



## SAFETY DATA SHEET

### SECTION 01 - IDENTIFICATION

|                                                                          |                                                                                                                                                                                                                    |
|--------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Product Identifier</b>                                                | POTASSIUM NITRATE                                                                                                                                                                                                  |
| <b>Other identification (Chemical name, Commercial name, Synonymous)</b> | POTASSIUM NITRATE; SALPÊTRE; NITRE; NITRIC ACID POTASSIUM SALT; VICKNITE                                                                                                                                           |
| <b>Product code</b>                                                      | PR-0168                                                                                                                                                                                                            |
| <b>Chemical formula</b>                                                  | $\text{KNO}_3$                                                                                                                                                                                                     |
| <b>Molar weight</b>                                                      | 101.11                                                                                                                                                                                                             |
| <b>Recommended use and Restrictions on use</b>                           | For laboratory, school, commercial or industrial use. Not for medical or household use. Do not use for medical, food or household purposes.                                                                        |
| <b>Supplier</b>                                                          | LABORATOIRE MAT<br>610, rue Adanac<br>Québec<br>Québec<br>G1C 7B7<br>418-660-8666 Mon-Fri 8h-16h<br><a href="http://www.labmat.com">www.labmat.com</a><br><a href="mailto:labmat@labmat.com">labmat@labmat.com</a> |
| <b>Emergency phone</b>                                                   | 418-660-8666 Mon-Fri 8h-16h<br>CENTRE ANTI-POISON DU QUÉBEC 800-463-5060                                                                                                                                           |
| <b>Date SDS</b>                                                          | 2025-11-05                                                                                                                                                                                                         |

## SECTION 02 - HAZARDS IDENTIFICATION

### WHIMS CANADA

- Oxidizing solids - category 3
- Skin corrosion/irritation - Skin irritation - category 2
- Serious eye damage/eye irritation - Eye irritation - category 2

### PICTOGRAMS



### Signal Word

ATTENTION

### Hazards statements (H)

- May intensify fire; oxidizer
- Causes skin irritation
- Causes serious eye irritation

### Precautionary statements (P)

- Keep away from heat, sparks, open flames, hot surfaces. — No smoking.
- Keep away from clothing and combustible materials.
- Wear protective gloves (nitrile, butyle, neoprene), protective clothing and eye and face protection.
- In case of fire: Use water (not dry agents) to extinguish.
- Dispose of contents and container in accordance with local, regional and national regulations, or contact a specialist waste disposal company.
- Wash thoroughly after handling.
- IF ON SKIN: Wash with plenty of water
- If skin irritation occurs: Get medical attention.
- IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- If eye irritation persists get medical attention.

### Other dangers

NFPA (Risk: 0=No risk; 1=Slight; 2=Moderate; 3=Significant; 4=Extreme)

Health 1  
Fire 0  
Reactivity 1  
Special danger OX

## SECTION 03 - COMPOSITION/INFORMATION ON INGREDIENTS

| Component         | No. CAS   | % Weight |
|-------------------|-----------|----------|
| Potassium nitrate | 7757-79-1 | <=100%   |

## SECTION 04 - FIRST AID MEASURE

|                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                               |
|------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <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 contaminated 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. Never give anything by mouth to an unconscious person. Consult a physician.                                                                                                                                                                                                                                                                                  |
| <b>Most important symptoms and effects (acute and delayed)</b>         | Main symptoms of high exposure: 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. |
| <b>Immediate medical attention and special treatment, if necessary</b> | Treat according to symptoms. Show this sheet to the attending physician.                                                                                                                                                                                                                                                                                                                                      |

## SECTION 05 - FIREFIGHTING MEASURES

|                                                                      |                                                                                                                                                                                                                                                           |
|----------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Suitable extinguishing media</b>                                  | Use water to extinguish the fire.                                                                                                                                                                                                                         |
| <b>Unsuitable extinguishing media</b>                                | Do not use dry chemical. Do not use foams. CO2 or halon can provide limited control.                                                                                                                                                                      |
| <b>Combustion products</b>                                           | Hazardous combustion products formed under fire conditions: Nitrogen oxides (NOx). Potassium oxides.                                                                                                                                                      |
| <b>Specific hazards of the dangerous product</b>                     | Powerful oxidizer. Contact with combustible products may cause fire. 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>Personal precautions, protective equipment and emergency measures</b> | 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. Avoid dust formation. Avoid breathing dust. |
| <b>Methods and materials for containment and cleaning up</b>             | Pick up with a shovel or broom, taking care not to scatter dust. Dilute residues with water, clean and rinse. Dispose of residues in a container for disposal of hazardous materials. When handling, wear suitable safety equipment. Discharge into the environment must be avoided. Do NOT use combustible absorbents.                                                                                    |

## SECTION 07 - HANDLING AND STORAGE

|                                    |                                                                                                                                                                                                                                                                                                                                                                            |
|------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Conditions for safe storage</b> | 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). Hygroscopique                                                                                                                                                                                       |
| <b>Methods of handling</b>         | Avoid contact with eyes, skin and clothing. Avoid ingestion and inhalation. Avoid grinding or heat the product in the presence of combustible and organic materials. 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. |

|                            |                                                                                                                                                                                                                                                                                 |
|----------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Respiratory</b>         | If permitted levels are exceeded, use NIOSH cartridge respiratory protection, or an air-supplied respirator.                                                                                                                                                                    |
| <b>Gloves</b>              | 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. |
| <b>Eyes</b>                | Safety goggles with safety shutters.                                                                                                                                                                                                                                            |
| <b>Shoes</b>               | Use safety shoes.                                                                                                                                                                                                                                                               |
| <b>Clothes</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> | 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                        | Solide                                                       |
| Color                                 | White                                                        |
| Odour                                 | Odorless                                                     |
| Odour threshold                       | Data not available                                           |
| Melting point and freezing point      | 334°C                                                        |
| Boiling point                         | 400°C                                                        |
| 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                                    | pH = ~7                                                      |
| Kinematic viscosity                   | Not applicable                                               |
| Solubility                            | Soluble in water (100g/L @25°C). Slightly soluble in alcohol |
| Partition coefficient water/n-octanol | Data not available                                           |
| Vapour pressure                       | Data not available                                           |
| Relative density                      | 2.109 g/cm <sup>3</sup>                                      |
| Vapour density                        | Data not available                                           |
| Particle characteristics              | Cristalline powder                                           |

## 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             | 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 (NO <sub>x</sub> ). Potassium oxides.                                                                                                                                                                                                                      |

## SECTION 11 - TOXICOLOGICAL INFORMATION

### POTASSIUM NITRATE

|                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                    |
|--------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Routes of exposure</b>                        | Ingestion, inhalation, skin and eye contact.                                                                                                                                                                                                                                                                                                                                                                       |
| <b>Acute exposition effects / symptoms:</b>      | 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.                                                                                                                                                                                                                                           |
| <b>Acute toxicity (Ingestion)</b>                | Irritation of the esophagus and digestive tract. Mucous membrane irritation. Gastrointestinal disorders. Cramps. Diarrhea. Headaches. Dizziness. Nausea and vomiting. Convulsions.                                                                                                                                                                                                                                 |
| <b>Chronic exposure effects / symptoms</b>       | 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. |
| <b>DL50 (specify species and route of entry)</b> | LD50 Oral - Rat - 2000mg/kg. LD50 Dermal - Rat - 5000mg/kg.                                                                                                                                                                                                                                                                                                                                                        |
| <b>CL50 (specify species and route of entry)</b> | LC50 Inhalation - Rat - 4 h - 527 mg/m <sup>3</sup> .                                                                                                                                                                                                                                                                                                                                                              |

## SECTION 12 - ECOLOGICAL INFORMATION

### POTASSIUM NITRATE

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

## SECTION 13 - DISPOSAL CONSIDERATIONS

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

## SECTION 14 - TRANSPORT INFORMATION

|                            |                          |
|----------------------------|--------------------------|
| UN Number                  | 1486                     |
| UN Proper shipping name    | NITRATE DE POTASSIUM     |
| Transport hazard class(es) | Matières comburantes 5.1 |
| Packing group              | III                      |
| Limited quantity index     | 5 kg                     |
| ERAP Index                 | -                        |
| Special precautions        | -                        |

## SECTION 15 - REGULATORY INFORMATION

|              |                                                                                                                                                                    |
|--------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| WHIMS CANADA | - Oxidizing solids - category 3<br>- Skin corrosion/irritation - Skin irritation - category 2<br>- Serious eye damage/eye irritation - Eye irritation - category 2 |
|--------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|

## 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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