

Safety Data Sheet

According to Regulation (EC) No 2020/878 (REACH Annex II)



Potassium Nitrate Horticultural Grade

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

1.1. Product identifier

Product form: Substance
Trade name: **Potassium Nitrate Horticultural Grade**
Chemical name: Potassium nitrate
EC-No.: 231-818-8
CAS-No.: 7757-79-1
REACH registration No: 01-2119488224-35
Formula: KNO_3
Product group: Raw material

1.2. Relevant identified uses of the substance or mixture and uses advised against

1.2.1. Relevant identified uses

Main use category : Formulation of preparations, Industrial use, Fertilizer, Agriculture, forestry, fishery
Industrial/Professional use spec : Formulation of preparations Fertilizers

1.2.2. Uses advised against

Restrictions on use: Food/feedstuff additives, Water treatment chemicals

1.3. Details of the supplier of the safety data sheet

Van Iperen International BV
Smidsweg 24
3273 LK Westmaas - Nederland
T +31 (0) 186 578 888 - F +31 (0) 186 573 452
info@iperen.com - www.vaniperen.com

1.4. Emergency telephone number

In case of emergency contact the national emergency telephone number: UK and Ireland: 112 or 999

Country	Official advisory body	Address	Emergency number
Ireland (Republic of)	National Poisons Information Centre Beaumont Hospital	Beaumont Hospital Beaumont Road 9 Dublin	: +353 1 8379964
United Kingdom	Guy's & St Thomas' Poisons Unit Medical Toxicology Unit, Guy's & St Thomas' Hospital Trust	Avonley Road SE14 5ER London	0870 243 2241

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP] Mixtures/Substances: SDS EU 2015: According to Regulation (EU) 2015/830 (REACH Annex II)

Ox. Sol. 3 H272

Full text of hazard classes and H-statements : see section 16

Adverse physicochemical, human health and environmental effects

No additional information available

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008

Hazard pictograms (CLP): GHS03



Signal word (CLP): Warning

Hazard statements (CLP):

H272 - May intensify fire; oxidiser.

Precautionary statements (CLP):

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.

P370+P378 - In case of fire: Use any suitable mean for extinguishing surrounding fire. Spray water for small fires. For large fires flood with abundant water. to extinguish.

P501 - Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

2.3. Other hazards

This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII

This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

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SECTION 3: Composition/information on ingredients

3.1. Substances

Substance type: Mono-constituent

Name	Product identifier
Potassium nitrate	(CAS-No.) 7757-79-1 (EC-No.) 231-818-8 (REACH-no) 01-2119488224-35-0000

3.2. Mixtures

Not applicable

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general: Call a poison center or a doctor if you feel unwell. Never give anything by mouth to an unconscious person.

First-aid measures after inhalation: Remove person to fresh air and keep comfortable for breathing. If experiencing respiratory symptoms: Call a poison center or a doctor.

First-aid measures after skin contact: Wash skin with plenty of water. If skin irritation occurs: Get medical advice/attention.

First-aid measures after eye contact: Remove contact lenses, if present and easy to do. Continue rinsing. Rinse cautiously with water for several minutes. If eye irritation persists: Get medical advice/attention.

First-aid measures after ingestion: Rinse mouth. Drink plenty of water. Do not induce vomiting. Call a poison center or a doctor if you feel unwell.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/effects: Not expected to present a significant hazard under anticipated conditions of normal use.

Symptoms/effects after inhalation: Dust of the product, if present, may cause respiratory irritation after an excessive inhalation exposure. In the event of thermal decomposition: Symptoms may be delayed.

Symptoms/effects after skin contact: May cause slight irritation to the skin.

Symptoms/effects after eye contact: May cause slight irritation.

Symptoms/effects after ingestion: On ingestion in large quantities: Irritation of the gastric/intestinal mucosa.

4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media: use any suitable mean for extinguishing surrounding fire. Spray water for small fires. For large fires flood with abundant water.

Unsuitable extinguishing media: None.

5.2. Special hazards arising from the substance or mixture

Fire hazard: Not flammable. May intensify fire; oxidiser..

Hazardous decomposition products in case of fire: Toxic fumes may be released. Corrosive vapours.

5.3. Advice for firefighters

Protection during firefighting: Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures: Ventilate area. Avoid dust formation.

6.1.1. For non-emergency personnel

Protective equipment: Wear recommended personal protective equipment.

6.1.2. For emergency responders

Protective equipment: Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

6.2. Environmental precautions

Do not allow to enter drains or water courses.

6.3. Methods and material for containment and cleaning up

For containment: Use appropriate container to avoid environmental contamination.

Methods for cleaning up: Take up mechanically (sweeping, shovelling) and collect in suitable container for disposal.

Other information: Do not absorb with saw-dust or any other combustible absorbent material.

6.4. Reference to other sections

For further information refer to section 8: "Exposure controls/personal protection". For disposal of residues refer to section 13: "Disposal considerations".

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SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling: Wear personal protective equipment. Avoid dust formation. Ensure adequate ventilation. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

Hygiene measures: Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions: Store in a well-ventilated place. Keep container tightly closed. Keep in original containers.

Incompatible products: Flammable or combustible materials. Reducing agents. strong acids.

7.3. Specific end use(s)

For further information refer to section 1.2.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1 National occupational exposure and biological limit values

No additional information available

8.1.2. Recommended monitoring procedures

No additional information available

8.1.3. Air contaminants formed

No additional information available

8.1.4. DNEL and PNEC

Potassium nitrate (7757-79-1)

DNEL/DMEL (Workers)

Long-term - systemic effects, dermal 20.8 mg/kg bodyweight/day

Long-term - systemic effects, inhalation 36.7 mg/m³

DNEL/DMEL (General population)

Long-term - systemic effects, oral 12.5 mg/kg bodyweight/day

Long-term - systemic effects, inhalation 10.9 mg/m³

Long-term - systemic effects, dermal 12.5 mg/kg bodyweight/day

PNEC (Water)

PNEC aqua (freshwater) 0.45 mg/l

PNEC aqua (marine water) 0.045 mg/l

PNEC aqua (intermittent, freshwater) 4.5 mg/l PNEC (STP)

PNEC (STP)

PNEC sewage treatment plant 18 mg/l

8.1.5. Control banding

No additional information available

Exposure controls

8.2.1. Appropriate engineering controls

Appropriate engineering controls:

Ensure good ventilation of the work station. Effective contaminant extraction. Training staff on good practice.

8.2.2. Personal protection equipment

Personal protective equipment symbol(s):



8.2.2.1. Eye and face protection

Eye protection:

Safety glasses

8.2.2.2. Skin protection

Skin and body protection:

Wear suitable protective clothing

Hand protection:

Protective gloves

8.2.2.3. Respiratory protection

Respiratory protection:

In case of insufficient ventilation, wear suitable respiratory equipment

8.2.2.4. Thermal hazards

No additional information available

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8.2.3. Environmental exposure controls

Environmental exposure controls:

Do not allow to enter drains or water courses.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	:	Solid
Colour	:	White.
Appearance	:	Crystals.
Odour	:	odourless.
Odour threshold	:	Not available
Melting point	:	333 – 337 °C
Freezing point	:	Not applicable
Boiling point	:	Not applicable
Flammability	:	Non flammable.
Explosive properties	:	Not explosive.
Oxidising properties	:	Oxidizing. Test O.1 Test for oxidizing solids.
Explosive limits	:	Not applicable
Lower explosion limit	:	Not applicable
Upper explosion limit	:	Not applicable
Flash point	:	Not applicable
Auto-ignition temperature	:	Not applicable
Decomposition temperature	:	> 600 °C
pH	:	8 – 11 Aqueous solution: 5%
pH solution	:	Not available
Viscosity, kinematic	:	Not applicable
Viscosity, dynamic	:	Not applicable
Solubility	:	Water: > 100 g/l
Partition coefficient n-octanol/water (Log Kow)	:	Not available
Vapour pressure	:	Not applicable
Vapour pressure at 50 °C	:	Not available
Density	:	2.1 at 20 °C
Relative density	:	Not applicable
Relative vapour density at 20 °C	:	Not applicable
Particle size	:	Not available
Particle size distribution	:	Not available
Particle shape	:	Not available
Particle aspect ratio	:	Not available
Particle aggregation state	:	Not available
Particle agglomeration state	:	Not available
Particle specific surface area	:	Not available
Particle dustiness	:	Not available

9.2. Other information

9.2.1. Information with regard to physical hazard classes

No additional information available

9.2.2. Other safety characteristics

Additional information

: None known

SECTION 10: Stability and reactivity

10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7).

10.5. Incompatible materials

flammable materials. Combustible materials. strong acids. Reducing agents.

10.6. Hazardous decomposition products

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Under normal conditions of storage and use, hazardous decomposition products should not be produced. thermal decomposition may produce : Nitrogen oxides. Potassium oxide.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral): Not classified

Acute toxicity (dermal): Not classified

Acute toxicity (inhalation): Not classified

Potassium nitrate (7757-79-1)

LD50 oral rat > 2000 mg/kg bodyweight OECD 425 method

LD50 dermal rat > 5000 mg/kg bodyweight OECD 402 method

LC50 inhalation rat (mg/l) > 0.527 mg/l/4h OECD 403 method

Skin corrosion/irritation

:

Not classified (Based on available data, the classification criteria are not met)

pH: 8 – 11 Aqueous solution: 5%

Additional information: (OECD 404 method) (OECD 439 method)

Serious eye damage/irritation Not classified (Based on available data, the classification criteria are not met)

pH: 8 – 11 Aqueous solution: 5%

Additional information (OECD 405 method) (OECD 437 method)

Respiratory or skin sensitisation Not classified (Based on available data, the classification criteria are not met)

Additional information (OECD 429 method)

Germ cell mutagenicity Mutagenicity tests are negative. AMES test. Chromosomal aberration test (Based on available data, the classification criteria are not met)

Additional information (OECD 476 method)

Carcinogenicity Not classified (Based on available data, the classification criteria are not met)

Reproductive toxicity Not classified (Based on available data, the classification criteria are not met)

Additional information (OECD 422 method)

STOT-single exposure Not classified (Based on available data, the classification criteria are not met)

STOT-repeated exposure Not classified (Based on available data, the classification criteria are not met)

Additional information (OECD 422 method)

Potassium nitrate (7757-79-1)

NOAEL (subacute, oral, animal/male, 28 days) 1500 mg/kg bodyweight (OECD 422 method)

Aspiration hazard Not classified (Based on available data, the classification criteria are not met)

Potassium nitrate (7757-79-1)

Viscosity, kinematic Not applicable

11.2. Information on other hazards

No additional information available

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general: The product is not considered harmful to aquatic organisms nor to cause long-term adverse effects in the environment.

Hazardous to the aquatic environment, short-term (acute): Not classified (Based on available data, the classification criteria are not met)

Hazardous to the aquatic environment, long-term (chronic): Not classified (Based on available data, the classification criteria are not met)

Potassium nitrate (7757-79-1)

LC50 fish 1 1378 mg/l (Published data)

EC50 Daphnia 1 490 mg/l (Published data)

EC50 72h algae (1) > 1700 mg/l (Published data)

12.2. Persistence and degradability

Potassium nitrate (7757-79-1)

Persistence and degradability

The product does not meet the PBT and vPvB classification criteria.

12.3. Bioaccumulative potential Potassium nitrate (7757-79-1)

Bioaccumulative potential

Information on basic physical and chemical properties. Low bioaccumulation potential.

12.4. Mobility in soil

Potassium nitrate (7757-79-1)

Ecology - soil

Product adsorbs little onto the soil.

12.5. Results of PBT and vPvB assessment

Potassium nitrate (7757-79-1)

This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII

This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

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12.6. Endocrine disrupting properties

No additional information available

12.7. Other adverse effects

Other adverse effects: May cause eutrophication at very low concentration

SECTION 13: Disposal considerations

13.1. Waste treatment methods






Regional legislation (waste): Disposal must be done according to official regulations. Dispose in a safe manner in accordance with local/national regulations. Do not allow to enter drains or water courses.

Waste treatment methods: Dispose of contents/container in accordance with licensed collector's sorting instructions.

Sewage disposal recommendations: Do not allow to enter drains or water courses. Do not allow material to contaminate surface water system.

SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

	ADR	IMDG	IATA	ADN	RID
14.1. UN number	UN 1486	UN 1486	UN 1486	UN 1486	UN 1486
14.2. UN proper shipping name	POTASSIUM NITRATE	POTASSIUM NITRATE	Potassium nitrate	POTASSIUM NITRATE	POTASSIUM NITRATE
14.3. Transport hazard class(es)	5.1 	5.1 	5.1 	5.1 	5.1 
14.4. Packing group	III	III	III	III	III
14.5. Environmental hazards	Dangerous for the environment : No	Dangerous for the environment : No Marine pollutant : No	Dangerous for the environment : No	Dangerous for the environment : No	Dangerous for the environment : No

No supplementary information available

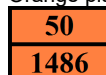
14.6. Special precautions for user

Special transport precautions: IMSBC Code: UN 1486, Class 5.1, POTASSIUM NITRATE

Overland transport

Classification code (ADR): O2

Orange plates:



Transport by sea

Special provisions (IMDG): 964, 967

IBC special provisions (IMDG): B3

Air transport

Special provisions (IATA): A803

Inland waterway transport

Classification code (ADN): O2

Rail transport

No data available

14.7. Maritime transport in bulk according to IMO instruments

Bulk cargo shipping name: IMSBC Code: UN 1486, Class 5.1, POTASSIUM NITRATE

Cargo is considered harmful to the marine environment: No

Material hazardous only in bulk: No

Cargo group: B

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

15.1.1. EU-Regulations

No REACH Annex XVII restrictions

Potassium Nitrate Crystalline is not on the REACH Candidate List

Potassium Nitrate Crystalline is not on the REACH Annex XIV List

Potassium Nitrate Crystalline is not subject to Regulation (EU) No 649/2012 of the European Parliament and of the Council of 4 July 2012 concerning the export and import of hazardous chemicals.

Potassium Nitrate Crystalline is not subject to Regulation (EU) No 2019/1021 of the European Parliament and of the Council of 20 June 2019 on persistent organic pollutants

Potassium nitrate is not subject to REGULATION (EU) No 1005/2009 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 September 2009 on substances that deplete the ozone layer.

Contains substance subject to Regulation (EU) 2019/1148 of the European Parliament and of the Council of 20 June 2019 on the marketing and use of explosives precursors.

ANNEX II REPORTABLE EXPLOSIVES PRECURSORS

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List of substances on their own or in mixtures or in substances for which suspicious transactions and significant disappearances and thefts are to be reported to the relevant national contact point within 24 hours.

Name	CAS-No.	Combined Nomenclature code (CN)	Combined Nomenclature code for mixture without constituents which would determine classification under another CN code
Potassium nitrate	7757-79-1	2834 21 00	ex 3824 99 96

Please see https://ec.europa.eu/home-affairs/system/files/2021-11/list_of_competent_authorities_and_national_contact_points_en.pdf

Other information, restriction and prohibition regulations:

Subject to Regulation (EU) 2019/1009. The product complies with applicable contaminant limits set out in Annex I to Regulation (EU) 2019/1009 of the European Parliament and of the Council of 5 June 2019.

Directive 2012/18/EU (SEVESO III)

Seveso Additional information:

Potassium nitrate (5 000 / 10 000) This applies to those composite potassium-nitrate based fertilisers (in prilled/granular form) which have the same hazardous properties as pure potassium nitrate.

Contains no substance subject to Regulation (EC) 273/2004 of the European Parliament and of the Council of 11 February 2004 on the manufacture and the placing on market of certain substances used in the illicit manufacture of narcotic drugs and psychotropic substances.

15.1.2. National regulations

Listed introduction on Australian Industrial Chemicals Introduction Scheme (AICIS Inventory) Listed on the Canadian DSL (Domestic Substances List) Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China) Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances) Listed on the Japanese ENCS (Existing New Chemical Substances) inventory Listed on KECL/KECI (Korean Existing Chemicals Inventory) Listed on NZIoC (New Zealand Inventory of Chemicals) Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances) Listed on the United States TSCA (Toxic Substances Control Act) inventory Listed on INSQ (Mexican National Inventory of Chemical Substances) Listed on Turkish inventory of chemical **Netherlands**

SZW-lijst van kankerverwekkende stoffen : The substance is not listed
SZW-lijst van mutagene stoffen : The substance is not listed

SZW-lijst van reprotoxische stoffen – Borstvoeding : The substance is not listed

SZW-lijst van reprotoxische stoffen – Vruchtbaarheid : The substance is not listed

SZW-lijst van reprotoxische stoffen – Ontwikkeling : The substance is not listed

15.2. Chemical safety assessment

For this substance a chemical safety assessment has been carried out

SECTION 16: Other information

Indication of changes

Section	Changed item	Change	Comments
1.2	Relevant identified uses of the substance or mixture and uses advised against		Amendment
3	Composition/information on ingredients		Modified
6	Accidental release measures		Amendment
7	Handling and storage		Amendment
8.2	Environmental exposure controls		Modified
11.1	(OECD 439 method)		Added
14.6	Special precautions for user		Amendment
15.1	EU-Regulations		Amendment

Full text of H- and EUH-statements:

H272 May intensify fire;
oxidiser.
Ox. Sol. 3 Oxidising Solids,
Category 3

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Company 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 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 proceed, unless specified in the text.