



SAFETY DATA SHEET

SECTION 01 - IDENTIFICATION

Product Identifier	POTASSIUM NITRATE (1.0M)
Other identification (Chemical name, Commercial name, Synonymous)	POTASSIUM NITRATE; SALPÊTRE; NITRE; NITRIC ACID POTASSIUM SALT; VICKNITE
Product code	PS-0168
Chemical formula	KNO ₃
Molar weight	101.11
Recommended use and Restrictions on use	For laboratory, school, commercial or industrial use. Not for medical or household use. Do not use for medical, food or household purposes.
Supplier	LABORATOIRE MAT 610, rue Adanac Québec Québec G1C 7B7 418-660-8666 Mon-Fri 8h-16h www.labmat.com labmat@labmat.com
Emergency phone	418-660-8666 Mon-Fri 8h-16h CENTRE ANTI-POISON DU QUÉBEC 800-463-5060
Date SDS	2025-07-10

SECTION 02 - HAZARDS IDENTIFICATION

WHIMS CANADA	- Not a hazardous substance according to WHMIS
Hazards statements (H)	- Not a dangerous substance or mixture according to the Canada WHIMS
Precautionary statements (P)	- The use of this product does not present any particular risk. However, standard laboratory safety precautions such as wearing gloves, clothing and eye protection should be followed.
Other dangers	NFPA (Risk: 0=No risk; 1=Slight; 2=Moderate; 3=Signifiant; 4=Extreme) Health 1 Fire 0 Reactivity 0 Special danger

SECTION 03 - COMPOSITION/INFORMATION ON INGREDIENTS

Component	No. CAS	% Weight
Potassium nitrate	7757-79-1	0.9%

SECTION 04 - FIRST AID MEASURE

Eye contact	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.
Skin contact	Wash skin with plenty of water for at least 15 minutes. Remove contaminated clothing. If irritation persists, seek medical attention.
Inhalation	Move the unwell person to the fresh air. If breathing is difficult, give oxygen. 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)	When concentrated, high exposure to the product causes the following main symptoms: Cyanosis (blue to black coloring of the skin and nails). Skin, eye and respiratory system irritation. Neurological disorders. Gastrointestinal disorders. Headaches. Dizziness. Nausea and vomiting. Convulsions. Fatigue. Anemia. Irritability. Dermatitis. Cough. Methemoglobinemia (methemoglobin level too high in the blood). Kidney damage. Confusion. Ref. section 11.
Immediate medical attention and special treatment, if necessary	Treat according to symptoms. Show this sheet to the attending physician.

SECTION 05 - FIREFIGHTING MEASURES

Suitable extinguishing media	Use water to extinguish the fire.
Unsuitable extinguishing media	Do not use dry chemical. Do not use foams. CO2 or halon can provide limited control.
Combustion products	Hazardous combustion products formed under fire conditions: Nitrogen oxides (NOx). Potassium oxides.
Specific hazards of the dangerous product	May react violently with incompatible products (Ref Section 10). In the event of a fire, the water in the solution will evaporate, and the oxidizing base product will fuel the fire.
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

Personal precautions, protective equipment and emergency measures	Evacuate personnel to safe areas. When handling, wear appropriate safety equipment (reference Section 8 for protective equipment to be used). Ensure a good ventilation. Use NIOSH cartridge respiratory protection if necessary or for larger spills. Cut off all sources of ignition. Keep combustibles (wood, paper, oil, etc.) away from spilled material.
Methods and materials for containment and cleaning up	Absorb the product with sand or vermiculite. Dilute residues with water, clean and rinse. Dispose of residues in a container for disposal of hazardous materials. Do NOT use combustible absorbents. Discharge into the environment must be avoided.

SECTION 07 - HANDLING AND STORAGE

Conditions for safe storage	Store in a cool, dry, and well-ventilated place. Keep container tightly closed and store away from heat, water, moisture, and incompatible products (ref. section 10).
Methods of handling	Avoid contact with eyes, skin and clothing. Avoid ingestion and inhalation. Wear personal protective equipment (ref. section 8) when handling. Always ensure good ventilation. Apply the usual standard hygiene rules: Wash your hands after use. Do not eat or drink during use.

SECTION 08 - EXPOSURE CONTROLS/PERSONAL PROTECTION

WORKPLACE CONTROL PARAMETERS

Component	CAS-No.	Value
Potassium nitrate	7757-79-1	No occupational exposure limits established by region-specific regulators - Quebec, Alberta, Ontario, British Columbia.

Respiratory	If permitted levels are exceeded, use NIOSH cartridge respiratory protection, or an air-supplied respirator.
Gloves	Handle with protective gloves. Suggested material: Nitrile. Butyl. Neoprene. The type, thickness and length of the glove must be chosen according to the use, the concentration of the product, as well as the duration of use. Replace gloves regularly for better protection.
Eyes	Safety goggles with safety shutters.
Shoes	Use safety shoes.
Clothes	Labcoat. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.
Engineering control	Use fan. 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	Liquid
Color	Colorless
Odour	Data not available
Odour threshold	Data not available
Melting point and freezing point	Data not available
Boiling point	Data not available
Flammability	No
Lower flammable / Explosive limit	Data not available
Upper flammable / Explosive limit	Data not available
Flash point	Data not available
Auto-ignition temperature	Data not available
Decomposition temperature	Data not available
pH	Donnée non-disponible
Kinematic viscosity	Data not available
Solubility	Sol in water
Partition coefficient water/n-octanol	Data not available
Vapour pressure	Data not available
Relative density	Data not available
Vapour density	Data not available
Particle characteristics	Not applicable

SECTION 10 - STABILITY AND REACTIVITY

Reactivity	May react violently with incompatible substances. Oxidizer: risk of fire in case of contact with combustible or organic substance.
Chemical stability	Stable under recommended storage conditions. Moisture sensitive.
Possibility of hazardous reactions	May react violently with incompatible substances. Risk of fire or explosion if heated or crushed in presence of combustible or organic products.
Conditions to avoid	Chocs sensitive. Sensitive to friction. Avoid moisture. Avoid excessive heat. Avoid contact with incompatible materials.
Incompatible materials	When pure, the product reacts with the following products: Strong reducers. Strong acids. Organic materials. Combustible materials. Heat and humidity. Sodium thiosulfate. Can form an explosive mixture with: Phosphorus. Alkyl esters. Antimony trisulfide. Metal powders. Arsenic disulfide. Sodium acetate. Sodium hypophosphite.
Hazardous decomposition products	Nitrogen oxides (NOx). Potassium oxides.

SECTION 11 - TOXICOLOGICAL INFORMATION

POTASSIUM NITRATE (1.0M)

Routes of exposure	Ingestion, inhalation, skin and eye contact.
Acute exposition effects / symptoms:	By exposure route below.
- Eyes	May cause: Irritation. Tearing To our knowledge, the chemical, physical and toxicological properties have not been fully investigated.
- Skin	May cause skin irritation. To our knowledge, the chemical, physical and toxicological properties have not been fully investigated.
- Inhalation	Irritation of the mucous membranes and respiratory tract. To our knowledge, the chemical, physical and toxicological properties have not been fully investigated.
Acute toxicity (Ingestion)	To our knowledge, the chemical, physical and toxicological properties have not been fully investigated.
Chronic exposure effects / symptoms	To our knowledge, the chemical, physical and toxicological properties have not been fully investigated.
DL50 (specify species and route of entry)	LD50 Oral - Rat - >5000mg/kg. LD50 Dermal - Rat - >5000mg/kg.
CL50 (specify species and route of entry)	LC50 Inhalation - Rat - 4 h - >5000mg/m ³ .

POTASSIUM NITRATE

Routes of exposure	Ingestion, inhalation, skin and eye contact.
Acute exposition effects / symptoms:	By exposure route below.
- Eyes	Irritation. Tearing
- Skin	Irritation. Dermatitis.
- Inhalation	Irritation of the mucous membranes and respiratory tract. Nervous disorders. Chest pain. Cough. Dyspnoea. Headaches. Dizziness. Watery eyes. Fever. Nausea and vomiting.
Acute toxicity (Ingestion)	Irritation of the esophagus and digestive tract. Mucous membrane irritation. Gastrointestinal disorders. Cramps. Diarrhea. Headaches. Dizziness. Nausea and vomiting. Convulsions.
Chronic exposure effects / symptoms	Is recognized as probably carcinogenic agent for humans (class 2A IARC) - Group 2A. Cyanosis (blue to black coloring of the skin and nails). Burning sensation. Dermatitis. Nervous disorders. Kidney damage. Chest pain. Cough. Dyspnoea. Laryngitis. Headache. Dizziness. Tearing. Confusion. Irritability. Fatigue. Anemia. Methemoglobinemia (methemoglobin level too high in the blood). Nausea and vomiting.
DL50 (specify species and route of entry)	LD50 Oral - Rat - 2000mg/kg. LD50 Dermal - Rat - 5000mg/kg.
CL50 (specify species and route of entry)	LC50 Inhalation - Rat - 4 h - 527 mg/m ³ .

SECTION 12 - ECOLOGICAL INFORMATION

POTASSIUM NITRATE (1.0M)

Ecotoxicity	Data not available.
Persistence and degradability	Not applicable for inorganic substances.
Bioaccumulative potential	Data not available.
Mobility in soil	Probable mobility in the environment due to its solubility in water.
Other adverse effects	An environmental hazard cannot be excluded in the event of unprofessional handling or disposal. Harmful to aquatic life.

POTASSIUM NITRATE

Ecotoxicity	Toxicity to fish: LC50 - <i>Gambusia affinis</i> (Mosquito fish) - 22.5 mg/l - 96 h. Static test - LC50 - <i>Poecilia reticulata</i> (guppy) - 378 mg/l - 96 h. Toxicity to daphnia and other aquatic invertebrates: EC0 - <i>Daphnia magna</i> (Water flea) - 226 mg/l - 72 h.
Persistence and degradability	Not applicable for inorganic substances.
Bioaccumulative potential	Data not available.
Mobility in soil	Probable mobility in the environment due to its solubility in water.
Other adverse effects	An environmental hazard cannot be excluded in the event of unprofessional handling or disposal. Harmful to aquatic life.

SECTION 13 - DISPOSAL CONSIDERATIONS

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

SECTION 14 - TRANSPORT INFORMATION

UN Number	N/R
UN Proper shipping name	
Transport hazard class(es)	
Packing group	
Limited quantity index	
ERAP Index	-
Special precautions	

SECTION 15 - REGULATORY INFORMATION

WHIMS CANADA	- Not a hazardous substance according to WHMIS
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SECTION 16 - OTHER INFORMATION

CNESST: Commission des normes, de l'équité et de la santé et sécurité au travail

NIH: National institute of health (U.S. National Library of Medicine)

ECHA: Agence Européenne de Chimie

ACGIH : American Conference of Governmental Industrial Hygienists

AIHA : American Industrial Hygiene Association

VECD: Valeur d'exposition courte durée

VEMP: Valeur d'exposition moyenne pondérée

CMRG : Chemical Manufacturer's Recommended Guidelines

OSHA : United States Department of Labor - Occupational Safety and Health Administration

TLV : Threshold limit value

TWA: Time-Weighted-Average

STEL: Short Term Exposure Limit

CEIL: Ceiling

RSST: Règlement sur la santé et sécurité au travail (Québec)

INRS: l'Institut national de recherche et de sécurité pour la prévention des accidents du travail et des maladies professionnelles (France)

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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