

Section 1. Product and Company Identification

Product Name Potassium Nitrate
CAS Number 7757-79-1

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CHEMTEL
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Section 2. Hazards Identification

Classification of the substance or mixture
GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

Oxidizing solids (Category 3), H272
Acute aquatic toxicity (Category 3), H402
Chronic aquatic toxicity (Category 3), H412

GHS Label Elements

Pictograms:



Signal word: WARNING

Hazard and precautionary statements

Hazard Statements

H272 May intensify fire; oxidizer.
H412 Harmful to aquatic life with long lasting effects.

Precautionary Statements

P210 Keep away from heat.
P220 Keep/Store away from clothing/combustible materials.
P221 Take any precaution to avoid mixing with combustibles.
P273 Avoid release to the environment.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P370 + P378 In case of fire: Use dry sand, dry chemical, or alcohol-resistant foam for extinction.
P501 Dispose of contents/container to an approved waste disposal plant.

Hazards not otherwise classified (HNOC) or not covered by GHS: None

Section 3. Composition / Information on Ingredients

Common Name	Potassium Nitrate
Synonym(s)	Nitric acid, potassium salt; Niter; Nitre; Saltpeter
Formula	KNO ₃
CAS Number	7757-79-1

Section 4. First Aid Measures

Description of first-aid measures

General advice: Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

Inhalation: If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

Skin contact: Wash off with soap and plenty of water. Consult a physician.

Eye contact: Flush eyes with water as a precaution.

Ingestion: Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

Most important symptoms and effects, both acute and delayed: The most important known symptoms and effects are described in the labelling (see section 2) and/or in section 11.

Indication of any immediate medical attention and special treatment needed: no data available

Section 5. Firefighting Measures

Extinguishing media

Suitable extinguishing media: Use water spray, alcohol-resistant foam, dry chemical, or carbon dioxide.

Special hazards arising from the substance or mixture: No data available

Advice for firefighters: Wear self-contained breathing apparatus for fire-fighting if necessary.

Further information: Use water spray to cool unopened containers.

Section 6. Accidental Release Measures

Personal precautions, protective equipment, and emergency procedures: Use personal protective equipment. Avoid dust formation. Avoid breathing vapors, mist, or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust. For personal protection see section 8.

Environmental precautions: Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

Methods and materials for containment and cleaning up: Sweep up and shovel. Contain spillage, and then collect with an electrically protected vacuum cleaner or by wetbrushing and place in container for disposal according to local regulations (see section 13). Keep in suitable, closed containers for disposal.

Reference to other sections: For disposal see section 13.

Section 7. Handling and Storage

Precautions for safe handling

Avoid formation of dust and aerosols.

Provide appropriate exhaust ventilation at places where dust is formed. Keep away from sources of ignition - No smoking. Keep away from heat and sources of ignition.

For precautions see section 2.

Conditions for safe storage, including any incompatibilities

Keep container tightly closed in a dry and well-ventilated place.

Handle and store under inert gas. strongly hygroscopic

Section 8. Exposure Controls / Personal Protection

Control parameters

Components with workplace control parameters: Contains no substances with occupational exposure limit values.

Exposure controls

Appropriate engineering controls: Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

Personal protective equipment

Eye/face protection: Safety glasses with side-shields conforming to EN166 Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin protection: Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Body Protection: Impervious clothing. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection: Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate

government standards such as NIOSH (US) or CEN (EU).

Control of environmental exposure: Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

Section 9. Physical and Chemical Properties

Information on basic physical and chemical properties

Appearance: Crystalline

Color: White

Odor: No data available

Odor Threshold: No data available

pH: 5.5 - 8 at 50 g/l at 20°C (68°F)

Melting/freezing point: 334°C (633°F)

Initial boiling point and boiling range: No data available

Flash point: No data available

Evaporation rate: No data available

Flammability (solid, gas): No data available

Upper/lower flammability or explosive limits: No data available

Vapor pressure: No data available

Vapor density: No data available

Relative density: 2.109 g/cm³

Water solubility: No data available

Partition coefficient (n-Octanol/water): No data available

Auto-ignition temperature: No data available

Decomposition temperature: No data available

Viscosity: No data available

Explosive properties: No data available

Oxidizing properties: The substance or mixture is classified as oxidizing with the category 3.

Other safety information

Bulk density: 800 kg/m³

Section 10. Stability and Reactivity

Reactivity: No data available

Chemical stability: Stable under recommended storage conditions.

Possibility of hazardous reactions: No data available

Conditions to avoid: No data available

Incompatible materials: Strong reducing agents, Powdered metals, Strong acids, Organic materials

Hazardous decomposition products

Hazardous decomposition products formed under fire conditions: nitrogen oxides (NO_x), Potassium oxides

Other decomposition products: No data available
In the event of fire: see section 5

Section 11. Toxicological Information

Information on toxicological effects

Acute toxicity

LD50 Oral - Rat: 3,750 mg/kg

Inhalation: No data available

Dermal: No data available

Skin corrosion/irritation: No data available

Serious eye damage/eye irritation: No data available

Respiratory or skin sensitization: No data available

Germ cell mutagenicity: No data available

Carcinogenicity

IARC: 2A - Group 2A: Probably carcinogenic to humans (Potassium nitrate)

ACGIH: No component of this product, present at levels greater than or equal to 0.1%, is identified as a carcinogen or potential carcinogen by ACGIH.

NTP: No component of this product, present at levels greater than or equal to 0.1%, is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product, present at levels greater than or equal to 0.1%, is identified as a carcinogen or potential carcinogen by OSHA.

Reproductive toxicity: No data available

Reproductive toxicity - rat - Oral

Effects on Fertility: Other measures of fertility

Reproductive toxicity - rat - Oral

Effects on Newborn: Behavioral.

Reproductive toxicity - rabbit - Oral

Effects on Fertility: Abortion.

Reproductive toxicity - guinea pig - Oral

Effects on Newborn: Stillbirth.

Reproductive toxicity - guinea pig - Oral

Effects on Fertility: Female fertility index (e.g., # females pregnant per # sperm positive females; # females pregnant per # females mated). Effects on Embryo or Fetus: Other effects to embryo.

Specific target organ toxicity - single exposure: No data available

Specific target organ toxicity - repeated exposure: No data available

Aspiration hazard: No data available

Additional Information

RTECS: TT3700000

Absorption into the body leads to the formation of methemoglobin which in sufficient concentration causes cyanosis. Onset may be delayed 2 to 4 hours or longer.

Liver - Irregularities - Based on Human Evidence

Section 12. Ecological Information

Toxicity

Toxicity to fish

LC50 - Gambusia affinis (Mosquito fish): 22.5 mg/l (96 h)

Static test

LC50 - Poecilia reticulata (guppy): 1,378 mg/l (96 h)

Toxicity to daphnia and other aquatic invertebrates

EC50 - Daphnia magna (Water flea): 226 mg/l (72 h)

Persistence and degradability: No data available

Bioaccumulative potential: No data available

Mobility in soil: No data available

Results of PBT and vPvB assessment: PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

Other adverse effects: An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.
Harmful to aquatic life

Section 13. Disposal Considerations

Waste Treatment Methods: Dispose of product and contaminated packaging in accordance with all local, state, and federal environmental control regulations.

Section 14. Transport Information

DOT (US)

UN number: 1486

Class: 5.1

Packing group: III

Proper shipping name: Potassium nitrate

Marine pollutant: No

Poison Inhalation Hazard: No

IMDG

UN number: 1486

Class: 5.1

Packing group: III



EMS-No: F-A, S-Q

Proper shipping name: Potassium Nitrate

Marine pollutant: No

IATA

UN number: 1486

Class: 5.1

Packing group: III

Proper shipping name: Potassium nitrate

Section 15. Regulatory Information

SARA 302 Components

SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 Components

The following components are subject to reporting levels established by SARA Title III, Section 313:

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Revision Date: 2007-03-01

SARA 311/312 Hazards

Reactivity Hazard, Chronic Health Hazard

Massachusetts Right to Know Components

Potassium nitrate (CAS-No. 7757-79-1)

Revision Date: 2007-03-01

Pennsylvania Right to Know Components

Potassium nitrate (CAS-No. 7757-79-1)

Revision Date: 2007-03-01

New Jersey Right to Know Components

Potassium nitrate (CAS-No. 7757-79-1)

Revision Date: 2007-03-01

California Prop. 65 Components: This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

Section 16. Other Information

Disclaimer: The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product.

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