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 : KNO₃

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.
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 Minimize dust generation. Avoid contact with eyes and skin.
Procedures 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.e. 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 LD$_{50}$ (rat): 3750 mg/Kg
- Dermal LD$_{50}$ (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  Fish Toxicity
Species: Daphnia magna  Species: Guppy (Poecilia Reticulata)
LC$_{50}$ 490 mg/L (48 h)  LC$_{50}$ 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 cannot 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


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