# SAFETY DATA SHEET

**Creation Date** 05-August-2010 **Revision Date** 18-December-2025 **Revision Number** 10

**This safety data sheet was created pursuant to the requirements of: Canada WHMIS 2015 which includes the amended Hazardous Products Act (HPA) and the Hazardous Products Regulation (HPR) - SOR 2022-272**

## 1. Identification

**Product Name** **Potassium nitrate**

**Cat No. :** **P261-3; P261-3LC; P263-100; P263-3; P263-50; P263-500; P383-100; P383-500; NC0763911; NC0763933; NC1277895; XXP263PP12KG; XXP26350KG; NC3804638**

**CAS-No** 7757-79-1
**Synonyms** Saltpeter.; Nitric acid potassium salt; Niter

**Recommended Use** Laboratory chemicals.
**Uses advised against** Food, drug, pesticide or biocidal product use.

**Details of the supplier of the safety data sheet**

**Company**
**Importer/Distributor**
Fisher Scientific
112 Colonnade Road,
Ottawa, ON K2E 7L6,
Canada
Tel: 1-800-234-7437

**Manufacturer**
Fisher Scientific Company
One Reagent Lane
Fair Lawn, NJ 07410
Tel: (201) 796-7100

**Emergency Telephone Number**
CHEMTREC®, Inside the USA: 800-424-9300
CHEMTREC®, Outside the USA: 001-703-527-3887

## 2. Hazard(s) identification

**Classification**

**WHMIS 2015 Classification** This product is hazardous in accordance with the Canada Hazardous Products Act (HPA) and Hazardous Products Regulation (HPR), as amended (SOR/2022-272)

| | |
|---|---|
| **Oxidizing solids** | Category 3 |

**Label Elements**

**Signal Word**
Warning

**Hazard Statements**
May intensify fire; oxidizer

**Precautionary Statements**
**Prevention**
Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking
Keep away from clothing and other combustible materials.
Take any precaution to avoid mixing with combustibles
Wear protective gloves/protective clothing/eye protection/face protection
**Response**
In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish
**Disposal**
Dispose of contents/container to an approved waste disposal plant

## 3. Composition/Information on Ingredients

| Component | CAS-No | Weight % |
|---|---|---|
| Potassium nitrate | 7757-79-1 | >95 |

## 4. First-aid measures

**General Advice** If symptoms persist, call a physician.

**Eye Contact** Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention.

**Skin Contact** Wash off immediately with plenty of water for at least 15 minutes. If skin irritation persists, call a physician.

**Inhalation** Remove to fresh air. If not breathing, give artificial respiration. Get medical attention if symptoms occur.

**Ingestion** Clean mouth with water and drink afterwards plenty of water. Get medical attention if symptoms occur.

**Most important symptoms/effects** None reasonably foreseeable.
**Notes to Physician** Treat symptomatically

## 5. Fire-fighting measures

**Suitable Extinguishing Media** Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

**Unsuitable Extinguishing Media** No information available

**Flash Point** No information available
**Method -** No information available

**Autoignition Temperature** No information available
**Explosion Limits**
**Upper** No data available

| | |
|---|---|
| **Lower** | No data available |
| **Oxidizing Properties** | Oxidizer |

| | |
|---|---|
| **Sensitivity to Mechanical Impact** | No information available |
| **Sensitivity to Static Discharge** | No information available |

**Specific Hazards Arising from the Chemical**
Oxidizer: Contact with combustible/organic material may cause fire. May ignite combustibles (wood paper, oil, clothing, etc.). Thermal decomposition can lead to release of irritating gases and vapors. Keep product and empty container away from heat and sources of ignition.

**Hazardous Combustion Products**
Potassium oxides. Nitrogen oxides (NOx).
**Protective Equipment and Precautions for Firefighters**
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

**NFPA**

| Health | Flammability | Instability | Physical hazards |
|---|---|---|---|
| 1 | 1 | 2 | OX |

## 6. Accidental release measures

| | |
|---|---|
| **Personal Precautions** | Use personal protective equipment as required. Ensure adequate ventilation. Avoid dust formation. |
| **Environmental Precautions** | Should not be released into the environment. |
| **Methods for Containment and Clean Up** | Sweep up and shovel into suitable containers for disposal. Keep in suitable, closed containers for disposal. Soak up with inert absorbent material. Sweep up and shovel into suitable containers for disposal. |

## 7. Handling and storage

| | |
|---|---|
| **Handling** | Wear personal protective equipment/face protection. Ensure adequate ventilation. Avoid ingestion and inhalation. Avoid dust formation. Do not get in eyes, on skin, or on clothing. Keep away from clothing and other combustible materials. |
| **Storage.** | Keep containers tightly closed in a dry, cool and well-ventilated place. Do not store near combustible materials. Incompatible Materials. Strong reducing agents. Strong acids. Combustible material. |

## 8. Exposure controls / personal protection

| | |
|---|---|
| **Exposure Guidelines** | This product does not contain any hazardous materials with occupational exposure limitsestablished by the region specific regulatory bodies. |
| **Engineering Measures** | Ensure adequate ventilation, especially in confined areas. Ensure that eyewash stations and safety showers are close to the workstation location. |

**Personal protective equipment**

| | |
|---|---|
| **Eye Protection** | 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.

**Hand Protection** Protective gloves

| Glove material | Breakthrough time | Glove thickness | Glove comments |
|---|---|---|---|
| Butyl rubber | > 480 minutes | 0.5 mm | As tested under EN374-3 Determination of Resistance to Permeation by Chemicals |

Inspect gloves before use. observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. (Refer to manufacturer/supplier for information) gloves are suitable for the task: Chemical compatability, Dexterity, Operational conditions, User susceptibility, e.g. sensitisation effects, also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion. gloves with care avoiding skin contamination.

**Respiratory Protection**
When workers are facing concentrations above the exposure limit they must use appropriate certified 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.

**Recommended Filter type:** Particulates filter conforming to EN 143

**Environmental exposure controls**
No information available.

**Hygiene Measures**
Handle in accordance with good industrial hygiene and safety practice. Keep away from food, drink and animal feeding stuffs. Do not eat, drink or smoke when using this product. Remove and wash contaminated clothing and gloves, including the inside, before re-use. Wash hands before breaks and after work.

## 9. Physical and chemical properties

**Appearance**

| Property | Values | Remarks • Method |
|---|---|---|
| **Physical State** | Solid | |
| **Color** | White | |
| **Odor** | Odorless | |
| **Odor Threshold** | No information available | |
| **Melting Point/Range** | 334 °C / 633.2 °F | |
| **Softening Point** | No data available | |
| **Boiling Point/Range** | 400 °C / 752 °F | @ 760 mmHg |
| **Flash Point** | No information available | **Method -** No information available |
| **Flammability (liquid)** | Not applicable | Solid |
| **Flammability (solid,gas)** | Not flammable | |
| **Explosion Limits** | No data available | |
| **Autoignition Temperature** | No data available | |
| **Decomposition Temperature** | > 400°C | |
| **pH** | 6-8 | 5% aq. solution |
| **Viscosity** | Not applicable | Solid |
| **Water Solubility** | Soluble | |
| **Solubility in other solvents** | No information available | |
| **Partition Coefficient (n-octanol/water)** | | |
| **Vapor Pressure** | No data available | |
| **Density / Specific Gravity** | 2.1 @ 20 °C | Literature reference |
| **Bulk Density** | No data available | |
| **Vapor Density** | Not applicable | Solid |
| **Particle characteristics** | No data available | |

**Other Information**

| | |
|---|---|
| **Molecular Formula** | K N O3 |
| **Molecular Weight** | 101.1 |
| **Oxidizing Properties** | Oxidizer |
| **Evaporation Rate** | Not applicable - Solid |

## 10. Stability and reactivity

**Reactive Hazard** Yes

**Stability** Oxidizer: Contact with combustible/organic material may cause fire.

**Conditions to Avoid** Avoid dust formation. Excess heat. Combustible material. Incompatible products.

**Incompatible Materials** Strong reducing agents, Strong acids, Combustible material

**Hazardous Decomposition Products** Potassium oxides, Nitrogen oxides (NOx)

**Hazardous Polymerization** Hazardous polymerization does not occur.

**Hazardous Reactions** None under normal processing.

## 11. Toxicological information

**Information on expected route of exposure**

| | |
|---|---|
| **Inhalation** | May cause irritation of respiratory tract. |
| **Ingestion** | May cause irritation. |
| **Eyes** | May cause irritation. |
| **Skin** | May cause irritation. |

**Toxicology data for the components**

| Component | LD50 Oral | LD50 Dermal | LC50 Inhalation |
|---|---|---|---|
| Potassium nitrate | LD50 = 3015 mg/kg ( Rat ) | > 5000 mg/kg (Rat) | >0.527 mg/l 4h (Rat) |

**Toxicologically Synergistic Products** No information available

**(b) skin corrosion/irritation;** Based on available data, the classification criteria are not met

**(c) serious eye damage/irritation;** Based on available data, the classification criteria are not met

| | |
|---|---|
| **Test method** | OECD 405 |
| **Test species** | rabbit |
| **Observation end point** | No eye irritation |

**(d) respiratory or skin sensitization;**

| | |
|---|---|
| **Respiratory** | Based on available data, the classification criteria are not met |
| **Skin** | Based on available data, the classification criteria are not met |

**(e) germ cell mutagenicity;** Based on available data, the classification criteria are not met

Did not show mutagenic effects in animal experiments

**(f) carcinogenicity;** Based on available data, the classification criteria are not met

The table below indicates whether each agency has listed any ingredient as a carcinogen

| Component | CAS-No | IARC | NTP | ACGIH | OSHA | Mexico |
|---|---|---|---|---|---|---|
| Potassium nitrate | 7757-79-1 | Not listed | Not listed | Not listed | Not listed | Not listed |

**(g) reproductive toxicity;** Based on available data, the classification criteria are not met

**Reproductive Effects** Animal testing did not show any effects on fertility.

**(h) STOT-single exposure;** Based on available data, the classification criteria are not met

**(i) STOT-repeated exposure;** Based on available data, the classification criteria are not met

**Test method** OECD Test Guideline 422
**Study result** NOAEL = 1500 mg/kg bw/day
**Target Organs** None known.

**(j) aspiration hazard;** Not applicable
Solid

**Symptoms / effects,both acute and delayed** No information available.

**Other Adverse Effects** The toxicological properties have not been fully investigated.

**Endocrine Disrupting Properties** This product does not contain any known or suspected endocrine disruptors.

## 12. Ecological information

**Ecotoxicity**
This product contains the following substance(s) which are hazardous for the environment. .

| Component | Freshwater Algae | Freshwater Fish | Microtox | Water Flea |
|---|---|---|---|---|
| Potassium nitrate | > 1700 mg/l EC50 (10 day) | 1378 mg/l LC50 (96h) | Not listed | 490 mg/l EC50 (48h) |

**Persistence and Degradability** Soluble in water Persistence is unlikely based on information available.

**Bioaccumulation/ Accumulation** No information available.

**Mobility** Will likely be mobile in the environment due to its water solubility.

## 13. Disposal considerations

**Waste Disposal Methods** Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.

## 14. Transport information

**DOT**
**UN-No** UN1486
**Proper Shipping Name** POTASSIUM NITRATE
**Hazard Class** 5.1
**Packing Group** III

**TDG**
**UN-No** UN1486
**Proper Shipping Name** POTASSIUM NITRATE
**Hazard Class** 5.1
**Packing Group** III

**IATA**

| | |
|---|---|
| **UN-No** | UN1486 |
| **Proper Shipping Name** | POTASSIUM NITRATE |
| **Hazard Class** | 5.1 |
| **Packing Group** | III |

**IMDG/IMO**

| | |
|---|---|
| **UN-No** | UN1486 |
| **Proper Shipping Name** | POTASSIUM NITRATE |
| **Hazard Class** | 5.1 |
| **Packing Group** | III |

## 15. Regulatory information

**International Inventories**

| Component | CAS-No | DSL | NDSL | TSCA | TSCA Inventory notification - Active-Inactive | EINECS | ELINCS | NLP |
|---|---|---|---|---|---|---|---|---|
| Potassium nitrate | 7757-79-1 | X | - | X | ACTIVE | 231-818-8 | - | - |

| Component | CAS-No | IECSC | KECL | ENCS | ISHL | TCSI | AICS | NZIoC | PICCS |
|---|---|---|---|---|---|---|---|---|---|
| Potassium nitrate | 7757-79-1 | X | KE-29163 | X | X | X | X | X | X |

**Legend:**
X - Listed '-' - Not listed
**KECL** - NIER number or KE number (http://ncis.nier.go.kr/en/main.do)
**DSL/NDSL** - Canadian Domestic Substances List/Non-Domestic Substances List
**TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory
**EINECS/ELINCS** - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances
**IECSC** - Chinese Inventory of Existing Chemical Substances
**KECL** - Korean Existing and Evaluated Chemical Substances
**ENCS** - Japanese Existing and New Chemical Substances
**AICS** - Australian Inventory of Chemical Substances
**PICCS** - Philippines Inventory of Chemicals and Chemical Substances

**Canada**

SDS in compliance with provisions of information as set out in Canadian Standard - Part 4, Schedule 1 and 2 of the Hazardous Products Regulations (HPR) and its amendments and meets the requirements of the HPR (Paragraph 13(1)(a) of the revised Hazardous Products Act (HPA)).

**Other International Regulations**

**Authorisation/Restrictions according to EU REACH** Not applicable

**Contains component(s) that meet a 'definition' of per & poly fluoroalkyl substance (PFAS)?**
Not applicable

**Safety, health and environmental regulations/legislation specific for the substance or mixture**

| Component | CAS-No | OECD HPV | Persistent Organic Pollutant | Ozone Depletion Potential | Restriction of Hazardous Substances (RoHS) |
|---|---|---|---|---|---|
| Potassium nitrate | 7757-79-1 | Listed | Not applicable | Not applicable | Not applicable |

| Component | CAS-No | Seveso III Directive (2012/18/EC) - Qualifying Quantities for Major Accident Notification | Seveso III Directive (2012/18/EC) - Qualifying Quantities for Safety Report Requirements | Rotterdam Convention (PIC) | Basel Convention (Hazardous Waste) |
|---|---|---|---|---|---|

| | | | | | |
|---|---|---|---|---|---|
| Potassium nitrate | 7757-79-1 | Not applicable | Not applicable | Not applicable | Not applicable |

## 16. Other information

**Prepared By**
Product stewardship (Regulatory Affairs)
Thermo Fisher Scientific
email - begel.sdsdesk@thermofisher.com

**Creation Date** 05-August-2010
**Revision Date** 18-December-2025
**Print Date** 18-December-2025
**Revision Summary** This document has been updated to comply with the requirements of WHMIS 2015 which includes the amended Hazardous Products Act (HPA) and the Hazardous Products Regulation (HPR) to align with the Globally Harmonised System (GHS) (V7/8) for the Classification and Labelling of Chemicals.

**Disclaimer**

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**End of SDS**