

# Material Safety Data Sheet

## Potassium nitrate

ACC# 19470

### Section 1 - Chemical Product and Company Identification

**MSDS Name:** Potassium nitrate**Catalog Numbers:** AC193800000, AC193800100, AC193800500, AC193802500, AC205910000, AC205910010, AC205915000, AC424150000, AC424150050, AC424155000, 13620834, BP368-500, P261-3, P263-100, P263-3, P263-50, P263-500, P383-100, P383-500**Synonyms:** Nitric acid potassium salt; Niter; Saltpeter.**Company Identification:**Fisher Scientific  
1 Reagent Lane  
Fair Lawn, NJ 07410**For information, call:** 201-796-7100**Emergency Number:** 201-796-7100**For CHEMTREC assistance, call:** 800-424-9300**For International CHEMTREC assistance, call:** 703-527-3887

### Section 2 - Composition, Information on Ingredients

CAS#	Chemical Name	Percent	EINECS/ELINCS
7757-79-1	Potassium nitrate	99+	231-818-8

### Section 3 - Hazards Identification

#### EMERGENCY OVERVIEW

Appearance: white.

**Danger!** Strong oxidizer. Contact with other material may cause a fire. Hygroscopic (absorbs moisture from the air).**Target Organs:** None known.**Potential Health Effects****Eye:** May cause eye irritation.**Skin:** May cause skin irritation. May be harmful if absorbed through the skin.**Ingestion:** May cause irritation of the digestive tract. May be harmful if swallowed.**Inhalation:** May cause respiratory tract irritation. May be harmful if inhaled. The toxicity of nitrates is due to their in-vivo conversion to nitrites which may lead to methemoglobinemia.**Chronic:** No information found.

### Section 4 - First Aid Measures

**Eyes:** Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. If irritation develops, get medical aid.**Skin:** Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical aid if irritation develops or persists.**Ingestion:** Do not induce vomiting. Get medical aid if irritation or symptoms occur.

**Inhalation:** Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid if cough or other symptoms appear.

**Notes to Physician:** Treat symptomatically and supportively.

## Section 5 - Fire Fighting Measures

**General Information:** As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. Strong oxidizer. Contact with other material may cause fire.

**Extinguishing Media:** Use water spray, dry chemical, carbon dioxide, or chemical foam.

**Flash Point:** Not applicable.

**Autoignition Temperature:** Not available.

**Explosion Limits, Lower:** Not available.

**Upper:** Not available.

**NFPA Rating:** (estimated) Health: 1; Flammability: 1; Instability: 3; Special Hazard: OX

## Section 6 - Accidental Release Measures

**General Information:** Use proper personal protective equipment as indicated in Section 8.

**Spills/Leaks:** Vacuum or sweep up material and place into a suitable disposal container. Avoid generating dusty conditions. Provide ventilation. Do not use combustible materials such as paper towels to clean up spill. Keep combustibles (wood, paper, oil, etc.,) away from spilled material. Do not let this chemical enter the environment.

## Section 7 - Handling and Storage

**Handling:** Minimize dust generation and accumulation. Avoid contact with skin and eyes. Avoid ingestion and inhalation. Use with adequate ventilation. Keep from contact with clothing and other combustible materials.

**Storage:** Do not store near combustible materials. Store in a cool, dry place. Store in a tightly closed container.

## Section 8 - Exposure Controls, Personal Protection

**Engineering Controls:** Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate ventilation to keep airborne concentrations low.

### Exposure Limits

Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
Potassium nitrate	none listed	none listed	none listed

**OSHA Vacated PELs:** Potassium nitrate: No OSHA Vacated PELs are listed for this chemical.

### Personal Protective Equipment

**Eyes:** Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

**Skin:** Wear appropriate gloves to prevent skin exposure.

**Clothing:** Wear appropriate protective clothing to prevent skin exposure.

**Respirators:** Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

## Section 9 - Physical and Chemical Properties

**Physical State:** Crystals  
**Appearance:** white  
**Odor:** odorless  
**pH:** 6 - 8 (5% aq. sol.)  
**Vapor Pressure:** Not available.  
**Vapor Density:** Not available.  
**Evaporation Rate:** Not available.  
**Viscosity:** Not available.  
**Boiling Point:** 400 deg C @ 760 mmHg  
**Freezing/Melting Point:** 334 deg C  
**Decomposition Temperature:** > 400 deg C  
**Solubility:** 320 g/L (20°C)  
**Specific Gravity/Density:** 2.11  
**Molecular Formula:** KNO<sub>3</sub>  
**Molecular Weight:** 101.1

## Section 10 - Stability and Reactivity

**Chemical Stability:** Hygroscopic: absorbs moisture or water from the air.  
**Conditions to Avoid:** Incompatible materials, dust generation, combustible materials, organic materials, exposure to moist air or water.  
**Incompatibilities with Other Materials:** Strong oxidizing agents, reducing agents, combustible and flammable materials (e.g. alkyl resins, asphalt, gasoline, grease, methyl acetone, polystyrene, polyurethane).  
**Hazardous Decomposition Products:** Nitrogen oxides, oxygen.  
**Hazardous Polymerization:** Will not occur.

## Section 11 - Toxicological Information

**RTECS#:**  
**CAS#** 7757-79-1: TT3700000  
**LD50/LC50:**  
CAS# 7757-79-1:  
Oral, rabbit: LD50 = 1901 mg/kg;  
Oral, rat: LD50 = 3750 mg/kg;  
Oral, rat: LD50 = 3540 mg/kg;

**Carcinogenicity:**  
CAS# 7757-79-1: Not listed by ACGIH, IARC, NTP, or CA Prop 65.

**Epidemiology:** No information available.  
**Teratogenicity:** No information available.  
**Reproductive Effects:** See actual entry in RTECS for complete information.  
**Mutagenicity:** See actual entry in RTECS for complete information.  
**Neurotoxicity:** No information available.  
**Other Studies:**

## Section 12 - Ecological Information

**Ecotoxicity:** No data available. No information available.

**Environmental:** Nitrates are predominantly used as fertilizer. Unfortunately, nitrates have a tendency to migrate into groundwater as they do not bind to soil and are extremely soluble. Excessive levels of nitrates in drinking water may cause serious illness and death. Infants are most susceptible to nitrate toxicity. "Blue Baby Syndrome" can occur when the infant's conversion of nitrate to nitrite interferes with the oxygen-carrying capacity of the blood. Symptoms of Blue Baby Syndrome include, but may not be limited to, shortness of breath and bluish colored skin.

**Physical:** No information available.

**Other:** Do not empty into drains.

## Section 13 - Disposal Considerations

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification determination are listed in 40 CFR Parts 261.3. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.

**RCRA P-Series:** None listed.

**RCRA U-Series:** None listed.

## Section 14 - Transport Information

	US DOT	Canada TDG
<b>Shipping Name:</b>	POTASSIUM NITRATE	POTASSIUM NITRATE
<b>Hazard Class:</b>	5.1	5.1
<b>UN Number:</b>	UN1486	UN1486
<b>Packing Group:</b>	III	III

## Section 15 - Regulatory Information

### US FEDERAL

#### TSCA

CAS# 7757-79-1 is listed on the TSCA inventory.

#### Health & Safety Reporting List

None of the chemicals are on the Health & Safety Reporting List.

#### Chemical Test Rules

None of the chemicals in this product are under a Chemical Test Rule.

#### Section 12b

None of the chemicals are listed under TSCA Section 12b.

#### TSCA Significant New Use Rule

None of the chemicals in this material have a SNUR under TSCA.

#### CERCLA Hazardous Substances and corresponding RQs

None of the chemicals in this material have an RQ.

#### SARA Section 302 Extremely Hazardous Substances

None of the chemicals in this product have a TPQ.

#### SARA Codes

CAS # 7757-79-1: immediate, delayed, fire.

#### Section 313

This material contains Potassium nitrate (listed as Water Dissociable Nitrate Compounds), 99+%, (CAS# 7757-79-1) which is subject to the reporting requirements of Section 313 of SARA Title III and 40 CFR Part 373.

#### Clean Air Act:

This material does not contain any hazardous air pollutants.

This material does not contain any Class 1 Ozone depletors.

This material does not contain any Class 2 Ozone depletors.

**Clean Water Act:**

None of the chemicals in this product are listed as Hazardous Substances under the CWA.

None of the chemicals in this product are listed as Priority Pollutants under the CWA.

None of the chemicals in this product are listed as Toxic Pollutants under the CWA.

**OSHA:**

None of the chemicals in this product are considered highly hazardous by OSHA.

**STATE**

CAS# 7757-79-1 can be found on the following state right to know lists: New Jersey, Pennsylvania, Massachusetts.

**California Prop 65**

California No Significant Risk Level: None of the chemicals in this product are listed.

**European/International Regulations****European Labeling in Accordance with EC Directives****Hazard Symbols:**

O

**Risk Phrases:**

R 8 Contact with combustible material may cause fire.

**Safety Phrases:**

S 17 Keep away from combustible material.

S 24/25 Avoid contact with skin and eyes.

**WGK (Water Danger/Protection)**

CAS# 7757-79-1: 1

**Canada - DSL/NDSL**

CAS# 7757-79-1 is listed on Canada's DSL List.

**Canada - WHMIS**

This product has a WHMIS classification of C.

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all of the information required by those regulations.

**Canadian Ingredient Disclosure List**

CAS# 7757-79-1 is not listed on the Canadian Ingredient Disclosure List.

<b>Section 16 - Additional Information</b>
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**MSDS Creation Date:** 8/14/1998

**Revision #10 Date:** 2/15/2008

*The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall Fisher be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if Fisher has been advised of the possibility of such damages.*