



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

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


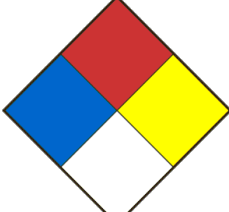
Fax. (Qc): (418) 660-8998

## SAFETY DATA SHEET

### SECTION 01 - PRODUCT AND COMPANY IDENTIFICATION

Product Identifier COBALT REFERENCE SOLUTION 1000 PPM +/- 1%		Product Use Laboratory use	
Chemical formula Co(NO <sub>3</sub> ) <sub>2</sub> ·6H <sub>2</sub> O		Product code AA-1000	Molar weight
Chemical name / Commercial name / Synonymous Étalon Cobalt 1000 mg/L			
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 10/26/2020	SDS Prepared by Laboratoire MAT	E-Mail labmat@labmat.com	

## SECTION 02 - HAZARDS IDENTIFICATION

<b>Classification WHIMS / GHS</b>	<p>Serious eye damage/eye irritation - Serious eye damage category 1</p> <p>Respiratory or skin sensitization - Respiratory sensitizer category 1</p> <p>Carcinogenicity category 1B</p> <p>Skin corrosion/irritation - Skin corrosion category 1</p> <p>Corrosive to metals-Category 1</p> <p>Reproductive toxicity category 1B</p>
<b>Signal Word</b>	<p>DANGER</p>
<b>Hazards statements (H)</b>	<p>H314 Causes severe skin burns and eye damage.</p> <p>H318 Causes serious eye damage.</p> <p>H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.</p> <p>H350 May cause cancer.</p> <p>H290 May be corrosive to metals.</p> <p>H360 May damage fertility or the unborn child.</p>
<b>Precautionary statements (P)</b>	<p>P201 Obtain special instructions before use.</p> <p>P202 Do not handle until all safety precautions have been read and understood.</p> <p>P260 Do not breathe dust / fume / gas / mist / vapors / spray.</p> <p>P261 Avoid breathing dust / fume / gas / mist / vapors / spray.</p> <p>P264 Wash the areas of the body that have been in contact with the product after handling.</p> <p>P280 Wear protective gloves/protective clothing/eye protection/face protection.</p> <p>P284 Wear respiratory protection.</p> <p>P301 + P330 + P331 IF SWALLOWED: rinse mouth. Do NOT induce vomiting.</p> <p>P303 + P361 + P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.</p> <p>P304 + P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.</p> <p>P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.</p> <p>P308 + P313 IF exposed or concerned: Get medical advice/attention.</p> <p>P310 Immediately call a POISON CENTER or doctor/physician.</p> <p>P321 Specific treatment (see section 4 of the SDS and on this label).</p> <p>P342 + P311 If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician.</p> <p>P363 Wash contaminated clothing before reuse.</p> <p>P405 Store locked up.</p> <p>P501 Dispose of contents/container in accordance with local / regional / national / international regulations or contact a specialist waste disposal company.</p> <p>P234 Keep only in original container.</p> <p>P390 Absorb spillage to prevent material damage.</p> <p>P406 Store in a corrosion resistant container / or a container with corrosion resistant liner.</p>
<b>PICTOGRAMS</b>	
<b>Other dangers</b>	<p>NFPA (Risk: 0=No risk; 1=Slight; 2=Moderate; 3=Signifiant; 4=Extreme)</p>
	<p><b>Health</b> 2</p> <p><b>Fire</b> 0</p> <p><b>Reactivity</b> 0</p> <p><b>Special danger</b></p>

## SECTION 03 - COMPOSITION/INFORMATION ON INGREDIENTS

Ingrédients (Dénomination chimique / synonymes)	Numéro CAS et tout identificateur unique	Concentration (%)
Nitrate de cobalt	10026-22-9	0.5
Acide nitrique	7697-37-2	4

## SECTION 04 - FIRST AID MEASURES

<b>Eye contact</b>	Wash eyes with large amounts of water for at least 15 minutes while holding eyelids apart to rinse eyes. If irritation persists, seek medical attention.
<b>Skin contact</b>	Wash skin with plenty of water for at least 15 minutes. Remove soiled clothing. If irritation persists, seek medical attention.
<b>Inhalation</b>	Move the unwell person to the fresh air. If breathing is difficult, give oxygen. Consult a physician.
<b>Ingestion</b>	If the person is conscious, give water to drink. Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Consult a physician.
<b>Most important symptoms and effects (acute and delayed)</b>	The product is a material corrosive. Main symptoms of high exposure: Eyes irritation. Skin irritation. Irritation of the respiratory system. Pneumonia. Pulmonary edema. Ref. section 11.
<b>Immediate medical attention and special treatment, if necessary</b>	In case of medical consultation, keep this sheet available.
<b>General advice</b>	Show this safety data sheet to the doctor in attendance.

## SECTION 05 - FIREFIGHTING MEASURES

<b>Flammability</b>	No
<b>Ignition conditions</b>	Not flammable or combustible.
<b>Suitable extinguishing media</b>	Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
<b>Unsuitable extinguishing media</b>	Do not use a heavy water stream.
<b>Hazardous combustion products</b>	Hazardous combustion products formed under fire conditions: - nitrogen oxides (NO <sub>x</sub> ). Cobalt oxides.
<b>Special fire and explosion hazards</b>	May react violently with incompatible products (Ref Section 10).
<b>Special protective equipment and precautions for firefighters</b>	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

<b>Methods and materials for containment and cleaning up / Personnel precautions, protective equipment</b>	Evacuate personnel to safe areas. Absorb the product with sand or vermiculite. Dilute residues with water, clean and rinse. Ensure a good ventilation of the premises. Dispose of residues in a container for disposal of hazardous materials. When handling, wear suitable safety equipment. Use breathing apparatus if necessary. Avoid breathing vapors, mist or gas. Do not let product enter drains.
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## SECTION 07 - HANDLING AND STORAGE

<b>Conditions for safe storage</b>	Store in a cool, dry place. Store in a well-ventilated area. Keep container tightly closed and store away from heat, light, organic materials and incompatible materials. Protect from the sun's rays.
<b>Methods of handling</b>	Avoid inhalation of vapor or mist. Keep away from heat and sources of ignition. Bottle in corrosion resistant plastic containers. Do not use metal instruments to handle this product. 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
Nitric acid	7697-37-2	TWA	2.000000 ppm 5.200000 mg/m3	Canada. Alberta, Occupational Health and Safety Code (table 2: OEL)
		STEL	4.000000 ppm 10.000000 mg/m3	Canada. Alberta, Occupational Health and Safety Code (table 2: OEL)
		TWA	2.000000 ppm	Canada. British Columbia OEL
		STEL	4.000000 ppm	Canada. British Columbia OEL
		TWAEV	2.000000 ppm 5.200000 mg/m3	Québec. Regulation respecting occupational health and safety, Schedule 1, Part 1: Permissible exposure values for airborne contaminants
		STEV	4.000000 ppm 10.000000 mg/m3	Québec. Regulation respecting occupational health and safety, Schedule 1, Part 1: Permissible exposure values for airborne contaminants
		TWA	2.000000 ppm	USA. ACGIH Threshold Limit Values (TLV)
		STEL	4.000000 ppm	USA. ACGIH Threshold Limit Values (TLV)

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)

<b>Data source</b>	Sigma-Aldrich.
<b>Ventilation</b>	Fan.
<b>Respiratory</b>	If the permissible levels are exceeded, use a mechanical filter / cartridge against NIOSH vapors or a respirator with air supply.
<b>Gloves</b>	Handle with gloves.
<b>Eyes</b>	Safety goggles with safety shutters.
<b>Shoes</b>	Safety shoes.
<b>Clothing</b>	Labcoat. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.
<b>Engineering control</b>	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

<b>Physical state</b>	Liquid.
<b>Appearance</b>	Liquide rougeâtre.
<b>Odour</b>	Inodore.
<b>Odour threshold</b>	Data not available
<b>pH</b>	< 1.0.
<b>Melting point / Freezing point</b>	-7°C
<b>Initial boiling point</b>	102°C
<b>Boiling range</b>	Data not available
<b>Flash point</b>	Data not available
<b>Evaporation rate</b>	Data not available
<b>Flammability</b>	No
<b>Lower flammable / Explosive limit</b>	Data not available
<b>Upper flammable / Explosive limit</b>	Data not available
<b>Vapour pressure</b>	Data not available
<b>Solubility</b>	Miscible avec l'eau en toutes proportions.
<b>Vapour density</b>	Data not available
<b>Relative density</b>	1.03g/ml
<b>Partition coefficient water/n-octanol</b>	Data not available
<b>Auto-ignition temperature</b>	Data not available
<b>Decomposition temperature</b>	Data not available
<b>Viscosity</b>	Data not available

## SECTION 10 - STABILITY AND REACTIVITY

<b>Reactivity</b>	Acid product, reacts strongly with strong bases. Reacts strongly with metals.
<b>Chemical stability</b>	Stable under recommended storage conditions.
<b>Possibility of hazardous reactions</b>	May react violently with incompatible substances.
<b>Conditions of instability (Including sensitivity to shock / static discharge / vibration)</b>	Nitric acid is yellowish in color when exposed to light. Old nitric acid inventories (10 years and older) or yellowish-colored batches have formed a nitroz compound with very explosive potential. Avoid contact with incompatible materials and extreme temperatures.
<b>Incompatible material</b>	When pure, the products react with the following products: Reducing agents, ammonium hexacyanoferrate, carbon, organic and combustible materials, heat and moisture. Nitric acid is incompatible with bases, most metals, especially alkali metals, powdered metals, metal oxides, reducing agents, organic substances, including anhydrides, alcohols, aldehydes, ketones, ethers, amines, hydrocarbons, toluene, acetonitrile, acrylonitrile, chlorobenzene, methylene chloride, etc., combustible organic materials such as paper, charcoal, wood dust, etc. and with many sulphides, nonmetallic hydrides, carbides, and acetylenides.
<b>Hazardous decomposition products</b>	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)

<b>Routes of exposure</b>	Ingestion, inhalation, skin and eyes.
<b>Acute exposition effects / symptoms:</b>	By exposure route below.
<b>- Eyes</b>	May cause eye irritation.
<b>- Skin</b>	May be harmful if absorbed through skin. May cause skin irritation.
<b>- Inhalation</b>	May be harmful if inhaled. May cause respiratory tract irritation. Nervous disorders, cough, dyspnea, headache, dizziness, nausea and vomiting.
<b>Acute toxicity (Ingestion)</b>	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.
<b>Chronic exposure effects / symptoms</b>	urning sensation, conjunctivitis, skin allergy, nervous disorders, headache, cough, dyspnea, dizziness, tiredness, loss of appetite, nausea and vomiting. Is recognized as a possible carcinogen for humans (class 2B) by IARC. Toxic suspected to be reproductive for humans. Suspected of damaging the unborn child. In vitro tests showed mutagenic effects.
<b>DL50 (specify species and route of entry)</b>	LD50 Oral - Rat - 691 mg/Kg LD50 Dermal - Rat - > 2000 mg / kg
<b>CL50 (specify species and route of entry)</b>	LC50 - Inhalation - Data not available.

## NITRIC ACID

<b>Routes of exposure</b>	Ingestion, inhalation, skin and eyes.
<b>Acute exposition effects / symptoms:</b>	By exposure route below.
<b>- Eyes</b>	Irritation and tearing. Severe burns and destruction of ocular tissue that can lead to corneal ulceration and blindness.
<b>- Skin</b>	May be harmful if absorbed through skin. Severe burns and tissue ulcerations.
<b>- Inhalation</b>	Spasms, irritation and inflammation of the nose, throat and lungs. Cough, dyspnea, cyanosis, chest pain. Edema of the larynx and bronchi. Chemical pneumonitis and pulmonary edema that can lead to death.
<b>Acute toxicity (Ingestion)</b>	Corrosion and ulceration of the mouth, throat, esophagus, stomach and abdominal wall.
<b>Chronic exposure effects / symptoms</b>	Dental erosions have been attributed to repeated exposures. To our knowledge, the chemical, physical and toxicological properties have not been fully investigated.
<b>DL50 (specify species and route of entry)</b>	LD50 Oral - Data not available. LD50 Dermal - Data not available.
<b>CL50 (specify species and route of entry)</b>	Inhalation: 67 ppm, 4hres, Mouse

## SUMMARY

Acute exposure effects / Symptoms:	By exposure routes below.
Ingestion	May be harmful or fatal if ingested.
Inhalation	None expected.
Skin	May cause eye irritation or burns.
Eyes	May cause eye irritation or burns.
Chronic exposure effects / Symptoms:	Causes severe skin burns and eye damage (Nitric Acid). To our knowledge, the product has not been fully evaluated
ETA Mix (Estimated Acute Toxicity)	LD50 Oral: >5000 mg/kg - Rat LD50 Dermal: No data available LC50 Inhalation: 1675 ppm - 4h - Mouse

## SECTION 12 - ECOLOGICAL INFORMATION

<b>Available ecological information</b>	No
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## SECTION 13 - DISPOSAL CONSIDERATIONS

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

## SECTION 14 - TRANSPORT INFORMATION

<b>UN Number</b>	3264
<b>UN Proper shipping name</b>	LIQUIDE CORROSIF, ACIDE, INORGANIQUE, N.S.A. (acide nitrique)
<b>Transport hazard class(es)</b>	8 Corrosive substances
<b>Packing group</b>	III
<b>Limited quantity index</b>	5L
<b>ERAP Index</b>	-
<b>Special precautions</b>	16

## SECTION 15 - REGULATORY INFORMATION

<b>WHIMS CANADA</b>	Serious eye damage/eye irritation - Serious eye damage category 1 Respiratory or skin sensitization - Respiratory sensitizer category 1 Carcinogenicity category 1B Skin corrosion/irritation - Skin corrosion category 1 Corrosive to metals-Category 1 Reproductive toxicity category 1B
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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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