

Safety data sheet
according to UK REACH

Page 1/10

Printing date 06.08.2025

Revision: 09.07.2025

Version number 15.04 (replaces version 15.03)

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

- **1.1 Product identifier**
- **Trade name:** potassium nitrate
- **Article number:** 1524
- **CAS Number:**
7757-79-1
- **EC number:**
231-818-8
- **Application of the substance / the mixture** Laboratory chemicals
- **1.3 Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
PANREAC QUIMICA S.L.U.
C/Garraf 2
Polígono Pla de la Bruguera
E-08211 Castellar del Vallès (Barcelona)
Tel. (+34) 937 489 400
Fax. (+34) 937 489 401
e-mail: product.safety@itwreagents.com
- **Further information obtainable from:** email: product.safety@panreac.com
- **1.4 Emergency telephone number:**
Single telephone number for emergency calls: 112 (EU)
Tel.: (+34) 937 489 499

SECTION 2: Hazards identification

- **2.1 Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**
Ox. Sol. 2 H272 May intensify fire; oxidiser.
- **2.2 Label elements**
- **Labelling according to Regulation (EC) No 1272/2008**
The substance is classified and labelled according to the GB CLP regulation.
- **Hazard pictograms**



GHS03

- **Signal word** Danger

(Contd. on page 2)

GB

Trade name: potassium nitrate

(Contd. of page 1)

- **Hazard statements**
H272 May intensify fire; oxidiser.
- **Precautionary statements**
 - P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
 - P220 Keep away from clothing and other combustible materials.
 - P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.
 - P370+P378 In case of fire: Use CO₂, powder or water spray to extinguish.
 - P501 Dispose of contents/container in accordance with local/regional/national/international regulations.
- **2.3 Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

SECTION 3: Composition/information on ingredients

- **3.1 Substances**
- **CAS No. Description**
7757-79-1 potassium nitrate
- **Identification number(s)**
- **EC number:** 231-818-8

SECTION 4: First aid measures

- **4.1 Description of first aid measures**
- **General information:** No special measures required.
- **After inhalation:** Take affected persons into fresh air and keep quiet.
- **After skin contact:**
Clean with water and soap. If possible, also wash with polyethylene glycol 400.
Immediately rinse with water.
If skin irritation continues, consult a doctor.
- **After eye contact:**
Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
- **After swallowing:** make victim drink water (maximum of 2 drinking glasses)
- **4.2 Most important symptoms and effects, both acute and delayed**
Coughing
Breathing difficulty
Dizziness
Headache
- **4.3 Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

SECTION 5: Firefighting measures

- **5.1 Extinguishing media**
- **Suitable extinguishing agents:**
Water
Carbon dioxide
Use fire extinguishing methods suitable to surrounding conditions.
- **5.2 Special hazards arising from the substance or mixture**
In case of fire, the following can be released:

(Contd. on page 3)

Trade name: potassium nitrate

(Contd. of page 2)

Nitrogen oxides (NO_x)

Has a fire-promoting effect due to release of oxygen.

During heating or in case of fire poisonous gases are produced.

Non-combustible.

· **5.3 Advice for firefighters**

· **Protective equipment:**

Mouth respiratory protective device.

Wear self-contained respiratory protective device.

Wear fully protective suit.

· **Additional information**

Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.

SECTION 6: Accidental release measures

· **6.1 Personal precautions, protective equipment and emergency procedures**

Avoid formation of dust.

Mount respiratory protective device.

Wear protective equipment. Keep unprotected persons away.

Avoid substance contact.

Ensure adequate ventilation

· **6.2 Environmental precautions:** Do not allow to enter sewers/ surface or ground water.

· **6.3 Methods and material for containment and cleaning up:**

Pick up mechanically.

Avoid formation of dust.

Clean up affected area.

· **6.4 Reference to other sections**

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

SECTION 7: Handling and storage

· **7.1 Precautions for safe handling**

Prevent formation of dust.

Any unavoidable deposit of dust must be regularly removed.

· **Information about fire - and explosion protection:**

Keep ignition sources away - Do not smoke.

Keep respiratory protective device available.

The product is not flammable.

· **7.2 Conditions for safe storage, including any incompatibilities**

· **Storage:**

· **Requirements to be met by storerooms and receptacles:** Store only in the original receptacle.

· **Information about storage in one common storage facility:** Not required.

· **Further information about storage conditions:**

Open receptacle only under localised extractor facilities.

Store receptacle in a well ventilated area.

Store only outside or in explosion proof rooms.

Store under lock and key and with access restricted to technical experts or their assistants only.

Keep container sealed.

· **Recommended storage temperature:** Room Temperature

· **Storage class:** 5.1 B

(Contd. on page 4)

Trade name: potassium nitrate

(Contd. of page 3)

- **7.3 Specific end use(s)** No further relevant information available.

SECTION 8: Exposure controls/personal protection

- **8.1 Control parameters**
- **Ingredients with limit values that require monitoring at the workplace:** Not required.

· DNELs

Oral	Long-term - systemic effects, general population	12.5 mg/kg
Dermal	Long-term - systemic effects, worker	20.8 mg/kg
	Long term - systemic effects, general population	12.5 mg/kg
Inhalative	Long-term - systemic effects, worker	36.7 mg/m3
	Long-term - systemic effects, general population	10.9 mg/m3

· PNECs

Aquatic compartment - freshwater	0.45 mg/L
Aquatic compartment - marine water	0.045 mg/L
Aquatic compartment - water, intermittent releases	4.5 mg/L
Sewage treatment plant	18 mg/L

- **Additional information:** The lists valid during the making were used as basis.

· 8.2 Exposure controls

- **Appropriate engineering controls** No further data; see section 7.
- **Individual protection measures, such as personal protective equipment**

· **General protective and hygienic measures:**

Immediately remove all soiled and contaminated clothing
Wash hands before breaks and at the end of work.

· **Respiratory protection:**

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.
Required when dusts are generated.

- **Recommended filter device for short term use:** Filter P1

· **Hand protection**



Protective gloves

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

· **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

· **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

- **For the permanent contact gloves made of the following materials are suitable:**

Nitrile rubber, NBR

Recommended thickness of the material: ≥ 0.11 mm

Value for the permeation: Level ≥ 480 min

- **As protection from splashes gloves made of the following materials are suitable:**

Nitrile rubber, NBR

Recommended thickness of the material: ≥ 0.11 mm

(Contd. on page 5)

Trade name: potassium nitrate

(Contd. of page 4)

Value for the permeation: Level $\geq$ 480 min

- **Eye/face protection** Safety glasses
- **Body protection:** Use protective suit.

SECTION 9: Physical and chemical properties

· 9.1 Information on basic physical and chemical properties

· General Information

· Physical state	Solid
· Colour:	Colourless
· Odour:	Odourless
· Odour threshold:	Not determined.
· Melting point/freezing point:	334 °C
· Boiling point or initial boiling point and boiling range	400 °C
· Flammability	Contact with combustible material may cause fire.
· Lower and upper explosion limit	
· Lower:	Not determined.
· Upper:	Not determined.
· Flash point:	Not applicable.
· Decomposition temperature:	400 °C
· pH	5-7.5
· Viscosity:	
· Kinematic viscosity	Not applicable.
· Dynamic:	Not applicable.
· Solubility	
· water at 20 °C:	320 g/l
· Partition coefficient n-octanol/water (log value)	Not determined.
· Vapour pressure:	Not applicable.
· Density and/or relative density	
· Density at 20 °C:	2.109 g/cm ³
· Relative density	Not determined.
· Vapour density	Not applicable.

· 9.2 Other information

· Appearance:	
· Form:	Crystalline
· Important information on protection of health and environment, and on safety.	
· Ignition temperature:	Not determined.
· Explosive properties:	Product does not present an explosion hazard.
· Molecular weight	101.1 g/mol
· Change in condition	
· Evaporation rate	Not applicable.

· Information with regard to physical hazard classes

· Explosives	Void
· Flammable gases	Void
· Aerosols	Void
· Oxidising gases	Void
· Gases under pressure	Void
· Flammable liquids	Void

(Contd. on page 6)

Trade name: potassium nitrate

(Contd. of page 5)

- | | |
|--|-------------------------------|
| · Flammable solids | Void |
| · Self-reactive substances and mixtures | Void |
| · Pyrophoric liquids | Void |
| · Pyrophoric solids | Void |
| · Self-heating substances and mixtures | Void |
| · Substances and mixtures, which emit flammable gases in contact with water | Void |
| · Oxidising liquids | Void |
| · Oxidising solids | May intensify fire; oxidiser. |
| · Organic peroxides | Void |
| · Corrosive to metals | Void |
| · Desensitised explosives | Void |

SECTION 10: Stability and reactivity

- **10.1 Reactivity** oxidizing agent
- **10.2 Chemical stability**
- **Thermal decomposition / conditions to be avoided:**
No decomposition if used according to specifications.
- **10.3 Possibility of hazardous reactions** Reacts with organic substances.
- **10.4 Conditions to avoid** No further relevant information available.
- **10.5 Incompatible materials:**
alkali metals
sulfides
phosphorus
metals in powder form
boron
carbon/soot
phosphides
magnesium
Reacts with flammable substances.
- **10.6 Hazardous decomposition products:** In the event of fire: See chapter 5

SECTION 11: Toxicological information

- **11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008**
- **Acute toxicity** Based on available data, the classification criteria are not met.
- **LD/LC50 values relevant for classification:**
Quantitative data on the toxicological effect of this product are not available.

Components	Type	Value	Species
Oral	LD50	3,750 mg/kg (rat)	
Dermal	LD50	>5,000 mg/kg (rat)	

- **Primary irritant effect:**
- **Skin corrosion/irritation**
Irritant effect
Based on available data, the classification criteria are not met.
- **Serious eye damage/irritation**
irritations
Based on available data, the classification criteria are not met.
- **After inhalation:** Irritation symptoms in the respiratory tract.
- **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.

(Contd. on page 7)

Trade name: potassium nitrate

(Contd. of page 6)

- **Germ cell mutagenicity** Based on available data, the classification criteria are not met.
- **Carcinogenicity** Based on available data, the classification criteria are not met.
- **Reproductive toxicity** Based on available data, the classification criteria are not met.
- **STOT-single exposure** Based on available data, the classification criteria are not met.
- **STOT-repeated exposure** Based on available data, the classification criteria are not met.
- **Aspiration hazard** Based on available data, the classification criteria are not met.
- **11.2 Information on other hazards**
- **Endocrine disrupting properties** Substance is not listed.

SECTION 12: Ecological information

- **12.1 Toxicity**
- **Aquatic toxicity:** No further relevant information available.

Type of test	Effective concentration	Method	Assessment
EC50	490 mg/l (daphnia magna)		
EC0	200 mg/l (fish)		
LC50/48 h	490 mg/l (Aquatic Invertebrata)		
LC50/96 h	1,378 mg/l (fish)		
	>98.9 mg/l (Oncorhynchus mykiss)		
NOEC	180 mg/L (micro-organisms)		

- **12.2 Persistence and degradability** No further relevant information available.
- **12.3 Bioaccumulative potential** No further relevant information available.
- **12.4 Mobility in soil** No further relevant information available.
- **12.5 Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **12.6 Endocrine disrupting properties**
The product does not contain substances with endocrine disrupting properties.
- **12.7 Other adverse effects**
- **Additional ecological information:**
- **General notes:**
Do not allow product to reach ground water, water course or sewage system.
Water hazard class 1 (German Regulation) (Assessment by list): slightly hazardous for water

SECTION 13: Disposal considerations

- **13.1 Waste treatment methods**
- **Recommendation**
Chemicals must be disposed of in compliance with the respective national regulations.
Must not be disposed together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packaging:**
- **Recommendation:**
Disposal must be made according to official regulations.
Packagings that may not be cleansed are to be disposed of in the same manner as the product.

GB

(Contd. on page 8)

Trade name: potassium nitrate

(Contd. of page 7)

SECTION 14: Transport information

· 14.1 UN number or ID number	
· ADR, IMDG	UN1486
· 14.2 UN proper shipping name	
· ADR, IMDG	POTASSIUM NITRATE
· 14.3 Transport hazard class(es)	
· ADR	
	
· Class	5.1 (O2) Oxidising substances.
· Label	5.1
· IMDG, IATA	
	
· Class	5.1 Oxidising substances.
· Label	5.1
· 14.4 Packing group	
· ADR, IMDG, IATA	III
· 14.5 Environmental hazards:	Not applicable.
· 14.6 Special precautions for user	Warning: Oxidising substances.
· Hazard identification number (Kemler code):	50
· EMS Number:	F-A,S-Q
· Stowage Category	A
· Stowage Code	SW23 When transported in BK3 bulk container, see 7.6.2.12 and 7.7.3.9.
· 14.7 Maritime transport in bulk according to IMO instruments	Not applicable.
· Transport/Additional information:	
· ADR	
· Limited quantities (LQ)	5 kg
· Excepted quantities (EQ)	Code: E1 Maximum net quantity per inner packaging: 30 g Maximum net quantity per outer packaging: 1000 g
· Transport category	3
· Tunnel restriction code	E
· IMDG	
· Limited quantities (LQ)	5 kg
· Excepted quantities (EQ)	Code: E1 Maximum net quantity per inner packaging: 30 g Maximum net quantity per outer packaging: 1000 g

(Contd. on page 9)

Trade name: potassium nitrate

(Contd. of page 8)

· UN "Model Regulation":

UN 1486 POTASSIUM NITRATE, 5.1, III

SECTION 15: Regulatory information

- **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **Poisons Act**
- **Regulated explosives precursors** Substance is not listed.
- **Regulated poisons** Substance is not listed.
- **Reportable explosives precursors** Listed
- **Reportable poisons** Substance is not listed.
- **Directive 2012/18/EU**
- **Named dangerous substances - ANNEX I** Substance is listed.
- **Qualifying quantity (tonnes) for the application of lower-tier requirements** 50 t
- **Qualifying quantity (tonnes) for the application of upper-tier requirements** 200 t
- **15.2 Chemical safety assessment:** A Chemical Safety Assessment has been carried out.

SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· Abbreviations and acronyms:

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)
ICAO: International Civil Aviation Organisation
ICAO-TI: Technical Instructions by the "International Civil Aviation Organisation" (ICAO)
ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
GHS: Globally Harmonised System of Classification and Labelling of Chemicals
EINECS: European Inventory of Existing Commercial Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
DNEL: Derived No-Effect Level (UK REACH)
PNEC: Predicted No-Effect Concentration (UK REACH)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
Ox. Sol. 2: Oxidizing solids – Category 2

- *** Data compared to the previous version altered.**

Annex: Exposure scenario

- **Short title of the exposure scenario**
Formulation and packing/repacking of substances and mixtures
Use in laboratories
- **Description of the activities / processes covered in the Exposure Scenario**
See section 1 of the annex to the Safety Data Sheet.
- **Conditions of use**
- **Duration and frequency** 5 workdays/week.
- **Physical parameters**
- **Physical state** Solid
- **Concentration of the substance in the mixture** Raw material.

(Contd. on page 10)

Trade name: potassium nitrate

(Contd. of page 9)

- **Other operational conditions**
- **Other operational conditions affecting environmental exposure** No special measures required.
- **Other operational conditions affecting worker exposure**
Keep away from combustible material.
Avoid breathing particles.
- **Other operational conditions affecting consumer exposure** No special measures required.
- **Other operational conditions affecting consumer exposure during the use of the product**
Not applicable.
- **Risk management measures**
- **Worker protection**
- **Organisational protective measures** No special measures required.
- **Technical protective measures**
No special measures required.
Ensure that suitable extractors are available on processing machines
- **Personal protective measures**
Do not inhale dust / smoke / mist.
In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.
Required when dusts are generated.
- **Measures for consumer protection** Ensure adequate labelling.
- **Environmental protection measures**
- **Water** No special measures required.
- **Disposal measures** Ensure that waste is collected and contained.
- **Disposal procedures**
Must not be disposed together with household garbage. Do not allow product to reach sewage system.
- **Waste type** Partially emptied and uncleaned packaging
- **Exposure estimation**
- **Consumer** Not relevant for this Exposure Scenario.
- **Guidance for downstream users** No further relevant information available.