions	Ensure adequate ventilation. Use personal protective equipment as required. Avoid dust formation. Keep people away from and upwind of spill/leak. Evacuate personnel to safe areas.
Environmental Precautions	Do not flush into surface water or sanitary sewer system. Do not allow material to contaminate ground water system. Prevent product from entering drains. Local authorities should be advised if significant spillages cannot be contained. Should not be released into the environment.
Methods for Containment and Clean Up	Sweep up and shovel into suitable containers for disposal. Avoid dust formation. Soak up with inert absorbent material. Keep in suitable, closed containers for disposal. Sweep up and shovel into suitable containers for disposal.

7. Handling and storage

Handling	Wear personal protective equipment/face protection. Do not get in eyes, on skin, or on clothing. Avoid dust formation. Use only under a chemical fume hood. Do not breathe (dust, vapor, mist, gas). Do not ingest. If swallowed then seek immediate medical assistance. Keep away from clothing and other combustible materials.
Storage.	Keep containers tightly closed in a dry, cool and well-ventilated place. Do not store near combustible materials. Incompatible Materials. Strong oxidizing agents. Strong reducing agents. Combustible material.

8. Exposure controls / personal protection

Exposure Guidelines

Component	Alberta	British Columbia	Ontario TWAEV	Quebec
Cobalt(II) nitrate, hexahydrate	TWA: 0.02 mg/m ³	TWA: 0.02 mg/m ³	TWA: 0.02 mg/m ³	TWA: 0.02 mg/m ³
Nitric acid, cobalt(2+) salt	TWA: 0.02 mg/m ³	TWA: 0.02 mg/m ³	TWA: 0.02 mg/m ³	TWA: 0.02 mg/m ³

Component	Manitoba	New Brunswick	Newfoundland and Labrador	Nova Scotia
Cobalt(II) nitrate, hexahydrate		TWA: 0.02 mg/m ³	TWA: 0.02 mg/m ³	TWA: 0.02 mg/m ³
Nitric acid, cobalt(2+) salt		TWA: 0.02 mg/m ³	TWA: 0.02 mg/m ³	TWA: 0.02 mg/m ³

Component	Nunavut	Prince Edward Island	Saskatchewan	Yukon
Cobalt(II) nitrate, hexahydrate	TWA: 0.02 mg/m ³ STEL: 0.06 mg/m ³	TWA: 0.02 mg/m ³	TWA: 0.02 mg/m ³ STEL: 0.06 mg/m ³	
Nitric acid, cobalt(2+) salt	TWA: 0.02 mg/m ³ STEL: 0.06 mg/m ³	TWA: 0.02 mg/m ³	TWA: 0.02 mg/m ³ STEL: 0.06 mg/m ³	

Component	ACGIH TLV	OSHA PEL	NIOSH
Cobalt(II) nitrate, hexahydrate 10026-22-9 (>95)	TWA: 0.02 mg/m ³		
Nitric acid, cobalt(2+) salt 10141-05-6 (-)	TWA: 0.02 mg/m ³		

Legend

ACGIH - American Conference of Governmental Industrial Hygienists

Engineering Measures

Use only under a chemical fume hood. Ensure that eyewash stations and safety showers are close to the workstation location. Ensure adequate ventilation, especially in confined areas.

Wherever possible, engineering control measures such as the isolation or enclosure of the process, the introduction of process or equipment changes to minimise release or contact, and the use of properly designed ventilation systems, should be adopted to control hazardous materials at source

Personal protective equipment

Eye Protection Goggles
Hand Protection Protective gloves

Glove material	Breakthrough time	Glove thickness	Glove comments
Natural rubber	See manufacturers	-	Splash protection only
Nitrile rubber	recommendations		
Neoprene			
PVC			

Inspect gloves before use. observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. (Refer to manufacturer/supplier for information) gloves are suitable for the task: Chemical compatability, Dexterity, Operational conditions, User susceptibility, e.g. sensitisation effects, also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion. gloves with care avoiding skin contamination.

Respiratory Protection

When workers are facing concentrations above the exposure limit they must use appropriate certified respirators. Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

To protect the wearer, respiratory protective equipment must be the correct fit and be used and maintained properly

Recommended Filter type: Particulates filter conforming to EN 143

When RPE is used a face piece Fit Test should be conducted

Environmental exposure controls

Prevent product from entering drains. Do not allow material to contaminate ground water system. Local authorities should be advised if significant spillages cannot be contained.

Hygiene Measures

Handle in accordance with good industrial hygiene and safety practice. Keep away from food, drink and animal feeding stuffs. Do not eat, drink or smoke when using this product. Remove and wash contaminated clothing and gloves, including the inside, before re-use. Wash hands before breaks and after work.

9. Physical and chemical properties

Appearance**Physical State**

Solid

Color

Red brown

Odor

Odorless

Odor Threshold

No information available

Property**Values****Remarks****• Method****Melting Point/Range**

55 - 56 °C / 131 - 132.8 °F

Softening Point

No data available

Boiling Point/Range

No information available

Flash Point

No information available

Method - No information available**Flammability (liquid)**

Not applicable

Solid

Flammability (solid,gas)

No information available

Explosion Limits

No data available

Autoignition Temperature

No data available

Decomposition Temperature

No data available

pH

No information available

Viscosity

Not applicable

Solid

Water Solubility

134 g/100ml

Solubility in other solvents

No information available

Partition Coefficient (n-octanol/water)**Vapor Pressure**

No data available

Density / Specific Gravity

Bulk Density	No data available	
Vapor Density	Not applicable	Solid
Particle characteristics	No data available	

Other Information

Molecular Formula	Co N2 O6 . 6 H2 O
Molecular Weight	291.02
Oxidizing Properties	Oxidizer
Evaporation Rate	Not applicable - Solid

10. Stability and reactivity

Reactive Hazard	Yes
Stability	Hygroscopic. Oxidizer: Contact with combustible/organic material may cause fire.
Conditions to Avoid	Incompatible products. Excess heat. Avoid dust formation. Exposure to moist air or water. Combustible material.
Incompatible Materials	Strong oxidizing agents, Strong reducing agents, Combustible material
Hazardous Decomposition Products	Nitrogen oxides (NOx), Cobalt oxides
Hazardous Polymerization	Hazardous polymerization does not occur.
Hazardous Reactions	None under normal processing.

11. Toxicological information

Information on expected route of exposure

Inhalation	Toxic by inhalation. May cause irritation of respiratory tract.
Ingestion	Toxic if swallowed. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.
Eyes	May cause irritation.
Skin	Toxic in contact with skin. May cause irritation.

Toxicology data for the components

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Cobalt(II) nitrate, hexahydrate	LD50 = 691 mg/kg (Rat)	-	-
Nitric acid, cobalt(2+) salt	LD50 = 434 mg/kg (Rat)	-	-

Toxicologically Synergistic Products	No information available
(b) skin corrosion/irritation;	No data available
(c) serious eye damage/irritation;	Category 1
(d) respiratory or skin sensitization;	
Respiratory	Category 1
Skin	Category 1
	May cause sensitization by skin contact

(e) germ cell mutagenicity; Category 2
Mutagenic effects have occurred in experimental animals

(f) carcinogenicity;
The table below indicates whether each agency has listed any ingredient as a carcinogen

Component	CAS-No	IARC	NTP	ACGIH	OSHA	Mexico
Cobalt(II) nitrate, hexahydrate	10026-22-9	Group 2B	Reasonably Anticipated	A3	X	Not listed
Nitric acid, cobalt(2+) salt	10141-05-6	Group 2B	Reasonably Anticipated	A3	X	Not listed

IARC (International Agency for Research on Cancer)

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Group 1 - Carcinogenic to Humans

Group 2A - Probably Carcinogenic to Humans

Group 2B - Possibly Carcinogenic to Humans

A1 - Known Human Carcinogen

A2 - Suspected Human Carcinogen

A3 - Animal Carcinogen

ACGIH: (American Conference of Governmental Industrial Hygienists)

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(g) reproductive toxicity; Category 1B

Reproductive Effects Possible risk of impaired fertility.

(h) STOT-single exposure; No data available

(i) STOT-repeated exposure; No data available

Target Organs No information available.

(j) aspiration hazard; Not applicable
Solid

Symptoms / effects, both acute and delayed Symptoms of allergic reaction may include rash, itching, swelling, trouble breathing, tingling of the hands and feet, dizziness, lightheadedness, chest pain, muscle pain or flushing.

Other Adverse Effects The toxicological properties have not been fully investigated.

Endocrine Disrupting Properties This product does not contain any known or suspected endocrine disruptors.

12. Ecological information

Ecotoxicity

The product contains following substances which are hazardous for the environment. Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. May cause long-term adverse effects in the environment. Do not allow material to contaminate ground water system.

Persistence and Degradability based on information available. May persist

Bioaccumulation/ Accumulation No information available.

Mobility Will likely be mobile in the environment due to its water solubility.

13. Disposal considerations

Waste Disposal Methods Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and

national hazardous waste regulations to ensure complete and accurate classification.

14. Transport information

DOT

UN-No	UN1477
Proper Shipping Name	consumer commodity NITRATES, INORGANIC, N.O.S.
Technical Shipping Name	Cobalt (II) nitrate
Hazard Class	5.1
Packing Group	II

TDG

UN-No	UN1477
Proper Shipping Name	NITRATES, INORGANIC, N.O.S.
Technical Shipping Name	Cobalt (II) nitrate
Hazard Class	5.1
Packing Group	II

IATA

UN-No	UN1477
Proper Shipping Name	NITRATES, INORGANIC, N.O.S.
Technical Shipping Name	Cobalt (II) nitrate
Hazard Class	5.1
Packing Group	II

IMDG/IMO

UN-No	UN1477
Proper Shipping Name	NITRATES, INORGANIC, N.O.S.
Technical Shipping Name	Cobalt (II) nitrate
Hazard Class	5.1
Packing Group	II

15. Regulatory information

International Inventories

Component	CAS-No	DSL	NDSL	TSCA	TSCA Inventory notification - Active-Inactive	EINECS	ELINCS	NLP
Cobalt(II) nitrate, hexahydrate	10026-22-9	-	-	-	-	-	-	-
Nitric acid, cobalt(2+) salt	10141-05-6	X	-	X	ACTIVE	233-402-1	-	-

Component	CAS-No	IECSC	KECL	ENCS	ISHL	TCSI	AICS	NZIoC	PICCS
Cobalt(II) nitrate, hexahydrate	10026-22-9	X	-	X	X	X	X	X	X
Nitric acid, cobalt(2+) salt	10141-05-6	X	KE-06102	X	X	X	X	X	X

Legend:

X - Listed '-' - Not listed

KECL - NIER number or KE number (<http://ncis.nier.go.kr/en/main.do>)

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

EINECS/ELINCS - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances

IECSC - Chinese Inventory of Existing Chemical Substances

KECL - Korean Existing and Evaluated Chemical Substances

ENCS - Japanese Existing and New Chemical Substances

AICS - Australian Inventory of Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances

Canada

SDS in compliance with provisions of information as set out in Canadian Standard - Part 4, Schedule 1 and 2 of the Hazardous Products Regulations (HPR) and its amendments and meets the requirements of the HPR (Paragraph 13(1)(a) of the revised Hazardous Products Act (HPA)).

Component	Canada - National Pollutant Release Inventory (NPRI)	Canadian Environmental Protection Agency (CEPA)	Canada's Chemicals Management Plan (CEPA)

		- List of Toxic Substances	
Cobalt(II) nitrate, hexahydrate	Part 1, Group B Substance		
Nitric acid, cobalt(2+) salt	Part 1, Group B Substance		

Other International Regulations

Authorisation/Restrictions according to EU REACH

Component	REACH (1907/2006) - Annex XIV - Substances Subject to Authorization	REACH (1907/2006) - Annex XVII - Restrictions on Certain Dangerous Substances	REACH Regulation (EC 1907/2006) article 59 - Candidate List of Substances of Very High Concern (SVHC)
Cobalt(II) nitrate, hexahydrate	-	-	SVHC Candidate list - - Carcinogenic, Article 57a;Toxic for reproduction, Article 57c
Nitric acid, cobalt(2+) salt	-	Use restricted. See entry 28. (see link for restriction details) Use restricted. See entry 30. (see link for restriction details) Use restricted. See entry 75. (see link for restriction details)	SVHC Candidate list - 233-402-1 - Carcinogenic, Article 57a;Toxic for reproduction, Article 57c

After the sunset date the use of this substance requires either an authorization or can only be used for exempted uses, e.g. use in scientific research and development which includes routine analytics or use as intermediate.

REACH links

<https://echa.europa.eu/authorisation-list>

<https://echa.europa.eu/substances-restricted-under-reach>

<https://echa.europa.eu/candidate-list-table>

Contains component(s) that meet a 'definition' of per & poly fluoroalkyl substance (PFAS)?

Not applicable

Safety, health and environmental regulations/legislation specific for the substance or mixture

Component	CAS-No	OECD HPV	Persistent Organic Pollutant	Ozone Depletion Potential	Restriction of Hazardous Substances (RoHS)
Cobalt(II) nitrate, hexahydrate	10026-22-9	Not applicable	Not applicable	Not applicable	Not applicable
Nitric acid, cobalt(2+) salt	10141-05-6	Listed	Not applicable	Not applicable	Not applicable

Component	CAS-No	Seveso III Directive (2012/18/EC) - Qualifying Quantities for Major Accident Notification	Seveso III Directive (2012/18/EC) - Qualifying Quantities for Safety Report Requirements	Rotterdam Convention (PIC)	Basel Convention (Hazardous Waste)
Cobalt(II) nitrate, hexahydrate	10026-22-9	Not applicable	Not applicable	Not applicable	Not applicable
Nitric acid, cobalt(2+) salt	10141-05-6	Not applicable	Not applicable	Not applicable	Not applicable

16. Other information

Prepared By

Product stewardship (Regulatory Affairs)
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19-December-2025

Revision Summary

This document has been updated to comply with the requirements of WHMIS 2015 which includes the amended Hazardous Products Act (HPA) and the Hazardous Products Regulation (HPR) to align with the Globally Harmonised System (GHS) (V7/8) for the

Classification and Labelling of Chemicals.

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text

End of SDS