

SAFETY DATA SHEET

Potassium nitrate



1. Identification of the Substance/Preparation and of the Company/Undertaking

Product Name : Potassium nitrate **Emergency Telephone Number** : 972-4-8469603/4

Synonyms : Nitrate of potash.

Chemical formula : KNO₃

Material Uses : Glass (cathodes ray tubes, lead crystal). Explosives, blasting powder (black powder). Pyrotechnics, propellants (rocket fuel oxidizers). Heat treading salts (steel and rubber manufacture), oxidizing flux (in metallurgy). Heat transfer salts, energy storage. Ceramics (tiles, glazes).

Supplier/Manufacturer : Haifa Chemicals Ltd. **Importer** :

P.O. Box 10809,
Haifa Bay 26120, Israel
Tel: 972-4-8469961
Fax: 972-4-8469955
Email:
industrial@haifachem.co.il

2. Composition/Information on Ingredients

Substance/Preparation : Substance

Chemical Name*	CAS no.	%	EC Number	Symbol	R-Phrases
Europe					
Potassium nitrate	7757-79-1	>97.5	231-818-8	O	R8
Sweden					
Potassium nitrate	7757-79-1	>97.5	231-818-8	O	R8
Denmark					
Potassium nitrate	7757-79-1	>97.5	231-818-8	O	R8
Norway					
Potassium nitrate	7757-79-1	>97.5	231-818-8	O	R8
Netherlands					
Potassium nitrate	7757-79-1	>97.5	231-818-8	O	R8
Germany					
Potassium nitrate	7757-79-1	>97.5	231-818-8	O	R8
Finland					
Potassium nitrate	7757-79-1	>97.5	231-818-8	O	R8
United Kingdom (UK)					
Potassium nitrate	7757-79-1	>97.5	231-818-8	O	R8
Austria					
Potassium nitrate	7757-79-1	>97.5	231-818-8	O	R8
Switzerland					
Potassium nitrate	7757-79-1	>97.5	231-818-8	O	R8
Belgium					
Potassium nitrate	7757-79-1	>97.5	231-818-8	O	R8

* Occupational Exposure Limit(s), if available, are listed in Section 8

3. Hazards Identification

Physical/chemical Hazards : Contact with combustible material may cause fire.

4. First Aid Measures

First-Aid Measures

Inhalation : If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention if symptoms appear.

Ingestion : Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention if symptoms appear.

Skin contact : In case of contact, immediately flush skin with plenty of water. Cold water may be used. Obtain medical attention.

Eye Contact : Check for and remove any contact lenses. In case of contact, immediately flush eyes with a copious amount of water for at least 15 minutes. Cold water may be used. Obtain medical attention.

Effects and Symptoms

Inhalation : May cause slight transient irritation.

Ingestion : Slightly hazardous in case of ingestion. Ingestion may cause gastrointestinal irritation, vomiting and diarrhea.

Skin contact : Slightly hazardous in case of skin contact (irritant). Non-sensitiser for skin.

Eye Contact : Hazardous in case of eye contact (irritant).

Aggravating Conditions : Repeated or prolonged exposure is not known to aggravate medical condition.

Notes to Physician : No specific antidote, medical staff contact Poisons Information Centre.

5. Fire-Fighting Measures

Extinguishing Media

Suitable : Use extinguishing media suitable for surrounding materials.

Unusual Fire/Explosion Hazards : Non-explosive under normal conditions.

Special Fire-Fighting Procedures : Fire-fighters should wear self-contained positive pressure breathing apparatus (SCBA) and full turnout gear.

6. Accidental Release Measures

Personal Precautions : Safety glasses. Full suit. Dust respirator. Boots. Gloves. A self-contained breathing apparatus should be used to avoid inhalation of the product.

Environmental precautions and cleanup methods : Stop leak if without risk. Avoid contact with a combustible material (wood, paper, oil, clothing, etc.). Keep substance damp using water spray. Do not touch spilled material. Prevent entry into sewers, basements or confined areas; dike if needed. Call for assistance on disposal.

7. Handling and Storage

Handling : Keep away from heat. Keep away from sources of ignition. Keep away from combustible material. Do not ingest. Do not breathe dust. Wear suitable protective clothing. If ingested, seek medical advice immediately and show the container or the label. Avoid contact with skin and eyes. Keep away from incompatibles such as reducing agents, organic materials, acids.

Storage : Keep container tightly closed. Keep container in a cool, well-ventilated area. Separate from acids, alkalis, reducing agents and combustibles. See NFPA 430, Code for the Storage of liquid and Solid Oxidisers.

Packaging Materials

Recommended Use : Use original container.

Danish Fire Class : Not classified.

8. Exposure Controls/Personal Protection

Engineering Measures : Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

Hygiene Measures : Wash hands after handling compounds and before eating, smoking, using lavatory, and at the end of day.

Potassium nitrate

<u>Ingredient Name</u>	<u>Occupational Exposure Limits</u>
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Europe	
Potassium nitrate	TWA: 5 mg/m ³ (Dust)
Sweden	
Potassium nitrate	TWA: 5 mg/m ³ (Dust)
Denmark	
Potassium nitrate	TWA: 5 mg/m ³ (Dust)
Norway	
Potassium nitrate	TWA: 5 mg/m ³ (Dust)
Netherlands	
Potassium nitrate	TWA: 5 mg/m ³ (Dust)
Germany	
Potassium nitrate	TWA: 5 mg/m ³ (Dust)
Finland	
Potassium nitrate	TWA: 5 mg/m ³ (Dust)
United Kingdom (UK)	
Potassium nitrate	TWA: 5 mg/m ³ (Dust)
Austria	
Potassium nitrate	TWA: 5 mg/m ³ (Dust)
Switzerland	
Potassium nitrate	TWA: 5 mg/m ³ (Dust)
Belgium	
Potassium nitrate	TWA: 5 mg/m ³ (Dust)

Personal Protective Equipment

- Respiratory System** : Dust respirator. Be sure to use an approved/certified respirator or equivalent. Wear appropriate respirator when ventilation is inadequate.
- Skin and Body** : Lab coat.
- Hands** : Gloves.
- Eyes** : Safety glasses.

9. Physical and Chemical Properties

- Physical State** : Solid. (Prills./Crystalline./Powder.)
- Colour** : White.
- Odour** : Odourless.
- Odour threshold** : Odourless.
- Melting point** : 333.9°C (633°F)
- Bulk Density** : 1.1 g/cm³
- Vapour density** : Non volatile.
- Vapour pressure** : <0.1333 kPa (<1 mm Hg) (at 20°C)
- Evaporation Rate** : Non volatile.
- Solubility** : 31.6 g/100 ml of water at 20°C (68°F).
- LogK_{ow}** : The product is more soluble in water; log(octanol/water) <1.
- pH** : 6 to 10.5 (Conc. (% w/w): 10) [Basic.]
- Viscosity** : Non-viscous substance.

10. Stability and Reactivity

- Stability** : The product is stable.
- Conditions to Avoid** : None known.
- Materials to Avoid** : Reactive with reducing agents, organic materials, acids.
Slightly reactive with moisture.

11. Toxicological Information

Acute Toxicity

<u>Ingredient Name</u>	<u>Test</u>	<u>Result</u>	<u>Route</u>	<u>Species</u>
Potassium nitrate	LD50	3750 mg/kg	Oral	Rat
	LD50	1901 mg/kg	Oral	Rabbit

Local Effects

- Skin Irritation** : Hazardous in case of skin contact (irritant).
Eye Irritation : Hazardous in case of eye contact (irritant).
Sensitisation : Non-sensitiser for skin.

Chronic Toxicity : Repeated or prolonged exposure is not known to aggravate medical condition.

Carcinogenic effects : Not classified or listed by IARC, NTP, OSHA, EU and ACGIH.

12. Ecological Information

Ecotoxicity Data

<u>Ingredient Name</u>	<u>Species</u>	<u>Period</u>	<u>Result</u>
Potassium nitrate	Poecilia reticulata (LC50)	96 hour(s)	180 mg/l
	Poecilia reticulata (LC50)	96 hour(s)	188 mg/l
	Poecilia reticulata (LC50)	96 hour(s)	191 mg/l
	Poecilia reticulata (LC50)	96 hour(s)	200 mg/l

BOD and COD : This product is readily biodegradable.

Biodegradable/OECD : Readily biodegradable.

Mobility : Soluble in cold water, hot water.

Products of Degradation : These products are nitrogen oxides (NO, NO₂). Some metallic oxides.

Toxicity of the Products of Biodegradation : The product itself and its products of degradation are not toxic.





13. Disposal Considerations

Methods of disposal ; Waste of residues ; Contaminated packaging : Waste must be disposed of in accordance with EC, national, regional and local environmental control regulations.


Hazardous Waste : The classification of the product may meet the criteria for a hazardous waste

14. Transport Information


International Transport Regulations

<u>Regulatory Information</u>	<u>UN Number</u>	<u>Proper Shipping Name</u>	<u>Class</u>	<u>Packing group</u>	<u>Label</u>	<u>Additional Information</u>
ADR/RID Class	UN1486	Potassium nitrate	5.1	III		-
ADN Class	UN1486	Potassium nitrate	5.1	III		-
IMDG Class	UN1486	Potassium nitrate	5.1	III		-
IATA-DGR Class	UN1486	Potassium nitrate	5.1	III		-


15. Regulatory Information**EU Regulations**

- Hazard Symbol(s)** : 
- Classification** : Oxidizing
- Risk Phrases** : R8- Contact with combustible material may cause fire.
- Product Use** : Classification and labelling have been performed according to EU directives 67/548/EEC, 1999/45/EC, including amendments and the intended use.
- Consumer applications.

National Regulations**Sweden**

- Hazard Symbol(s)** : 
- Classification** : Oxidizing
- Risk Phrases** : R8- Contact with combustible material may cause fire.
- Sweden - The Ordinance on Thermoset Plastics** : Not applicable.

Denmark

- Hazard Symbol(s)** : 
- Classification** : Oxidizing
- Risk Phrases** : R8- Contact with combustible material may cause fire.
- Statutory Order 571 on Aerosols** : Not applicable.

Norway

- Hazard Symbol(s)** : 
- Classification** : Oxidizing
- Risk Phrases** : R8- Contact with combustible material may cause fire.
- Carcinogenic Class** : Not classified.

Netherlands

- K-Klasse** : K5
- CPR** : b
- SHHR** : 0ZZ

Germany

- Employment restrictions in accordance with § 15b of the Hazardous Substance Ordinance** : No.
- Hazardous Incident Ordinance** : Yes.
- Ordinance on Combustible Liquids** : Class: Omitted
- Hazard Class for Water** : 1

Austria

- Classification, packaging and labeling** : Irritant.

Potassium nitrate

Limitation of the Use of Organic Solvents : Not applicable.

United Kingdom (UK)

VOC Content (Retail Use) : Not applicable.

VOC Content (Industrial Use) : Not applicable.

Hazard Symbol(s) :



Classification : Oxidising

Risk Phrases : R8- Contact with combustible material may cause fire.

Switzerland

LRV Klasse (Ta-Luft) : Not applicable.

Poison Class : Not applicable.

BAGT : Not applicable.

VOC Content : Liberated.

Italy

Restrictions on the use of Benzol and Similar materials : Not applicable.

16. Other Information

HISTORY

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Version : 1

Prepared by : Kemika XXI Inc. +1-450-435-7475

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Version 1

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