

# SAFETY DATA SHEET

Creation Date 05-Aug-2010

Revision Date 18-Dec-2025

Revision Number 6

This safety data sheet was created pursuant to the requirements of: US OSHA Hazard Communication Standard 2024 (29 CFR 1910.1200)

## 1. Identification

|                             |                                                |
|-----------------------------|------------------------------------------------|
| <b>Product Name</b>         | <b>Potassium nitrate</b>                       |
| <b>Cat No. :</b>            | <b>BP368-500</b>                               |
| <b>CAS No</b>               | 7757-79-1                                      |
| <b>Synonyms</b>             | Saltpeter.; Nitric acid potassium salt; Niter  |
| <b>Recommended Use</b>      | Laboratory chemicals.                          |
| <b>Uses advised against</b> | Food, drug, pesticide or biocidal product use. |

### Details of the supplier of the safety data sheet

#### Company

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

#### **Emergency Telephone Number**

Chemtrec US: (800) 424-9300  
Chemtrec EU: 001-703-527-3887  
CHEMTREC®, Inside the USA: 800-424-9300  
CHEMTREC®, Outside the USA: 001-703-527-3887

## 2. Hazard(s) identification

### Classification

This chemical is considered hazardous according to [US] OSHA (29 CFR 1910.1200, 2024)

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

**Fire**

In case of fire: Use CO<sub>2</sub>, dry chemical, or foam to extinguish

**Disposal**

Dispose of contents/container to an approved waste disposal plant

**Hazards not otherwise classified (HNOC)**

None identified

**Hazards classified under paragraph (d)(1)(ii) of 1910.1200**

No information available

### 3. Composition/information on Ingredients

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

### 4. First-aid measures

|                                            |                                                                                                                   |
|--------------------------------------------|-------------------------------------------------------------------------------------------------------------------|
| <b>General Advice</b>                      | If symptoms persist, call a physician.                                                                            |
| <b>Eye Contact</b>                         | Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention.   |
| <b>Skin Contact</b>                        | Wash off immediately with plenty of water for at least 15 minutes. If skin irritation persists, call a physician. |
| <b>Inhalation</b>                          | Remove to fresh air. If not breathing, give artificial respiration. Get medical attention if symptoms occur.      |
| <b>Ingestion</b>                           | Clean mouth with water and drink afterwards plenty of water. Get medical attention if symptoms occur.             |
| <b>Most important symptoms and effects</b> | None reasonably foreseeable.                                                                                      |
| <b>Notes to Physician</b>                  | Treat symptomatically                                                                                             |

### 5. Fire-fighting measures

|                                       |                                                                                                         |
|---------------------------------------|---------------------------------------------------------------------------------------------------------|
| <b>Suitable Extinguishing Media</b>   | Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. |
| <b>Unsuitable Extinguishing Media</b> | No information available                                                                                |

|                                         |                          |
|-----------------------------------------|--------------------------|
| <b>Flash Point</b>                      | No information available |
| <b>Method -</b>                         | No information available |
| <b>Autoignition Temperature</b>         | No information available |
| <b>Explosion Limits</b>                 |                          |
| <b>Upper</b>                            | No data available        |
| <b>Lower</b>                            | No data available        |
| <b>Oxidizing Properties</b>             | Oxidizer                 |
| <b>Sensitivity to Mechanical Impact</b> | No information available |
| <b>Sensitivity to Static Discharge</b>  | 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 (NO<sub>x</sub>).

**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**  
1

**Flammability**  
1

**Instability**  
2

**Physical hazards**  
OX

**6. Accidental release measures**

|                                             |                                                                                                                                                                                                                |
|---------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Personal Precautions</b>                 | Use personal protective equipment as required. Ensure adequate ventilation. Avoid dust formation.                                                                                                              |
| <b>Environmental Precautions</b>            | Should not be released into the environment.                                                                                                                                                                   |
| <b>Methods for Containment and Clean Up</b> | 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**

|                 |                                                                                                                                                                                                                                              |
|-----------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Handling</b> | 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. |
| <b>Storage.</b> | 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**

|                                      |                                                                                                                                                                      |
|--------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Exposure Guidelines</b>           | This product does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.                        |
| <b>Engineering Measures</b>          | Ensure adequate ventilation, especially in confined areas. Ensure that eyewash stations and safety showers are close to the workstation location.                    |
| <b>Personal Protective Equipment</b> |                                                                                                                                                                      |
| <b>Eye/face Protection</b>           | 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.                                                                                                                                                                                                                                            |
| <b>Skin and body protection</b> | Wear appropriate protective gloves and clothing to prevent skin exposure.                                                                                                                                                                         |
| <b>Respiratory Protection</b>   | 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. |
| <b>Recommended Filter type:</b> | Particulates filter conforming to EN 143.                                                                                                                                                                                                         |
| <b>Hygiene Measures</b>         | Handle in accordance with good industrial hygiene and safety practice.                                                                                                                                                                            |

## 9. Physical and chemical properties

### Appearance

|                                                |                          |                                          |                 |
|------------------------------------------------|--------------------------|------------------------------------------|-----------------|
| <b>Physical State</b>                          | Solid                    |                                          |                 |
| <b>Color</b>                                   | White                    |                                          |                 |
| <b>Odor</b>                                    | Odorless                 |                                          |                 |
| <b>Odor Threshold</b>                          | No information available |                                          |                 |
| <b>Property</b>                                | <b>Values</b>            | <b>Remarks</b>                           | <b>• Method</b> |
| <b>Melting Point/Range</b>                     | 334 °C / 633.2 °F        |                                          |                 |
| <b>Softening Point</b>                         | No data available        |                                          |                 |
| <b>Boiling Point/Range</b>                     | 400 °C / 752 °F          | @ 760 mmHg                               |                 |
| <b>Flash Point</b>                             | No information available | <b>Method -</b> No information available |                 |
| <b>Flammability (liquid)</b>                   | Not applicable           | Solid                                    |                 |
| <b>Flammability (solid,gas)</b>                | Not flammable            |                                          |                 |
| <b>Explosion Limits</b>                        | No data available        |                                          |                 |
| <b>Autoignition Temperature</b>                | No data available        |                                          |                 |
| <b>Decomposition Temperature</b>               | > 400°C                  |                                          |                 |
| <b>pH</b>                                      | 6-8                      | 5% aq. solution                          |                 |
| <b>Viscosity</b>                               | Not applicable           | Solid                                    |                 |
| <b>Water Solubility</b>                        | Soluble                  |                                          |                 |
| <b>Solubility in other solvents</b>            | No information available |                                          |                 |
| <b>Partition Coefficient (n-octanol/water)</b> |                          |                                          |                 |
| <b>Vapor Pressure</b>                          | No data available        |                                          |                 |
| <b>Density / Specific Gravity</b>              | 2.1 @ 20 °C              | Literature reference                     |                 |
| <b>Bulk Density</b>                            | No data available        |                                          |                 |
| <b>Vapor Density</b>                           | Not applicable           | Solid                                    |                 |
| <b>Particle characteristics</b>                | No data available        |                                          |                 |
| <b>Other Information</b>                       |                          |                                          |                 |
| <b>Molecular Formula</b>                       | K N O <sub>3</sub>       |                                          |                 |
| <b>Molecular Weight</b>                        | 101.1                    |                                          |                 |
| <b>Oxidizing Properties</b>                    | Oxidizer                 |                                          |                 |
| <b>Evaporation Rate</b>                        | Not applicable - Solid   |                                          |                 |

## 10. Stability and reactivity

|                               |                                                                                 |
|-------------------------------|---------------------------------------------------------------------------------|
| <b>Reactive Hazard</b>        | Yes                                                                             |
| <b>Stability</b>              | Oxidizer: Contact with combustible/organic material may cause fire.             |
| <b>Conditions to Avoid</b>    | Avoid dust formation. Excess heat. Combustible material. Incompatible products. |
| <b>Incompatible Materials</b> | Strong reducing agents, Strong acids, Combustible material                      |

**Hazardous Decomposition Products** Potassium oxides, Nitrogen oxides (NO<sub>x</sub>)

**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

### United States of America Inventory

| Component         | CAS No    | TSCA | TSCA Inventory notification - Active-Inactive | TSCA - EPA Regulatory Flags |
|-------------------|-----------|------|-----------------------------------------------|-----------------------------|
| Potassium nitrate | 7757-79-1 | X    | ACTIVE                                        | -                           |

**Legend:**

TSCA US EPA (TSCA) - Toxic Substances Control Act, (40 CFR Part 710)

X - Listed

-' - Not Listed

**TSCA - Per 40 CFR 751, Regulation of Certain Chemical Substances & Mixtures, Under TSCA Section 6(h) (PBT)**

Not applicable

**TSCA 12(b)** - Notices of Export

Not applicable

**International Inventories**

Canada (DSL/NDSL), Europe (EINECS/ELINCS/NLP), Philippines (PICCS), Japan (ENCS), Japan (ISHL), Australia (AICS), China (IECSC), Korea (KECL).

| Component         | CAS No    | DSL | NDSL | EINECS    | PICCS | ENCS | ISHL | AICS | IECSC | KECL     |
|-------------------|-----------|-----|------|-----------|-------|------|------|------|-------|----------|
| Potassium nitrate | 7757-79-1 | X   | -    | 231-818-8 | X     | X    | X    | X    | X     | KE-29163 |

KECL - NIER number or KE number (<http://ncis.nier.go.kr/en/main.do>)**U.S. Federal Regulations****SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

| Component         | CAS No    | Weight % | SARA 313 - Threshold Values % | SARA 313 - Reporting thresholds |
|-------------------|-----------|----------|-------------------------------|---------------------------------|
| Potassium nitrate | 7757-79-1 | >95      | 1.0 %                         | -                               |

**SARA 311/312 Hazard Categories**

Should this product meet EPCRA 311/312 Tier reporting criteria at 40 CFR 370, refer to Section 2 of this SDS for appropriate classifications.

**CWA (Clean Water Act)**

Not applicable

**Clean Air Act**

Not applicable

**OSHA** - Occupational Safety and Health Administration

Not applicable

**CERCLA**

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

**California Proposition 65**

This product does not contain any Proposition 65 chemicals.

**U.S. State Right-to-Know Regulations**

| Component         | Massachusetts | New Jersey | Pennsylvania | Illinois | Rhode Island |
|-------------------|---------------|------------|--------------|----------|--------------|
| Potassium nitrate | X             | X          | X            | X        | X            |

**U.S. Department of Transportation**

Reportable Quantity (RQ): N

DOT Marine Pollutant N

DOT Severe Marine Pollutant N

## U.S. Department of Homeland Security

This product contains the following DHS chemicals:

**Legend** - STQs = Screening Threshold Quantities, APA = A placarded amount

| Component         | DHS Chemical Facility Anti-Terrorism Standard |
|-------------------|-----------------------------------------------|
| Potassium nitrate | Theft STQs - 400lb                            |

**Other International Regulations**

Mexico - Grade

No information available

Authorisation/Restrictions according to EU REACH

Not applicable

| Component         | CAS No    | REACH (1907/2006) - Annex XIV - Substances Subject to Authorization | REACH (1907/2006) - Annex XVII - Restrictions on Certain Dangerous Substances | REACH Regulation (EC 1907/2006) article 59 - Candidate List of Substances of Very High Concern (SVHC) |
|-------------------|-----------|---------------------------------------------------------------------|-------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------|
| Potassium nitrate | 7757-79-1 | -                                                                   | -                                                                             | -                                                                                                     |

**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                             |

**Contains component(s) that meet a 'definition' of per & poly fluoroalkyl substance (PFAS)?**

Not applicable

**Other International Regulations**

| 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-Aug-2010

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18-Dec-2025

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18-Dec-2025

**Revision Summary**

Updated to the U.S. Department of Labor's Occupational Safety and Health Administration (OSHA) which published its Final Rule in the Federal Register revising the Hazard Communication Standard (HCS/HazCom), 29 CFR 1910.1200 (2024) (HCS §1910.1200, 2024), May 20, 2024, effective July 19, 2024.

**Disclaimer**

The information provided in 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 guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered 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



materials or in any process, unless specified in the text

**End of SDS**