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Material Safety Data Sheet

EMERGENCY NUMBERS:

(USA) CHEMTREC : 1(800) 424-9300 (24hrs)
 (CAN) CANUTEC : 1(613) 996-6666 (24hrs)

WHMIS	Protective Clothing	TDG Road/Rail
WHMIS CLASS: C D-2B		TDG CLASS: 5.1 PIN: UN1486 PG: III
		

Section I. Product Identification and Uses

Product name	POTASSIUM NITRATE, 2M		
Chemical formula	Not applicable.	CI#	Not available.
Synonyms	C-4194	CAS#	Not applicable.
		Code	C-4194
		Formula weight	Not applicable.
		Supersedes	
Material uses	For laboratory use only.		

Section II. Ingredients

Name	CAS #	%	TLV
1) POTASSIUM NITRATE	7757-79-1	15-25	Not established by ACGIH
2) WATER	7732-18-5	Balance	Not established by ACGIH

Toxicity values of the hazardous ingredients POTASSIUM NITRATE:
 ORAL (LD50): Acute: 3750 mg/kg (Rat). 1901 mg/kg (Rabbit).

Section III. Physical Data

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Physical state and appearance / Odor	Colorless liquid. Odorless.
pH (1% soln/water)	Not available.
Odor threshold	Not available.
Percent volatile	100% (w/w). (Water).
Freezing point	Not available.
Boiling point	Not available.
Specific gravity	>1 (Water = 1)
Vapor density	Not available.
Vapor pressure	Not applicable.
Water/oil dist. coeff.	Not available.
Evaporation rate	Not available.
Solubility	Miscible in water.

Section IV. Fire and Explosion Data

Flash point	Not applicable.
Flammable limits	Not applicable.
Auto-ignition temperature	Not available.
Fire degradation products	Oxides of nitrogen and potassium.
Fire extinguishing procedures	Use flooding quantities of water. Wear adequate personal protection to prevent contact with material or its combustion products. Self contained breathing apparatus with a full facepiece operated in a pressure demand or other positive pressure mode. Cool containing vessels with flooding quantities of water until well after fire is out.
Fire and Explosion Hazards	Powerful oxidizing agent; may ignite oxidizable materials. Contributes to combustion of other materials. Contact with other material may cause fire and/or explosion. Container explosion may occur under fire conditions or when heated. The product is sensitive to impact. May explode by friction, shock or heat. When contaminated, it is very sensitive. Contact with other material may form shock, heat or friction sensitive mixtures. Emits toxic fumes under fire conditions.

Section V. Toxicological Properties

Routes of entry	Ingestion and inhalation. Eye contact. Skin contact.
Effects of Acute Exposure	Harmful by ingestion, inhalation or skin absorption. Irritant. Target organs: blood, central nervous system.
Eye	Causes irritation (redness, watering, itching and pain). May cause burns.
Skin	Causes skin irritation (redness, itching and pain). May cause burns.
Inhalation	Material is irritating to mucous membranes and upper respiratory tract. Coughing, headache, nausea, vomiting, dizziness, methemoglobinemia, cyanosis, pulmonary edema, coma, collapse and death.
Ingestion	Causes gastrointestinal irritation. Headache, nausea, vomiting, dizziness, gastro-enteritis, bloody diarrhea, abdominal pain, weakness, diuresis, methemoglobinemia, cyanosis, convulsions, collapse and possibly death. Nitrates may be reduced to nitrites by bacteria in the digestive tract. Signs and symptoms of nitrite poisoning include methemoglobinemia with cyanosis, nausea, dizziness, increased heart rate and respiratory paralysis.

Section V. Toxicological Properties

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Effects of Chronic Overexposure Anemia, headache, weakness, dermatitis, central nervous system depression, methemoglobinemia and nephritis. May damage fetus. Medical conditions which may be aggravated: Individuals with preexisting diseases of the skin, eye, or respiratory system may be more susceptible to the toxicity of overexposure to this product. Carcinogenic effects: Not available. Mutagenic effects: Not available. Teratogenic effects: Not available. Toxicity of the product to the reproductive system: Not available. To the best of our knowledge the chronic toxicity of this substance has not been fully investigated.

Section VI. First Aid Measures

Eye contact Immediately flush eyes with copious quantities of water for at least 15 minutes holding lids apart to ensure flushing of the entire surface. Call a physician.

Skin contact Immediately flush skin with plenty of water and soap for at least 15 minutes while removing contaminated clothing and shoes. Call a physician. Wash contaminated clothing before reusing.

Inhalation Remove patient to fresh air. Administer approved oxygen supply if breathing is difficult. Administer artificial respiration or CPR if breathing has ceased. Call a physician.

Ingestion Induce vomiting as directed by medical personnel. Never give anything by mouth to an unconscious or convulsing person. Get immediate medical attention.

Section VII. Reactivity Data

Stability Stable. Conditions to avoid: High temperatures, sparks, open flames and all other sources of ignition, shock, friction, contamination.

Hazardous decomp. products Not available.

Incompatibility Combustible materials, organic materials, oxidizable materials, reducing agents, acids, metals (sodium, iron, magnesium, titanium, antimony, arsenic, germanium, zinc, zirconium, aluminum, etc...), phosphites, cyanides, acetates, tartrates, non-metals (boron, carbon, phosphorus, sulfur, etc...), ammonium sulfate, trichloroethylene, sulfides, hypophosphites, carbides, AsS₂, BaS, CaS, Cu₃P₂, GeS, TiS₂, CaSi, MoS₂, BP, SbS₃, sodium thiosulfate, sodium acetate, sodium hypophosphite, peroxides, phosphides, calcium hydroxide, chromium nitride, lactose, phospham, esters, stannous chloride, thiocyanates, 1,3-Bis(trichloromethyl)benzene, amides, boron phosphide, sodium cyanide, isothiocyanates, citric acid, nitrites, phosphinates, ammonium salts, fluorine, calcium silicide.

Reaction Products Contact with other material may cause fire and/or explosion. Contact with other material may form shock, heat or friction sensitive mixtures. Hazardous polymerization will not occur.

Section VIII. Preventive Measures

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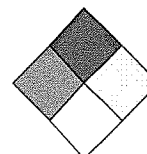
Protective Clothing in case of spill and leak	Wear self-contained breathing apparatus, rubber boots and heavy rubber gloves.
Spill and leak	Evacuate the area. Eliminate all sources of ignition. Absorb on sand or vermiculite and place in a closed container for disposal. Ventilate area and wash spill site after material pick up is complete. DO NOT empty into drains. DO NOT touch damaged container or spilled material. Avoid contact with a combustible material (wood, paper, oil, clothing...).
Waste disposal	According to all applicable regulations. Harmful to aquatic life at low concentrations. Can be dangerous if allowed to enter drinking water intakes. Do not contaminate domestic or irrigation water supplies, lakes, streams, ponds, or rivers.
Storage and Handling	Do not store near flammable /organic substances. Store in a cool place away from heated areas, sparks, and flame. Store in a well ventilated area. Store away from incompatible materials. Do not add any other material to the container. Do not wash down the drain. Do not breathe gas/fumes/vapor/spray. In case of insufficient ventilation, wear suitable respiratory equipment. Keep away from direct sunlight or strong incandescent light. Keep container tightly closed. Manipulate in a well ventilated area or under an adequate fume hood. Use non-sparking tools. Empty containers may contain a hazardous residue. Handle and open container with care. Take off immediately all contaminated clothing. Avoid contact with a combustible material (wood, paper, oil, clothing...). This product must be manipulated by qualified personnel. Do not get in eyes, on skin, or on clothing. Wash well after use. In accordance with good storage and handling practices. Do not allow smoking and food consumption while handling. Do not store on wood floors.

Section IX. Protective Measures

Protective clothing	Splash goggles. Impervious rubber or neoprene gloves, apron, coveralls, and/or other resistant protective clothing. Sufficient to protect skin. A OSHA/MSHA jointly approved respirator is advised in the absence of proper environmental controls. For emergency situations, a self-contained respirator is recommended (NIOSH-approved). Do not wear contact lenses. Make eye bath and emergency shower available. Ensure that eyewash station and safety shower is proximal to the work-station location.
Engineering controls	Use in a chemical fume hood. Use adequate ventilation. Do not use in unventilated spaces.

Section X. Other Information

Special Precautions or comments	Powerful oxidizing agent; may ignite oxidizable materials. Harmful liquid! Do not breathe vapor. Avoid all contact with the product. Avoid prolonged or repeated exposure. Manipulate in a well ventilated area or under an adequate fume hood. Keep away from heat, sparks and flame. Contact with other material may cause fire and/or explosion. When contaminated, it is very sensitive. Handle and open container with care. Container should be opened only by a technically qualified person. RTECS NO: TT3700000 (Potassium Nitrate).
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NFPA

Prepared by MSDS Department/Département de F.S..

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While the company believes the data set forth herein are accurate as of the date hereof, the company makes no warranty with respect thereto and expressly disclaims all liability for reliance thereon. Such data are offered solely for your consideration, investigation and verification.