



Centre Anti-Poison pour le Québec: (800) 463-5060

Tél. (Qc): (418) 660-8666 / 800-890-8666

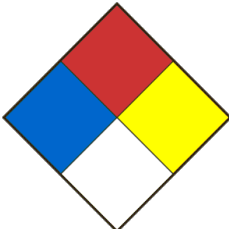
Fax. (Qc): (418) 660-8998

SAFETY DATA SHEET

SECTION 01 - PRODUCT AND COMPANY IDENTIFICATION

Product Identifier COBALT(II) NITRATE (hexahydrate)		Product Use Laboratory use	
Chemical formula $\text{Co}(\text{NO}_3)_2 \cdot 6\text{H}_2\text{O}$		Product code CR-0157	Molar weight 291,03
Chemical name / Commercial name / Synonymous COBALT(II) NITRATE HEXAHYDRATE, COBALTOUS NITRATE, NITRIC ACID COBALT SALT			
Supplier's name Laboratoire MAT		Address-Street 610, Adanac Street	
City Québec		Province Québec	
Postal code G1C 7B7	Internet www.labmat.com	Phone number 418-660-8666 / 800-890-8666	
Emergency phone	CANUTEC: 613-996-6666 CENTRE ANTI-POISON DU QUÉBEC 800-463-5060		
Date SDS 3/4/2019	SDS Prepared by Laboratoire MAT	E-Mail labmat@labmat.com	

SECTION 02 - HAZARDS IDENTIFICATION

Classification WHIMS / GHS	Oxidizing solids category 2 Acute toxicity - Oral category 4 Respiratory or skin sensitization - Respiratory sensitizer category 1 Carcinogenicity category 1B Reproductive toxicity category 1B Germ cell mutagenicity category 2
Signal Word	DANGER
Hazards statements (H)	H272 May intensify fire; oxidiser. H302 Harmful if swallowed. H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled. H341 Suspected of causing genetic defects . H350 May cause cancer. H360 May damage fertility or the unborn child.
Precautionary statements (P)	P201 Obtain special instructions before use. P202 Do not handle until all safety precautions have been read and understood. P210 Keep away from heat/sparks/open flames/hot surfaces. — No smoking. P220 Keep/Store away from clothing and combustible materials. P261 Avoid breathing dust / fume / gas / mist / vapours / spray. P264 Wash the areas of the body that have been in contact with the product after handling. P270 Do no eat, drink or smoke when using this product. P280 Wear protective gloves/protective clothing/eye protection/face protection. P308 + P313 IF exposed or concerned: Get medical advice/attention. P330 Rinse mouth. P370 + P378 In case of fire: Use water spray or alcohol-resistant foam, or dry powder or carbon dioxide for extinction. P405 Store locked up. P501 Dispose of contents/container in accordance with local / regional / national / international regulations or contact a specialist waste disposal company. P301 + P312 IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell. P284 Wear respiratory protection. P304 + P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. P342 + P311 If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician.
PICTOGRAMS	
Other dangers	NFPA (Risk: 0=No risk; 1=Slight; 2=Moderate; 3=Signifiant; 4=Extreme)
	Health 2 Fire 0 Reactivity 2 Special danger OX

SECTION 03 - COMPOSITION/INFORMATION ON INGREDIENTS

Ingrédients (Dénomination chimique / synonymes)	Numéro CAS et tout identificateur unique	Concentration (%)
Nitrate de cobalt	10026-22-9	<=100

SECTION 04 - FIRST AID MEASURES

Eye contact	Wash eyes with large amounts of water for at least 15 minutes while holding eyelids apart to rinse eyes. See a doctor.
Skin contact	Remove soiled clothing. Wash skin under running water with soap. Consult a physician.
Inhalation	If breathed in, move person into fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Consult a physician.
Ingestion	If the person is conscious, give water to drink. Never give anything by mouth to an unconscious person. Consult a physician.
Most important symptoms and effects (acute and delayed)	Ref. section 11.
Immediate medical attention and special treatment, if necessary	In case of medical consultation, keep this sheet available.
General advice	Show this safety data sheet to the doctor in attendance.

SECTION 05 - FIREFIGHTING MEASURES

Flammability	No
Ignition conditions	May cause ignition in contact with reducing agents or combustible materials.
Suitable extinguishing media	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
Unsuitable extinguishing media	Halogenated hydrocarbons.
Hazardous combustion / decomposition products	Hazardous decomposition products formed under fire conditions. Cobalt oxides. - nitrogen oxides (NO _x).
Special fire and explosion hazards	Can ignite organic and combustible materials. May cause a potentially explosive reaction with carbon. Ammonium hexacyanoferrate may explode in the presence of cobalt nitrate if heated above 220 ° C. May react violently with incompatible products (ref .Section 10)
Special protective equipment and precautions for firefighters	Discard incompatible substances if this can be done without risk. Firefighters should be equipped with standard protective equipment, fireproof clothing, face mask, gloves, protective boots and, where appropriate, self-contained breathing apparatus.

SECTION 06 - ACCIDENTAL RELEASE MEASURES

Methods and materials for containment and cleaning up / Personnel precautions, protective equipment	Evacuate personnel to safe areas. Ensure adequate ventilation. Use personal protective equipment. Cut off all sources of ignition. Pick up with a shovel or broom, taking care not to scatter dust. Clean and rinse with water. Dispose of residues in a container provided for the disposal of hazardous materials. Do not let product enter drains.
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SECTION 07 - HANDLING AND STORAGE

Conditions for safe storage	Store in a cool, dry place. Keep container tightly closed and store away from heat, moisture, and incompatible products. Store away from flammable products, reducing agents, organic materials and metallic powders.
Methods of handling	Always open containers slowly to allow any excess pressure to vent. Avoid formation of dust and aerosols. Provide appropriate exhaust ventilation at places where dust or vapor is formed. Wear personal protective equipment when handling. Always ensure good ventilation. Transport according to TDG (ref Section 14)

SECTION 08 - EXPOSURE CONTROLS/PERSONAL PROTECTION

Workplace control parameters

Components	CAS-No.	Value	Control parameters	Basis
Cobaltous nitrate, hexahydrate	10026-22-9	TWA	0.050000 mg/m3	Canada. Alberta, Occupational Health and Safety Code (table 2: OEL)
Remarks				
		TWA	0.020000 mg/m3	Québec. Regulation respecting occupational health and safety, Schedule 1, Part 1: Permissible exposure values for airborne contaminants
	Carcinogenic effect detected in animals. Results of studies relating to the carcinogenicity of these substances in animals are not necessarily applicable to humans.			
		TWA	0.020000 mg/m3	Canada. British Columbia OEL
	IARC '2B' applies to substances deemed possibly carcinogenic to humans.			
	TWA 0.020000 mg/m3 USA. ACGIH Threshold Limit Values (TLV)			
	Confirmed animal carcinogen with unknown relevance to humans			
		TWA	0.020000 mg/m3	Canada. Alberta, Occupational Health and Safety Code (table 2: OEL)
		TWAEV	0.020000 mg/m3	Québec. Regulation respecting occupational health and safety, Schedule 1, Part 1: Permissible exposure values for airborne contaminants
	Sensitizer Carcinogenic effect detected in animals. Results of studies relating to the carcinogenicity of these substances in animals are not necessarily applicable to humans.			
		TWA	0.020000 mg/m3	Canada. British Columbia OEL
	IARC '2B' applies to substances deemed possibly carcinogenic to humans.			
		TWA	0.020000 mg/m3	USA. ACGIH Threshold Limit Values (TLV)

Data source	Sigma-Aldrich.
Ventilation	Fan.
Respiratory	If the permissible levels are exceeded, use a mechanical filter / cartridge against NIOSH vapors or a respirator with air supply.
Gloves	Handle with gloves.
Eyes	Safety goggles with safety shutters.
Shoes	Use safety shoes.
Clothing	Labcoat.
Engineering control	Have safety showers and eyewash stations in the workplace in case of an emergency and a ventilation system to maintain the level of concentrations in the air below the exposure limit values.

SECTION 09 - PHYSICAL AND CHEMICAL PROPERTIES

Physical state	Solid.
Appearance	Poudre cristalline rouge.
Odour	Inodore.
Odour threshold	Data not available
pH	Solution à 5% = pH 2.5 - 5.5.
Melting point / Freezing point	55°C
Initial boiling point	Data not available
Boiling range	Data not available
Flash point	Data not available
Evaporation rate	Data not available
Flammability	No
Lower flammable / Explosive limit	Data not available
Upper flammable / Explosive limit	Data not available
Vapour pressure	Data not available
Vapour density	Data not available
Relative density	1.87g/ml
Solubility	Très soluble dans l'eau et l'alcool. Solubilité dans l'eau: 103.8 g/100 ml à 25°C.
Partition coefficient water/n-octanol	Data not available
Auto-ignition temperature	Data not available
Decomposition temperature	Data not available
Viscosity	Data not available

SECTION 10 - STABILITY AND REACTIVITY

Reactivity	Oxidizer: risk of fire in case of contact with combustible / organic substance.
Chemical stability	Stable under recommended storage conditions.
Possibility of hazardous reactions	Stable under normal conditions. Oxidizer. May react violently with incompatible substances.
Conditions of instability (Including sensitivity to shock / static discharge / vibration)	Avoid heat and excessive moisture.
Incompatible material	Reducing agents, ammonium hexacyanoferrate, carbon, organic and combustible materials, heat and moisture. Powdered metals.
Hazardous decomposition products	Hazardous decomposition products formed under fire conditions. Toxic vapors of nitrogen oxides. Toxic vapors of cobalt oxides.

SECTION 11 - TOXICOLOGICAL INFORMATION

COBALT(II) NITRATE (HEXAHYDRATE)

Routes of exposure	Ingestion, inhalation, skin and eyes.
Acute exposition effects / symptoms:	By exposure route below.
- Eyes	May cause eye irritation.
- Skin	May be harmful if absorbed through skin. May cause skin irritation.
- Inhalation	May be harmful if inhaled. May cause respiratory tract irritation. Nervous disorders, cough, dyspnea, headache, dizziness, nausea and vomiting.
Acute toxicity (Ingestion)	Toxic if swallowed. Nervous disorders, liver and kidney damage, abdominal pain, cramps, diarrhea, diaphoresis, headache, dizziness, nausea and vomiting, convulsions, stupor, unconsciousness, coma and can lead to death.
Chronic exposure effects / symptoms	urning sensation, conjunctivitis, skin allergy, nervous disorders, headache, cough, dyspnea, dizziness, tiredness, loss of appetite, nausea and vomiting. Is recognized as a possible carcinogen (class 2B) by IARC. Toxic suspected to be reproductive for humans Suspected of damaging the unborn child. In vitro tests showed mutagenic effects.
DL50 (specify species and route of entry)	LD50 Oral - Rat - 691 mg/Kg LD50 Dermal - Rat - Data not available.
CL50 (specify species and route of entry)	LC50 - Inhalation - Data not available.

SECTION 12 - ECOLOGICAL INFORMATION

Ecotoxicity	Data not available.
Persistence and degradability	Data not available.
Bioaccumulative potential	Data not available.
Mobility in soil	Data not available.
Other adverse effects	Very toxic to aquatic life. An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

SECTION 13 - DISPOSAL CONSIDERATIONS

Waste Disposal Method	Dispose of contents / container in accordance with local / regional / national / international regulations / or contact a specialist waste disposal company.
Contaminated Packaging	Dispose of as unused product.

SECTION 14 - TRANSPORT INFORMATION

UN Number	1477
UN Proper shipping name	NITRATES INORGANIQUES, N.S.A.
Transport hazard class(es)	5.1 Oxidizing substances
Packing group	III
Limited quantity index	5kg
ERAP Index	
Special precautions	

SECTION 15 - REGULATORY INFORMATION

WHIMS CANADA	Oxidizing solids category 2 Acute toxicity - Oral category 4 Respiratory or skin sensitization - Respiratory sensitizer category 1 Carcinogenicity category 1B Reproductive toxicity category 1B Germ cell mutagenicity category 2
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SECTION 16 - OTHER INFORMATION

Further information

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. The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. It does not represent any guarantee of the properties of the product. Laboratoire MAT Inc. shall not be held liable for any damage resulting from handling or from contact with the above product.

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