



SAFETY DATA SHEET POTASSIUM NITRATE

Product No: 001/04-US

Section 1 : Identification of the Substance and of the Company

Product Name : Potassium Nitrate
Supplier : SQM Northamerica Corporation
Address : 3101 Towercreek Parkway, Suite 450
Atlanta, GA 30339
Telephone : (770) 916 9400
Fax : (770) 916 9401
Emergency Number : (800) 424 9300 (CHEMTREC)

Section 2 : Composition/Information on Ingredients

Chemical Name : Potassium Nitrate, Saltpeter, Niter
CAS No. : 7757-79-1
EINECS No. : 231-818-1
Molecular Weight : 101.1
Formula : KNO_3

Section 3 : Hazards Identification

Emergency Overview

Oxidizer. Contact with combustible material will not cause spontaneous ignition. However, substance will enhance an existing fire (Class 1 oxidizer according to NFPA).

NFPA Ratings

Health : 1
Flammability : 0
Reactivity : 1
Special : Oxidizer

Potential Health Effects

Inhalation : Inhalation of dust irritates the respiratory tract. Symptoms may include coughing.
Ingestion : Hazardous in case of ingestion.
Skin Contact : May cause irritation, specially with wet skin.
Eye Contact : May cause irritation, eye redness, itching and pain.

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Section 4 : First Aid Measures

General Information

In case of persisting adverse effects consult a physician.

Specific Measures

- Inhalation : Remove to fresh air. Get medical attention for any breathing difficulty.
- Ingestion : Induce vomiting. Never give anything by mouth (oral) to an unconscious person.
- Skin Contact : In case of irritation, remove clothing. Wipe excess from skin. Wash with soap and water for at least 5 minutes.
- Eye Contact : Flush eyes with plenty of water, lifting lower and upper eyelids occasionally.

Section 5 : Firefighting Measures

- Fire : Non combustible, but contact with combustible substances under a fire will increase combustion rate. For thermal decomposition products, refer to Section 10.
- Extinguishing Media
- Suitable : Any mean suitable for extinguishing surrounding fire. Spray water for small fires. For large fires flood with abundant water
 - Not Suitable : -
- Protective equipment: Refer to section 8.

Section 6 : Accidental Release Measures

- Personal Precautions : Ventilate the area. Use personal protective equipment (Section 8).
- Environmental Precautions: Do not discharge into drains. Avoid surface and ground water contamination.
- Methods for Cleaning Up/Taking Up : Pick up the product mechanically and store in suitable containers for recovery or disposal.





Section 7 : Handling and Storage

Handling

Special Procedures	None.
Safe Handling Procedures	Minimize dust generation. Avoid contact with eyes and skin.
Special Advices	See Section 10.

Storage

Special Requirements	: Reseal carefully any opened container and set upright to avoid leakages. Keep the product in the original containers.
Storage Conditions	: Keep away from flammable substances. Do not store with combustibles or reducing agents. Keep containers tightly closed in well ventilated and cool place.

Section 8 : Exposure Controls / Personal Protection

Exposure Limits

Suggested according to US regulations : 15 mg/m³ (total dust) ; 5 mg/m³ (respirable fraction)

Exposure Controls

Local exhaust ventilation to keep low dust environment.

Personal Protective Equipment

Respiratory	: Dust mask if necessary, <i>i.e.</i> in case of dust emission or dusty environments.
Eyes	: Safety goggles required all the time.
Hands	: Nitrile rubber gloves, over 0.11 mm thickness, > 480 min breakthrough time.

Hygiene Measures

Do not drink, eat or smoke during product manipulation. Keep away from foodstuffs and beverages. Wash hands before breaks and after work.





Section 9 : Physical and Chemical Properties

Physical Form	: Solid, crystalline
Colour	: White
Odour	: Odourless
pH	: 6-9 (5% aqueous solution)
Melting Point	: 334°C
Boiling Point	: not applicable
Flash Point	: not applicable
Flammability	: not flammable
Explosive Properties	: not applicable
Thermal Decomposition	: 400°C
Specific Gravity	: 2.5 g/mL
Water Solubility	: 320 g/L (20 °C)
Partition Coefficient (log Pow)	: not applicable

Section 10 : Stability and Reactivity

Stability	: Stable under normal storage and temperature conditions.
Conditions to avoid	: Keep away from flammable, combustible and reducing substances.
Hazardous Decomposition Products	: Nitrous oxides, potassium nitrite and potassium oxide by thermal decomposition.

Section 11 : Toxicological Information

Acute Data

Oral LD₅₀ (rat) : 3750 mg/Kg
Dermal LD₅₀ (rat) : > 5000 mg/Kg
Inhalation : no data available

Short-term Effects

Inhalation may cause irritation of the respiratory tract. Can cause skin and eye irritation. Cyanosis due to absorption of big quantities into the body and occurrence of methaemoglobinemia.

Chronic Effects

No adverse effects observed on reproductive or developmental toxicity. Non mutagenic according to *in vitro* bacterial tests.





Section 12 : Ecological Information

General

Do not discharge into drains and water or public depositories.

Environmental Fate

Dissociates into potassium and nitrate ions. Nitrates may be absorbed by plants and converted into organic nitrogen, whereas potassium binds to clay particles in the soil.

Zooplankton Toxicity

Species : *Daphnia magna*
LC₅₀ 490 mg/L (48 h)

Fish Toxicity

Species: Guppy (*Poecilia Reticulata*)
LC₅₀ 180 mg/L (96 h)

Not acutely toxic to aquatic organisms.

Mobility

Predicted Distribution : Water, 45% ; Soil, 54.7%

Majority of Potassium Nitrate used as fertilizer is removed from the growing media by crops.

Section 13 : Disposal Considerations

- Residues : Licensed professional waste disposal service is required. Disposal of waste according to all federal, state and local regulations.
- Empty Packaging : Empty containers may be reused after appropriate cleansing. Packaging that can not be cleaned should be disposed in agreement with the regional waste disposal company.

Section 14 : Transport Information

Rail & Road (DOT) – Sea (IMDG Code) – Air (IATA)

Proper Shipping Name	Potassium Nitrate
UN Number	1486
Class	5.1
Packaging Group	III
Hazard Label	Oxidizer





Section 15 : Regulatory Information

US Classification

Indication of Danger	Oxidizing.
Risk statements	Contact with combustible material under a fire will enhance combustion.
Safety Statements	Keep away from combustible material Avoid contact with skin and eyes
SARA	Not listed
TSCA	Listed
California Prop.65	Not listed

Section 16 : Other Information

This MSDS complies with 29 CFR prt 1910 subpart Z and ANSI Standard Z400.1-2004.

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