

SAFETY DATA SHEET

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifiers

Product name	Potassium Nitrate
CAS number	7757-79-1
Synonyms	Nitre; Nitrate of potash; Nitric acid, potassium salt; Saltpeter

1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses	Laboratory Chemicals
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1.3 Details of the supplier of the safety data sheet

Company	Lab Alley, LLC 12501 Pauls Valley Road Austin, Texas 78737 U.S.A.
Telephone	512-668-9918
Fax	512-886-4008

1.4 Emergency telephone

Emergency Phone #	US & Canada: 1-800-535-5053	INFOTRAC
	International 1-352-323-3500	INFOTRAC

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

Oxidizing solids	Category 3
Skin irritation	Category 3
Chronic Aquatic Toxicity	Category 3

2.2 GHS Label elements, including precautionary statements

Pictogram



Signal Word

Warning

Hazard statements

May intensify fire; oxidizer. Causes skin irritation. Causes serious eye irritation. May cause respiratory irritation.

Precautionary statements

If medical advice is needed, have product container or label at hand. Keep out of reach of children. Read label before use. Keep away from heat/sparks/open flames/hot surfaces. No smoking. Keep/Store away from clothing/combustible materials. Take any precaution to avoid mixing with combustibles. Wear protective gloves/protective clothing/eye protection/face protection. Avoid breathing dust/fumes/gas/mist/vapors/spray. Wash thoroughly after handling. Use only outdoors or in a well-ventilated area. Do not eat, drink or smoke when before reuse. IF ON SKIN: Wash with soap and water. IF INHALED: Remove with victim to fresh air and keep at rest in a position comfortable for breathing. If skin irritation occurs: Get medical advice/attention. If eye irritation persists get medical advice/attention. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing. Store locked up. Store in a well-ventilated place. Keep container tightly closed.

2.3 Hazards not otherwise classified (HNOC) or not covered by GHS

May form combustible dust concentrations in air (during processing)

SECTION 3: Composition/information on ingredients

3.1 Components

Chemical name	Common name and synonyms	CAS number	Concentration
Potassium Nitrate	Nitre; Nitrate of potash; Nitric acid, potassium salt; Saltpeter	7757-79-1	>99%

SECTION 4: First aid measures

4.1 Description of first-aid measures

General advice

If inhaled

Move exposed individual to fresh air. Loosen clothing as necessary and position individual in a comfortable position. Seek medical advice if discomfort or irritation persists. If breathing difficult, give oxygen.

In case of skin contact	Wash affected area with soap and water. Rinse/flush exposed skin gently using water for 15-20 minutes. Seek medical advice if discomfort or irritation persists.
In case of eye contact	Protect unexposed eye. Rinse/flush exposed eye(s) gently using water for 15-20 minutes. Remove contact lens(es) if able to do so during rinsing. Seek medical attention if irritation persists or if concerned.
If swallowed	Rinse mouth thoroughly. Do not induce vomiting. Have exposed individual drink sips of water. Seek medical attention if irritation, discomfort or vomiting persists.

4.2 Most important symptoms and effects, both acute and delayed

Irritation, nausea, headache, shortness of breath.

4.3 Indication of any immediate medical attention and special treatment needed

If seeking medical attention, provide SDS document to physician.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media	If in laboratory setting, follow laboratory fire suppression procedures. Use appropriate fire suppression agents for adjacent combustible materials or sources of ignition.
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Unsuitable extinguishing media	No information available.
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5.2 Specific hazards arising from the substance or mixture

Combustion products may include carbon oxides or other toxic vapors. Thermal decomposition can lead to release of irritating gases and vapors. Avoid generating dust; fine dust dispersed in air in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard.

5.3 Special protective equipment and precautions for firefighters

Use NIOSH-approved respiratory protection/breathing apparatus. Move product containers away from fire or keep cool with water spray as a protective measure, where feasible. Use spark-proof tools and explosion-proof equipment.

5.4 Further information

Flash Point	No data available
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Autoignition Temperature	No data available
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Explosion limits	
Upper	No information available

Lower No information available
Sensitivity to Mechanical Impact No information available
Sensitivity to Static Discharge No information available

NFPA

Health	Flammability	Instability	Physical hazards
1	1	2	OX

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Wear protective equipment. Transfer to a disposal or recovery container. Use spark-proof tools and explosion-proof equipment. Use respiratory protective device against the effects of fumes/dust/aerosol. Keep unprotected persons away. Ensure adequate ventilation. Keep away from ignition sources. Protect from heat. Stop the spill, if possible. Contain spilled material by diking or using inert absorbent.

6.2 Environmental precautions

Prevent from reaching drains, sewer or waterway. Collect contaminated soil for characterization per Section 13.

6.3 Methods and materials for containment and cleaning up

If in a laboratory setting, follow Chemical Hygiene Plan procedures. Place into properly labeled containers for recovery or disposal. If necessary, use trained response staff/contractor. Dust deposits should not be allowed to accumulate on surface, as these may form an explosive mixture if they are released into the atmosphere in sufficient concentration. Avoid dispersal of dust in the air (i.e., clearing dust surfaces with compressed air). Collect solids in powder form using vacuum with (HEPA filter).

6.4 Reference to other sections

See section 2 for full list of hazard and precaution statements.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Precautions on safe handling

Minimize dust generation and accumulation. Wash hands after handling. Avoid dispersal of dust in the air (i.e., clearing dust surface with compressed air). Routine housekeeping should be instituted to ensure that dusts do not accumulate on surfaces. Dry powders can build static electricity charges when subjected to the friction of transfer and mixing operations. Follow good hygiene procedures when handling chemical materials. Do not eat, drink, smoke or use personal products when handling chemical substances. If in a laboratory setting, follow Chemical Hygiene Plan. Use only in well-ventilated areas. Avoid generation of dust or fine particulate. Avoid contact with eyes, skin, and clothing.

Hygiene measures

The usual precautionary measures are to be adhered to when handling chemical. Keep away from food, beverages and feed sources. Immediately remove all soiled and contaminated clothing. Wash hands before breaks and at the end of work. Do not inhale gases/fumes/dust/mist/vapor/aerosols. Avoid contact with the eyes and skin.

7.2 Conditions for safe storage, including any incompatibilities

Storage conditions

Store in a cool location. Provide ventilation for containers. Avoid storage near extreme heat, ignition sources or open flame. Store away from foodstuffs. Store away from oxidizing agents. Store in cool, dry conditions in well sealed containers. Keep container tightly sealed. Store with like hazards.

Incompatibilities

No information available

SECTION 8: Exposure controls/personal protection

8.1 Occupational exposure limits

This product does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

8.2 Exposure controls

Appropriate engineering controls

Emergency eye wash fountains and safety showers should be available in the immediate vicinity of use/handling. Provide exhaust ventilation or other engineering controls to keep the applicable workplace exposure limits (Occupational Exposure Limits - OELs) indicated above. Use under a fume hood. It is recommended that all dust control equipment such as local exhaust ventilation and material transport systems involved in handling of this product contain explosion relieved vents or an explosion suppression system or an oxygen deficient environment. Ensure that dust-handling systems (such as exhaust ducts, dust collectors, vessels, and processing equipment) are designed in a manner to prevent the escape of dust into the work area (i.e., there is no leakage from the equipment).

Personal protective equipment

Eye/face protection

Safety glasses with side shields or goggles.

Skin and body protection

The gloves material has to be impermeable and resistant to the product/the substance/the preparation being used/handled. Selection of the gloves material on consideration of the penetration times, rates of diffusion and the degradation.

Respiratory protection

Not required under normal conditions of use. Use suitable respiratory protective device when high concentrations are present. Use suitable respiratory protective device when aerosol or mist is formed. For spills, respiratory protection may be advisable.

Control of environmental exposure

No information available

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical State	Solid
Appearance	White
Odor	Odorless
Odor Threshold	Not determined
pH	6-8 5% aq. Solution
Melting Point/Range	334 °C / 633.2 °F
Boiling Point/Range	400 °C / 752 °F @ 760 mmHg
Evaporation Rate	Not determined
Flammability (solid)	Not determined
Flammability or explosive limit	
Upper	No data available
Lower	No data available
Vapor Pressure	No information available
Vapor Density	No information available
Density	2.1 @ 20 °C
Solubility	Soluble in water
Partition coefficient; n-octanol/water	No information available
Autoignition Temp	No information available
Decomposition Temp	> 400 °C
Viscosity	No information available
Molecular Formula	KNO ₃
Molecular Weight	7757-79-1
VOC Content(%)	No information available
Oxidizing properties	Oxidizer

9.2 Other safety information

No information available

SECTION 10: Stability and reactivity

10.1 Reactivity

Nonreactive under normal conditions

10.2 Chemical stability

No decomposition if used and stored according to specifications.

10.3 Possibility of hazardous reactions

Contact with combustible/organic material may cause fire.

10.4 Conditions to avoid

Incompatible products, excess heat, combustible material, and dust formation. Strong reducing agents, powdered metals, strong acids, organic materials.

10.5 Incompatible materials

Strong reducing agents, strong acids, strong bases.

10.6 Hazardous decomposition products

Carbon oxides, oxides of potassium.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Product Information, Component Information

Acute toxicity

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Potassium nitrate	3015 mg/kg (rat)	>5000 mg/kg (Rat)	> 0.527 mg/L/4h (Rat)

Skin corrosion/irritation

No information available

Serious eye damage/eye irritation

No information available

Respiratory or skin sensitization

No information available.

Germ cell mutagenicity

No information available

Carcinogenicity

Component	CAS	IARC	NTP	ACGIH	OSHA	Mexico
Potassium nitrate	7757-79-1	Not listed	Not listed	Not listed	Not listed	Not listed

Specific target organ toxicity - single exposure

None known

Specific target organ toxicity - repeated exposure

None known

Reproductive toxicity

Oral effects on fertility, oral effects on newborn, effects on embryo or fetus.

Chronic effects

No information available

11.2 Additional Information

No information available

SECTION 12: Ecological information**12.1 Toxicity**

Product		Species	Test Results
Potassium nitrate	EC50	Freshwater Algae	>1700 mg/L, 10 days
	LC50	Freshwater Fish	1378 mg/L, 96h
	EC50	Water Flea	490 mg/L, 48h

12.2 Persistence and degradability

Readily degradable in the environment

12.3 Bio accumulative potential

No information available

12.4 Mobility in soil

No information available

12.5 Results of PBT and vPvB assessment

No information available

12.6 Endocrine disrupting properties

No information available

12.7 Other adverse effects

No information available

SECTION 13: Disposal considerations**13.1 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.

SECTION 14: Transport information

DOT (US)

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

IMDG

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

SECTION 15: Regulatory information

US federal regulations This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)
Not applicable

CERCLA Hazardous Substance List (40 CFR 302.4)
Not applicable

SARA 304 Emergency release notification
Not regulated

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)
Not regulated.

Superfund Amendments and Reauthorization Act of 1986 (SARA)
SARA 302 Extremely hazardous substance
Not listed.

SARA 311/312 Hazardous
Listed, Reactive, Chronic.

SARA 313 (TRI reporting)
Listed

Other federal regulations
Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List
Not regulated

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Safe Drinking Water Act

Not regulated

FEMA Priority Substances Respiratory Health and Safety in the Flavor Manufacturing Workplace

Not listed

US state regulations

US. Massachusetts RTK - Substance List

Listed, Potassium nitrate (CAS #7757-79-1).

US. New Jersey Worker and Community Right-to-Know Act

Listed, Potassium nitrate (CAS #7757-79-1).

US. Pennsylvania Worker and Community Right-to-Know Law

Listed, Potassium nitrate (CAS #7757-79-1).

California Proposition 65

Not listed

SECTION 16: Other information

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SECTION 17: Disclaimer

The information provided on this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.