

# MATERIAL SAFETY DATA SHEET

**Product Name:** Potassium Nitrate  $\text{KNO}_3$   
**Synonyms:** Saltpeter; niter; Nitric acid, potassium salt  
**Manufacturer:** WENTONG POTASSIUM SALT GROUP CO., LTD  
ROOM 706.707, NO.32 TIELING ROAD, YANGPU SHANGHAI 200122, CHINA  
TEL: 86-21-61007878  
FAX: 86-21-68765485  
WEB: www.wentong.cn



## 2.) INFORMATION ON INGREDIENTS

	EINECS	PERCENT	CAS NO:
Potassium Nitrate	231-818-8	99-100%	7757-79-1

## 3.) HAZARDS IDENTIFICATION

**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.

**Potential Health Effects:** Inhalation: Causes irritation to the respiratory tract. Symptoms may include coughing and 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 diureses 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.

## 4.) FIRST AID MEASURES

**Inhalation:** Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. 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.

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

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## 5.) FIRE FIGHTING MEASURES

<b>Extinguishing Media:</b>	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.
<b>Special Fire Fighting Procedures:</b>	Not combustible, but substance is a strong oxidizer and its heat of reaction with reducing agents or combustibles may cause ignition.
<b>Fire and Explosion Hazards:</b>	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.
<b>Hazardous Combustion Products:</b>	No information found.
<b>Protective Measure in Fire:</b>	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.

## 6.) ACCIDENTAL RELEASE MEASURES

<b>Personal Precaution in Spill:</b>	Wear appropriate personal protective equipment as specified in Section 8.
<b>Environment:</b>	Remove all sources of ignition. Ventilate area of leak or spill.
<b>Spill Clean Up:</b>	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.

## 7.) HANDLING/STORAGE

<b>Usage Precautions:</b>	
<b>Usage Descriptions:</b>	
<b>Storage Precautions:</b>	
<b>Handling Precautions:</b>	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.

## 8.) EXPOSURE CONTROLS / PERSONAL PROTECTION

<b>Protective Equipment:</b>	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.
<b>Process Conditions:</b>	None established.
<b>Respirators:</b>	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, glycerin, 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. <b>WARNING:</b> Air-purifying respirators

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	do not protect workers in oxygen-deficient atmospheres.
<b>Protective Gloves:</b>	Wear impervious protective gloves.
<b>Eye Protection:</b>	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.
<b>Other Protection:</b>	Wear impervious protective clothing, including boots, lab coat, apron or coveralls, as appropriate, to prevent skin contact.
<b>Hygienic Work Practices:</b>	No information found.

## 9.) PHYSICAL / CHEMICAL PROPERTIES

<b>Appearance:</b>	crystals	<b>Color:</b>	white
<b>Odor/Taste:</b>	odorless	<b>Specific Gravity:</b>	2.1
<b>Solubility:</b>	soluble	<b>Solubility Value:</b>	31 gm/100 ml H <sub>2</sub> O
<b>Melting Point:</b>	333C	<b>Boiling Point:</b>	333C
<b>Decamp Temp:</b>		<b>Flash Point:</b>	
<b>pH:</b>	6 to 10.5		

## 10.) STABILITY / REACTIVITY

<b>Stability:</b>	Stable under ordinary conditions of use and storage.
<b>Hazardous Decomp Products:</b>	Oxides of nitrogen and toxic metal fumes may form when heated to decomposition.
<b>Conditions to Avoid:</b>	Heat, flames, ignition sources and incompatibles such as heavy metals, phosphates, organic compounds, carbonaceous materials, strong acids, and many other substances.

## 11.) TOXICOLOGICAL INFORMATION

<b>Toxic Dose LD 50:</b>	3750 mg/kg (oral rat)
<b>Toxicological Info:</b>	Investigated as a mutagen, reproductive effector.
<b>Inhalation:</b>	No information found
<b>Skin:</b>	No information found
<b>Eyes:</b>	No information found
<b>Medical Symptoms:</b>	No information found

## 12.) ECOLOGICAL INFORMATION

<b>Toxicity:</b>	No information found
<b>Distribution:</b>	No information found
<b>Chemical Fate:</b>	No information found

## 13.) DISPOSAL CONSIDERATIONS

<b>Disposal Methods:</b>	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
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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.

**General Cleaning:**

**14.) TRANSPORTATION INFORMATION**

**DOT - GROUND TRANSPORTATION:**

**Proper Shipping Name:** POTASSIUM NITRATE

**Hazard Class:** 5.1

**UN. NO#:** UN1486

**Packing Group #:** 5.1//III

**IATA/IMDG REGULATIONS:**

**Hazard Class:** 5.1

**UN. NO#:** UN1486

**Packing Group #:** 5.1//III

**IMDG EMS:** F-A,S-Q

**15.) INFORMATION SOURCES**

**Information Sources:**

**Revision Comments:**

**Other Information:**

**Disclaimer:**

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