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Material Safety Data Sheet

Potassium Nitrate

Section 1 - Product Identification

Synonym : N.A.
Chemical Formula : KNO_3
Company Identification : Tradeasia International Pte. Limited
Address : 133 Cecil Street # 12-03 Keck Seng Tower, Singapore
Tel: +65-6227 6365
Fax: +65-6225 6286
Email: fertlizer@chemtradeasia.com
Recommended use : For fertilizer and agriculture applications

Section 2 – Hazards Identification

2.1. Emergency Overview

DANGER! STRONG OXIDIZER. CONTACT WITH OTHER MATERIAL MAY CAUSE FIRE. HARMFUL IF SWALLOWED, INHALED OR ABSORBED THROUGH SKIN. CAUSES IRRITATION TO SKIN, EYES AND RESPIRATORY TRACT.
Ratings
Health Rating: 2 - Moderate
Flammability Rating: 0 - None
Reactivity Rating: 3 - Severe (Oxidizer)
Contact Rating: 2 - Moderate (Life)
Lab Protective Equip: GOGGLES & SHIELD; LAB COAT & APRON; VENT HOOD; PROPER GLOVES
Storage Color Code: Yellow (Reactive)

2.2. Potential Health Effects

Inhalation
Causes irritation to the respiratory tract. Symptoms may include coughing, shortness of breath.
Ingestion
Causes irritation to the gastrointestinal tract. Symptoms may include nausea, vomiting and diarrhea. May cause gastroenteritis and abdominal pains. Purging and diuresis can be expected. Rare cases of nitrates being converted to the more toxic nitrites have been reported, mostly with infants.
Skin Contact
Causes irritation to skin. Symptoms include redness, itching, and pain.
Eye Contact
Causes irritation, redness, and pain.
Chronic Exposure
Under some circumstances methemoglobinemia occurs in individuals when the nitrate is converted by bacteria in the stomach to nitrite. Nausea, vomiting, dizziness, rapid heart beat, irregular breathing, convulsions, coma, and death can occur should this conversion take place. Chronic exposure to nitrites may cause anemia and adverse effects to kidney.
Aggravation of Pre-existing Conditions
No information found.

Section 3 – Composition/Information on Ingredients

3.1 Composition comments

Ingredients : Potassium Nitrate
CAS No. : 7757-79-1

Section 4 – First-Aid Measures

Inhalation
Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

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

Skin Contact
Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention. Wash clothing before reuse. Thoroughly clean shoes before reuse.

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

Section 5 – Fire Fighting Measures

5.1 Including exposure scenario information
One of the main concepts introduced by REACH and affecting SDSs is that of the exposure scenario. Any actor required to prepare a CSR including exposure scenarios **has to attach the relevant exposure scenario(s) to the SDS**. An exposure scenario describes how a substance can be manufactured or used in a safe way (i.e. ensuring protection of human health and environment) and should refer to the uses identified in the SDS itself. In practice, the exposure scenario(s) extend(s) the information given in the main body of the SDS. Thus the exposure scenario and the SDS need to be considered together and be consistent. It is very important that the supplier presents the information in a way that is readily understandable by the immediate downstream user who has to identify, apply and recommend the relevant measures further downstream.

5.2 Fire
Not combustible, but substance is a strong oxidizer and its heat of reaction with reducing agents or combustibles may cause ignition.

5.3 Explosion
Some nitrates may explode when shocked, exposed to heat or flame, or by spontaneous chemical reaction. Sealed containers may rupture when heated. Sensitive to mechanical impact.

5.4 Fire Extinguishing Media
Dry chemical, carbon dioxide, Halon, water spray, or fog. If water is used, apply from as far a distance as possible. Water spray may be used to keep fire exposed containers cool. Do not allow water runoff to enter sewers or waterways.

5.5 Special Information

Wear full protective clothing and breathing equipment for high-intensity fire or potential explosion conditions. This oxidizing material can increase the flammability of adjacent combustible materials.

Section 6 – Accidental Release Measures

Remove all sources of ignition. Ventilate area of leak or spill. Wear appropriate personal protective equipment as specified in Section 8. Spills: Clean up spills in a manner that does not disperse dust into the air. Use non-sparking tools and equipment. Reduce airborne dust and prevent scattering by moistening with water. Pick up spill for recovery or disposal and place in a closed container.

Section 7 – Handling and Storage

Keep in a tightly closed container, stored in a cool, dry, ventilated area. Protect against physical damage and moisture. Isolate from any source of heat or ignition. Avoid storage on wood floors. Separate from incompatibles, combustibles, organic or other readily oxidizable materials. Containers of this material may be hazardous when empty since they retain product residues (dust, solids); observe all warnings and precautions listed for the product.

Section 8 – Exposure Controls/Personal Protection

Airborne Exposure Limits
None established.

Ventilation System
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. Please refer to the ACGIH document, Industrial Ventilation, A Manual of Recommended Practices, most recent edition, for details.

Personal Respirators (NIOSH Approved)
For conditions of use where exposure to dust or mist is apparent and engineering controls are not feasible, a particulate respirator (NIOSH type N95 or better filters) may be worn. If oil particles (e.g. lubricants, cutting fluids, glycerine, etc.) are present, use a NIOSH type R or P filter. For emergencies or instances where the exposure levels are not known, use a full-face positive-pressure, air-supplied respirator.
WARNING: Air-purifying respirators do not protect workers in oxygen-deficient atmospheres.

Skin Protection
Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact.

Eye Protection
Use chemical safety goggles and/or full face shield where dusting or splashing of solutions is possible. Maintain eye wash fountain and quick-drench facilities in work area.

Section 9 – Physical and Chemical Properties

9.1. Information on basic physical and chemical properties

Appearance	: White crystals.
Odor	: Odorless.
Solubility	: 36 gm/l00 ml water
Specific Gravity	: 2.1
pH	: ca. 7
% Volatiles by volume@21°C (70°F)	: 0
Boiling Point	: 400°C (752°F)
Melting Point	: 333°C (631°F)
Vapor Density (Air=1)	: 3.00
Vapor Pressure (mm Hg)	: Negligible @20°C
Evaporation Rate (BuAc=1)	: No information found.

Section 10 – Stability and Reactivity

Stability
Stable under ordinary conditions of use and storage.

Hazardous Decomposition Products
Oxides of nitrogen and toxic metal fumes may form when heated to decomposition.

Hazardous Polymerization
Will not occur.

Incompatibilities
Heavy metals, phosphites, organic compounds, carbonaceous materials, strong acids, and many other substances.

Conditions to Avoid
Heat, flames, ignition sources and incompatibles

Section 11 – Toxicological Information

Oral rat LD50: 3750 mg/kg. Investigated as a mutagen, reproductive effector.
--------\Cancer Lists\----------NTP Carcinogen---Ingredient Known Anticipated IARC Category
Potassium Nitrate (7757-79-1) No No None

Section 12 – Ecological Information

Environmental Fate: No information found.
Environmental Toxicity: No information found.

Section 13 – Disposal Considerations

Whatever cannot be saved for recovery or recycling should be handled as hazardous waste and sent to a RCRA

approved waste facility. Processing, use or contamination of this product may change the waste management options. State and local disposal regulations may differ from federal disposal regulations. Dispose of container and unused contents in accordance with federal, state and local requirements.

Section 14 – Transport Information

Proper Shipping Name : Potassium Nitrate
Hazard Class : 5.1
UN/NA : UN1468
Packing Group : III

Section 15 – Regulatory Information

--------\Chemical Inventory Status - Part 1\---------
Ingredient TSCA EC Japan Australia
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Potassium Nitrate (7757-79-1) Yes Yes Yes Yes
--------\Chemical Inventory Status - Part 2\---------
--Canada--
Ingredient Korea DSL NDSL Phil.
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Potassium Nitrate (7757-79-1) Yes Yes No Yes
--------\Federal, State & International Regulations - Part 1\----------
-SARA 302- ------SARA 313------
Ingredient RQ TPQ List Chemical Catg.
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Potassium Nitrate (7757-79-1) No No No Nitrate Cmpd
--------\Federal, State & International Regulations - Part 2\----------
-RCRA- -TSCAIngredient
CERCLA 261.33 8(d)
Potassium Nitrate (7757-79-1) No No No
Chemical Weapons Convention: No TSCA 12(b): No CDTA: No
SARA 311/312: Acute: Yes Chronic: Yes Fire: Yes Pressure: No
Reactivity: No (Pure / Solid)
Australian Hazchem Code: 1[T]
Poison Schedule: None allocated.
WHMIS:
This MSDS has been prepared according to the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.

Section 16 : Additional Information

NFPA Ratings
Health: 1 Flammability: 0 Reactivity: 0 Other: Oxidizer

Label Hazard Warning
DANGER! STRONG OXIDIZER. CONTACT WITH OTHER MATERIAL MAY CAUSE FIRE. HARMFUL IF SWALLOWED, INHALED OR ABSORBED THROUGH SKIN. CAUSES IRRITATION TO SKIN, EYES AND RESPIRATORY TRACT.

Label Precautions
Keep from contact with clothing and other combustible materials. Store in a tightly closed container. Do not store near combustible materials. Remove and wash contaminated clothing promptly. Avoid contact with eyes, skin and clothing. Avoid breathing dust. Keep container closed. Use only with adequate ventilation. Wash thoroughly after handling.

Label First Aid
If swallowed, induce vomiting immediately as directed by medical personnel. Never give anything by mouth to an unconscious person. If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. In case of contact, immediately flush eyes or skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. In all cases, get medical attention

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