



SAFETY DATA SHEET

POTASSIUM NITRATE

Product No: 001/05-EC

Section 1 : Identification of the Substance and of the Company

Product Name : Potassium Nitrate
Use of the Substance : Product for the Chemical or Agricultural Industry according to the corresponding technical data sheet.
Supplier : SQM EUROPE N.V.
Address : Precambuilding, Sint Pietersvliet 7/8
B-2000 Antwerpen, Belgium
Telephone : +32 (0) 3 2039700 (Industrial) - +32 (0) 3 2039720 (Plant nutrition)
Fax : +32 (0) 3 203 97 72
E-mail Address : product_safety@sqm.com
Emergency Number : +1 (703) 527 3887 (CHEMTREC International)

Section 2 : Hazards Identification

Emergency Overview

Oxidizer in crystalline form, but not in prilled form. Contact with combustible material will not cause spontaneous ignition. However, substance will enhance an existing fire.

Potential Health Effects

Inhalation : Inhalation of dust irritates the respiratory tract. Symptoms may include coughing.
Ingestion : Hazardous in case of ingestion.
Skin Contact : May cause irritation, specially with wet skin.
Eye Contact : May cause irritation, eye redness, itching and pain.

Section 3 : Composition/Information on Ingredients

Chemical Name : Potassium Nitrate, Saltpeter, Niter
CAS No. : 7757-79-1
EINECS No. : 231-818-1
Molecular Weight : 101.1
Formula : KNO_3
R-phrases : 8 (crystalline form)
None (prilled form)
For the complete text of R-phrases, see Section 16.

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Page 1 of 6





Section 4 : First Aid Measures

General Information

In case of persisting adverse effects consult a physician.

Specific Measures

- Inhalation : Remove to fresh air. Get medical attention for any breathing difficulty.
Ingestion : Induce vomiting. Never give anything by mouth (oral) to an unconscious person.
Skin Contact : In case of irritation, remove clothing. Wipe excess from skin. Wash with soap and water for at least 5 minutes.
Eye Contact : Flush eyes with plenty of water, lifting lower and upper eyelids occasionally.

Section 5 : Firefighting Measures

- Fire : Non combustible, but contact with combustible substances under a fire will increase combustion rate. For thermal decomposition products, refer to Section 10.
Extinguishing Media
- Suitable : Any mean suitable for extinguishing surrounding fire. Spray water for small fires. For large fires flood with abundant water
- Not Suitable : -
Protective equipment: Refer to section 8.

Section 6 : Accidental Release Measures

- Personal Precautions : Ventilate the area. Use personal protective equipment (Section 8).
Environmental Precautions: Do not discharge into drains. Avoid surface and ground water contamination.
Methods for Cleaning Up/Taking Up : Pick up the product mechanically and store in suitable containers for recovery or disposal.





Section 7 : Handling and Storage

Handling

Special Procedures	None
Safe Handling Procedures	Minimize dust generation. Avoid contact with eyes and skin.
Special Advices	See Section 10.

Storage

Special Requirements	: Reseal carefully any opened container and set upright to avoid leakages. Keep the product in the original containers.
Storage Conditions	: Keep away from flammable substances. Do not store with combustibles or reducing agents. Keep containers tightly closed in well ventilated and cool place.

Section 8 : Exposure Controls / Personal Protection

Exposure Limits

Suggested according to US regulations : 15 mg/m³ (total dust) ; 5 mg/m³ (respirable fraction)

Exposure Controls

Local exhaust ventilation to keep low dust environment.

Personal Protective Equipment

Respiratory	: Dust mask if necessary, <i>i.e.</i> in case of dust emission or dusty environments
Eyes	: Safety goggles required all the time.
Hands	: Nitrile rubber gloves, over 0.11 mm thickness, > 480 min breakthrough time.

Hygiene Measures

Do not drink, eat or smoke during product manipulation. Keep away from foodstuffs and beverages. Wash hands before breaks and after work.

Section 9 : Physical and Chemical Properties

Physical Form	: Solid, prilled or crystalline
Colour	: White
Odour	: Odourless
pH	: 6-9 (5% aqueous solution)

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Page 3 of 6





Melting Point	: 334°C
Boiling Point	: not applicable
Flash Point	: not applicable
Flammability	: not flammable
Explosive Properties	: not applicable
Thermal Decomposition	: 400°C
Specific Gravity	: 2.5 g/mL
Water Solubility	: 320 g/L (20 °C)
Partition Coefficient (log Pow)	: not applicable

Section 10 : Stability and Reactivity

Stability	: Stable under normal storage and temperature conditions.
Conditions to avoid	: Keep away from flammable, combustible and reducing substances.
Hazardous	
Decomposition Products	: Nitrous oxides, potassium nitrite and potassium oxide by thermal decomposition.

Section 11 : Toxicological Information

Acute Data

Oral LD₅₀ (rat) : 3750 mg/Kg
Dermal LD₅₀ (rat) : > 5000 mg/Kg
Inhalation : no data available

Short-term Effects

Inhalation may cause irritation of the respiratory tract. Can cause skin and eye irritation. Cyanosis due to absorption of big quantities into the body and occurrence of methaemoglobinemia.

Chronic Effects

No adverse effects observed on reproductive or developmental toxicity. Non mutagenic according to *in vitro* bacterial tests.

Section 12 : Ecological Information

General

Do not discharge into drains and water or public depositories.

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Page 4 of 6





Environmental Fate

Dissociates into potassium and nitrate ions. Nitrates may be absorbed by plants and converted into organic nitrogen, whereas potassium binds to clay particles in the soil.

Zooplankton Toxicity	Fish Toxicity
Species : Daphnia magna	Species: Guppy (Poecilia Reticulata)
LC ₅₀ 490 mg/L (48 h)	LC ₅₀ 180 mg/L (96 h)

Not acutely toxic to aquatic organisms.

Mobility

Predicted Distribution : Water, 45% ; Soil, 54.7%

Majority of Potassium Nitrate used as fertilizer is removed from the growing media by crops.

Section 13 : Disposal Considerations

- Residues : Allocation of a waste code number, according to the European Waste catalogue (EWC), should be carried out in agreement with the regional waste disposal company.
- Empty Packaging : Empty containers may be reused after appropriate cleansing. Packaging that can not be cleaned should be disposed in agreement with the regional waste disposal company.

Section 14 : Transport Information

Rail & Road (ADR/IRD) – Sea (IMDG Code) – Air (IATA)

Proper Shipping Name	Potassium Nitrate.
UN Number	1486
Class	5.1
Packaging Group	III
Hazard Label	Oxidizing (*)

(*) Applies only for crystalline form. In prilled form and the condition it leaves our works, the product can be transported as non dangerous based on the test O.1 of the UN Manual of Tests and Criteria (ADR 2.2.51.1.5 / IMDG Chapter 3.3 Provision 223).

Test report can be submitted upon request.

The label "Product not belonging to Class 5.1" is recommended for transport documents in case they are transported as non dangerous (ADR 5.4.1.5)

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Page 5 of 6





Section 15 : Regulatory Information

Labelling according to EC Directives

Hazard Symbol	O	Oxidizing
R phrases	8	Contact with combustible may cause fire (*)
S phrases	16	Keep away from sources of ignition- No smoking.
	41	In case of fire do not breathe fumes.

(*) This sentence does not reflect exactly the risk. Contact with combustible material will not cause spontaneous ignition. However, substance will enhance an existing fire.

Section 16 : Other Information

This MSDS complies with Regulation (EC) 1907/2006.

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall SQM be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if SQM has been advised of the possibility of such damages.

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Page 6 of 6

