

Potassium Nitrate

SECTION 1. IDENTIFICATION

Product Identifier	Potassium Nitrate
Other Means of Identification	Nitrate of potash, Saltpeter, Vicknite
Product Code(s)	PO5720, PO5760, PO5761, PO5762, PO5764, PO5765
Product Family	Inorganic Solid
Recommended Use	Laboratory and industrial use.
Restrictions on Use	None known.
Supplier Identifier	Alphachem Limited, 2485 Milltower Court, Mississauga, Ontario, L5N 5Z6, (905) 821-2995
Emergency Phone No.	Infotrac, 1-800-535-5053, 24 Hours
SDS No.	0497

SECTION 2. HAZARD IDENTIFICATION

Classified according to Canada's Hazardous Products Regulations (WHMIS 2015) and the US Hazard Communication Standard (HCS 2012).

Classification

Oxidizing solid - Category 3; Skin irritation - Category 2; Eye irritation - Category 2A; Specific target organ toxicity (single exposure) - Category 3

Label Elements



Signal Word:
Warning

Hazard Statement(s):

May intensify fire; oxidizer.
Causes skin irritation.
Causes serious eye irritation.
May cause respiratory irritation.

Precautionary Statement(s):

Keep away from heat/sparks/open flames/hot surfaces. – No smoking.
Keep or store away from clothing and other combustible materials.
Keep away from clothing and other combustible materials.
Avoid breathing dust/fume/gas/mist/vapours/spray.
Wash hands and skin thoroughly after handling.
Use only outdoors or in a well-ventilated area.
Wear protective gloves/protective clothing/eye protection/face protection.
Response:

IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

IF ON SKIN: Wash with plenty of water.

If skin irritation occurs: Get medical advice/attention.

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.

If eye irritation persists: Get medical advice/attention.

Immediately call a POISON CENTRE or doctor.

Dispose of contents and container in accordance with local, regional, national and international regulations.

Other Hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance:

Chemical Name	CAS No.	%	Other Identifiers
Potassium nitrate	7757-79-1	> 99	Nitrate of potash, Saltpeter, Vicknite

SECTION 4. FIRST-AID MEASURES

First-aid Measures

Inhalation

Remove source of exposure or move to fresh air. Keep at rest in a position comfortable for breathing. Call a Poison Centre or doctor.

Skin Contact

Immediately wash gently and thoroughly with lukewarm, gently flowing water and mild soap for 15-20 minutes. If skin irritation occurs, get medical advice or attention.

Eye Contact

Immediately rinse the contaminated eye(s) with lukewarm, gently flowing water for 15-20 minutes, while holding the eyelid(s) open. If eye irritation persists, get medical advice or attention.

Ingestion

Rinse mouth with water. Do not induce vomiting. Immediately call a Poison Centre or doctor.

First-aid Comments

All first aid procedures should be periodically reviewed by a doctor familiar with the material and its condition of use in the workplace. Get medical advice or attention if you feel unwell or are concerned.

Most Important Symptoms and Effects, Acute and Delayed

If swallowed: can burn the lips, tongue, throat and stomach. Symptoms may include nausea, vomiting, stomach cramps and diarrhea. May cause serious eye damage. May irritate or burn the eyes. Permanent damage including blindness may result.

Immediate Medical Attention and Special Treatment

Special Instructions

General advice

Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

SECTION 5. FIRE-FIGHTING MEASURES

Extinguishing Media

Suitable Extinguishing Media

Not combustible. Use extinguishing agent suitable for surrounding fire. Use flooding quantities of water spray or fog.

Unsuitable Extinguishing Media

DO NOT use carbon dioxide, or other agents that smother the flames.

Specific Hazards Arising from the Product

Mild oxidizer. Releases oxygen to create an oxygen-rich atmosphere. Will cause combustible materials to ignite more readily. Heating increases the release of toxic vapour. Closed containers may rupture violently when heated releasing contents.

In a fire, the following hazardous materials may be generated: corrosive, oxidizing nitrogen oxides. Oxygen.

Special Protective Equipment and Precautions for Fire-fighters

Fight fire from a safe distance or a protected location. Approach fire from upwind to avoid hazardous vapours or gases. Oxidizer. Prevent contact with flammable and combustible materials. Knock down vapours or gases with water fog or fine water spray. For a massive fire, immediately evacuate the area and use unmanned hose holder or monitor nozzles. Dike and recover contaminated water for appropriate disposal.

A full-body encapsulating chemical protective suit with positive pressure SCBA may be necessary.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment, and Emergency Procedures

Emergency responders: use the personal protective equipment recommended in Section 8 of this safety data sheet. Evacuate the area immediately. Isolate the hazard area. Keep out unnecessary and unprotected personnel. Increase ventilation to area or move leaking container to a well-ventilated and secure area. Eliminate all ignition sources. Use grounded, explosion-proof equipment. Remove or isolate incompatible materials as well as other hazardous materials.

Environmental Precautions

Do not allow into any sewer, on the ground or into any waterway.

Methods and Materials for Containment and Cleaning Up

Small spills or leaks: contain spill with earth, sand, or absorbent material which does not react with spilled material. Place used absorbent into suitable, covered, labelled containers for disposal.

Large spills or leaks: avoid generating dust. Collect using shovel/scoop or approved HEPA vacuum and place in a suitable container for disposal. Do not return spilled product to its original container. Flush spill area. Dike and recover contaminated water for appropriate disposal.

SECTION 7. HANDLING AND STORAGE

Precautions for Safe Handling

Do not get in eyes, on skin or on clothing. Wear personal protective equipment to avoid direct contact with this chemical. Prevent accidental contact with incompatible chemicals. Avoid generating dusts. Only use where there is adequate ventilation. Eliminate heat and ignition sources such as sparks, open flames, hot surfaces and static discharge. Post "No Smoking" signs. Keep away from clothing and other combustible materials. Keep containers tightly closed when not in use or empty.

Conditions for Safe Storage

Store in an area that is: cool, dry. Protect from sunlight. Separate from incompatible materials (see Section 10: Stability and Reactivity), clear of combustible and flammable materials (e.g. old rags, cardboard). Store in a closed container.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control Parameters

Chemical Name	ACGIH TLV®		OSHA PEL		AIHA WEEL	
	TWA	STEL	TWA	Ceiling	8-hr TWA	TWA
Potassium nitrate	Not established		Not established			

Appropriate Engineering Controls

Use local exhaust ventilation and enclosure, if necessary, to control amount in the air. Provide safety shower in work area, if contact or splash hazard exists.

Individual Protection Measures

Product Identifier: Potassium Nitrate

Date of Preparation: May 02, 2016

Page 03 of 06

Eye/Face Protection

Wear chemical safety goggles and face shield when contact is possible.

Skin Protection

Wear chemical protective clothing e.g. gloves, aprons, boots.

No specific guidelines are available. Contact chemical manufacturer/supplier for advice.

Respiratory Protection

Wear a NIOSH approved air-purifying respirator with an appropriate cartridge.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Basic Physical and Chemical Properties

Appearance	White crystals.
Odour	Odourless
Odour Threshold	Not applicable
pH	6.8 - 7.6 (10% solution)
Melting Point/Freezing Point	334 °C (633 °F) (melting); Not available (freezing)
Initial Boiling Point/Range	Not available
Flash Point	Not applicable
Evaporation Rate	Not available
Flammability (solid, gas)	Will not burn.
Upper/Lower Flammability or Explosive Limit	Not applicable (upper); Not applicable (lower)
Vapour Pressure	Not available
Vapour Density (air = 1)	Not applicable
Relative Density (water = 1)	2.11
Solubility	32 - 35 g/100 mL (Soluble) in water; Mildly soluble in alcohols (e.g. ethanol).
Partition Coefficient, n-Octanol/Water (Log Kow)	-0.79 (estimated)
Auto-ignition Temperature	Not applicable
Decomposition Temperature	530 - 650 °C (986 - 1202 °F)
Viscosity	Not available (kinematic); Not applicable (dynamic)
Other Information	
Physical State	Solid
Other Physical Property 1	Relative Density (specific gravity): 2.11 measured at 16 deg C

SECTION 10. STABILITY AND REACTIVITY

Reactivity

Mild oxidizer. May cause or intensify fire.

Chemical Stability

Normally stable.

Possibility of Hazardous Reactions

None known.

Conditions to Avoid

Sunlight. Open flames, sparks, static discharge, heat and other ignition sources. Temperatures above 530.0 °C (986.0 °F)

Incompatible Materials

Strong reducing agents (e.g. hydrides).

Hazardous Decomposition Products

Oxygen (a strong oxidizer); corrosive, oxidizing nitrogen oxides.

Product Identifier: Potassium Nitrate

Date of Preparation: May 02, 2016

Page 04 of 06

SECTION 11. TOXICOLOGICAL INFORMATION

Likely Routes of Exposure

Inhalation; skin contact; eye contact; ingestion.

Acute Toxicity

Chemical Name	LC50	LD50 (oral)	LD50 (dermal)
Potassium nitrate	Not available	3015 mg/kg (rat)	Not available

Skin Corrosion/Irritation

Human experience and animal tests show moderate or severe irritation.

Serious Eye Damage/Irritation

Causes serious eye damage based on skin corrosion information.

STOT (Specific Target Organ Toxicity) - Single Exposure

Inhalation

May cause nose and throat irritation.

Ingestion

May cause severe irritation or burns to the mouth, throat and stomach. Symptoms may include nausea, vomiting, stomach cramps and diarrhea.

Aspiration Hazard

No information was located.

STOT (Specific Target Organ Toxicity) - Repeated Exposure

No information was located.

Respiratory and/or Skin Sensitization

No information was located.

Carcinogenicity

Chemical Name	IARC	ACGIH®	NTP	OSHA
Potassium nitrate	Not evaluated	Not Listed	Not Listed	

Reproductive Toxicity

Development of Offspring

No information was located.

Sexual Function and Fertility

No information was located.

Effects on or via Lactation

No information was located.

Germ Cell Mutagenicity

No information was located.

Interactive Effects

No information was located.

SECTION 12. ECOLOGICAL INFORMATION

This section is not required by WHMIS. This section is not required by OSHA HCS 2012.

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal Methods

Dispose of contents and container in accordance with local, regional, national and international regulations.

SECTION 14. TRANSPORT INFORMATION

Regulation	UN No.	Proper Shipping Name	Transport Hazard Class(es)	Packing Group
Canadian TDG	UN1486	POTASSIUM NITRATE	5.1	III
US DOT	UN1486	POTASSIUM NITRATE	5.1	III

Special Precautions Not applicable

Transport in Bulk According to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

SECTION 15. REGULATORY INFORMATION

Safety, Health and Environmental Regulations

Canada

Domestic Substances List (DSL) / Non-Domestic Substances List (NDSL)

Listed on the DSL.

USA

Toxic Substances Control Act (TSCA) Section 8(b)

Listed on the TSCA Inventory.

SECTION 16. OTHER INFORMATION

SDS Prepared By Alphachem Limited

Phone No. (905)-821-2995

Date of Preparation May 02, 2016

Date of Last Revision May 02, 2016

References CHEMINFO database. Canadian Centre for Occupational Health and Safety (CCOHS). GFS Chemicals database.

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