

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.
-----------------	-----------------------

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
Acute Aquatic Toxicity	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.
Harmful to aquatic life with long lasting effects.

Precautionary statements

Prevention: Keep away from heat. Keep/store away from clothing/combustible materials. Take any precaution to avoid mixing with combustibles. Avoid release to the environment. Wear protective gloves/eye protection/face protection.

Fire: 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.

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

None identified.

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

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

In case of skin contact

Take off immediately all contaminated clothing. Rinse skin with water/shower.

In case of eye contact

Rinse out with plenty of water. Remove contact lenses.

If swallowed

Make victim drink water (two glasses at most). Consult doctor if feeling unwell.

4.2 Most important symptoms and effects, both acute and delayed

None reasonably foreseeable.

4.3 Indication of any immediate medical attention and special treatment needed

No information available.

SECTION 5: Firefighting measures

5.1 Extinguishing media

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

Unsuitable extinguishing media No information available.

5.2 Specific hazards arising from the substance or mixture

Nitrogen oxides (NO_x), Potassium oxides. Not combustible. Has a fire-promoting effect due to release of oxygen. Ambient fire may liberate hazardous vapours.

5.3 Special protective equipment and precautions for firefighters

In the event of fire, wear self-contained breathing apparatus.

5.4 Further information

Flash Point No information available.

Autoignition Temperature No information available.

Explosion limits

Upper No data available.

Lower No data 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

Use personal protective equipment as required. Ensure adequate ventilation. Avoid dust formation.

6.2 Environmental precautions

Should not be released into the environment.

6.3 Methods and materials for containment and cleaning up

Sweep up and shovel into suitable containers for disposal. Keep in suitable, closed containers for disposal. Soak up with inert adsorbent material. Sweep up and shovel into suitable containers for disposal.

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

Wear personal protective equipment as required. Ensure adequate ventilation. Avoid dust formation.

Hygiene measures

Handle in accordance with good industrial hygiene and safety practice.

7.2 Conditions for safe storage, including any incompatibilities

Storage conditions

Keep containers tightly closed in a dry, cool, and well-ventilated place. Do not store near combustible materials.

Incompatibilities

Strong reducing agents. Strong acids. Combustible material.

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

Ensure adequate ventilation, especially in confined areas. Ensure that eyewash stations and safety showers are close to the workstation location.

Personal protective equipment

Eye/face 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.

Skin protection

Wear appropriate protective gloves and clothing to prevent skin exposure.

Body Protection

Wear appropriate protective gloves and clothing to prevent skin exposure.

Respiratory protection

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.

Control of environmental exposure

Do not let product enter drains.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical State	Solid
Appearance	White
Odor	Odorless
Odor Threshold	No information available
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 applicable
Flammability (solid)	Not flammable
Flammability or explosive limit	No data available
Upper	
Lower	
Vapor Pressure	No information available
Vapor Density	Not applicable
Density	2.1 @ 20 °C
Solubility	Soluble
Partition coefficient; n-octanol/water	No data available
Autoignition Temp	No information available
Decomposition Temp	> 400°C

Viscosity	Not applicable
Molecular Formula	K N O3
Molecular Weight	No information available
VOC Content(%)	No information available
Oxidizing properties	Oxidizer

9.2 Other safety information

No information available.

SECTION 10: Stability and reactivity

10.1 Reactivity

Known reactive hazard.

10.2 Chemical stability

Oxidizer; contact with combustible/organic material may cause fire.

10.3 Possibility of hazardous reactions

None under normal processing.

10.4 Conditions to avoid

Avoid dust formation. Excess heat. Combustible material. Incompatible products.

10.5 Incompatible materials

Strong reducing agents, strong acids, combustible material.

10.6 Hazardous decomposition products

Potassium oxides, Nitrogen oxides.

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

Did not show mutagenic effects in animal experiments.

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

Animal testing did not show any effects on fertility.

Chronic effects

No information available.

11.2 Additional Information

The toxicological properties have not been fully investigated.

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

Soluble in water. Persistence is unlikely based on information available.

12.3 Bio accumulative potential

No information available.

12.4 Mobility in soil

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

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 listed.

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

See Section 2 for more information.

SARA 313 (TRI reporting)

Listed, Potassium nitrate (CAS #7757-79-1), Threshold values %: 1.0

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

Issue date: 08/16/2024

Revision 1: 12/13/2024

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.