



MATERIAL SAFETY DATA SHEET

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POTASSIUM NITRATE

SECTION I: IDENTIFICATION OF PRODUCT

Product Name: POTASSIUM NITRATE
Chemical Family: Nitrates, Nitrous Acid, Potassium Salt
WHMIS Classification: Class C, D1B, D2B
Workplace Hazard: Skin, eye and respiratory tract irritant. Strong oxidizer. Immediate toxic effects

Product Use: Potassium Source
TDG Classification: 5, Division 5.1 Oxidizer
Packaging Group: III
PIN: UN 1486

SECTION II: HAZARDOUS INGREDIENTS

Ingredients	Percent	CAS Number	LD ₅₀ (rabbit/dermal)	LC ₅₀ (mouse/inhal)
Potassium Nitrate	100	7758-09-0	200 mg/kg	85 gm/m ³ 2hr

SECTION III: TOXICOLOGICAL PROPERTIES

Route of entry: Skin Eye Contact Inhalation Ingestion

Effects of acute exposure: Causes skin irritation, redness and pain. May be harmful if absorbed through the skin. Eyes will become irritated, redness and pain if contacted. Respiratory tract if breathed will become irritated. May cause effect similar to those described for ingestions. Is poison by ingestion. May cause headache. May cause nausea and vomiting. Overexposure may cause methemoglobinemia. Ingestion may cause a decrease in blood pressure, rapid pulse and visual disturbances.

Effects of chronic exposure: Absorption into the body leads to the formation of methemoglobin which in sufficient concentrations causes cyanosis (bluish discoloration of the skin due to deficient oxygenation in the blood).

Exposure limits: None established.

Irritancy of product: Not available

Sensitization to product: Not available

Carcinogenicity: Not available

Reproductive toxicity: Not available

Teratogenicity: Not available

Mutagenicity: Not available

Name of toxicological synergistic products: Not available



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SECTION IV: FIRST AID MEASURES

Inhalation: Get medical aid immediately. Remove from exposure and move to fresh air immediately. If breathing is difficult, give oxygen. Do NOT use mouth-to-mouth resuscitation. If breathing has ceased apply artificial respiration using oxygen and a suitable mechanical device as a bag and a mask.

Ingestion: DO NOT induce vomiting. Get medical aid immediately. Call a poison control center.

Skin Contact: Get medical aid immediately. Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes.

Eye Contact: Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid immediately.

SECTION V: PHYSICAL DATA

Physical state: Solid.

Appearance and odour: White to pale yellow crystals, odorless

Odour threshold: Not available

Specific gravity: 1.915

Vapor pressure (mmHG): Not available

Vapor density (Air=1): Not available

Evaporation rate: Not available

Boiling point (°C): Not available

Freeze/Melting point (°C): 387°C (613°F)

pH: 7 - 10

Co-efficient of water/oil distribution: Not applicable

Solubility: soluble in cold water



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SECTION VI: FIRE AND EXPLOSION DATA

Conditions of flammability: Not available, but specialty concerns are this product is a strong oxidizer. Contact with other material may cause fire. Containers may explode in the heat of a fire. This material in sufficient quantity and reduced particle size is capable of creating a dust explosion.

Means of extinguishing: Use water spray, dry chemical, carbon dioxide, or chemical foam. Use flooding amounts of water as spray. Cool containers with flooding quantities of water until well after fire is out. Use extinguisher suitable to surrounding media.

Flash point: Not available

Upper flammable limit: Not available

Lower flammable limit: Not available

Auto-ignition temperature: 510 C

Hazardous combustion products: Nitrogen Oxides

Explosion data-sensitivity to mechanical impact: Not available

Explosion data-sensitivity to static discharge: Not available

SECTION VII: REACTIVITY DATA

Chemically unstable (conditions): Stable under ordinary conditions of use and storage.

Product incompatible with: Acids, Aluminum, Amines, Chlorides, Finely Powdered Metals, Hydrazine, Permanganates, Boron, Amides, Hypophosphites, Sulfites, Carbon, Ammonium Salts, Iodides, Mercury Salts, Cyanide.

Conditions of reactivity: Incompatible materials, excess heat, combustible materials, organic materials, exposure to moist air or water, and temperatures above 300 C.

Hazardous decomposition products: Nitrogen Oxides.



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SECTION VIII: PREVENTATIVE MEASURES

Personal protective equipment: Use a NIOSH/MSHA approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced. Wear appropriate protective clothing to minimize contact with skin. Wear appropriate protective eyeglasses or chemical safety goggles. Wear appropriate gloves to prevent skin exposure.

Specific engineering controls: A system of local and/or general exhaust is recommended to keep employee exposures as low as possible. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area.

Procedures for leak/spills: Use proper personal protective/equipment as indicated. Vacuum or sweep up material and place into a suitable disposal container. Clean up spills immediately, observing precautions in the protective equipment section. Avoid generating dusty conditions. Flush spill area with water. Do not use combustible materials such as paper towels to clean up spill.

Waste disposal: Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Additionally, waste generators must consult local hazardous waste regulations to ensure complete and accurate classification.

Handling procedures and equipment: Use with adequate ventilation. Minimize dust generation and accumulation. Do not get on skin or in eyes. Use only in a chemical fume hood. Keep from contact with clothing and other combustible materials. Do not breathe dust.

Storage requirements: Do not store near combustible materials. Store in a tightly closed container. Store in a cool, dry, well-ventilated area away from incompatible substances. Store protected from moisture.

Special shipping information: Not available.

SECTION IX: PREPARATION

Date updated: November, 2007

Prepared by: Product Safety Committee

All the recommendations and suggestions herein concerning this product are based upon tests and data believed to be reliable, however it is the user's responsibility to determine the safety, toxicity and sustainability for their own use of the product described herein. Since the actual use by others is beyond our control, no guarantee, expressed or implied, is made by Q'Max Solutions Inc. as to the effects of such use, the results to be obtained, or the safety and toxicity of the product nor does Q'Max Solutions Inc. assume any liability arising out of use by others. Nor is the information herein to be considered as absolutely complete since additional information may be necessary or desirable when particular or exceptional conditions or circumstances exist or because of applicable laws or government regulations.