

## Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

Reference number: P0519

Issue date: 26/07/2023 Revision date: 10/07/2023 Supersedes version of: 10/07/2023 Version: 3.1

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

### 1.1. Product identifier

Product form	: Substance
Trade name	: Potassium nitrate
EC-No.	: 231-818-8
CAS-No.	: 7757-79-1
Product code	: P0519
Formula	: KNO <sub>3</sub>
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	: Professional use
Industrial/Professional use spec	: For professional use only. Duchefa Biochemie B.V. products are intended only for "in vitro laboratory" research purposes.

#### 1.2.2. Uses advised against

No additional information available

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

#### Supplier

Duchefa Biochemie B.V.  
A. Hofmanweg 71  
2031 BH Haarlem  
The Netherlands  
T +31(0)23-5319093 - F +31(0)23-5318027  
[info@duchefa.nl](mailto:info@duchefa.nl)

### 1.4. Emergency telephone number

Emergency number	: Supplier contact information: +31(0)23-5319093 (M-F 09:00-17:00) +31(0)6-30008100 (outside office hours)
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Country	Organisation/Company	Address	Emergency number	Comment
	World Health Organization world directory of poison centres	<a href="http://apps.who.int/poisoncentres/">http://apps.who.int/poisoncentres/</a>		Consult website for a local poison centre

## SECTION 2: Hazards identification

### 2.1. Classification of the substance or mixture

#### Classification according to Regulation (EC) No. 1272/2008 [CLP]

Oxidising Solids, Category 2 H272

Full text of H- and EUH-statements: see section 16

#### Adverse physicochemical, human health and environmental effects

No additional information available

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## 2.2. Label elements

## Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP)

:



GHS03

Signal word (CLP)

: Danger

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/hearing protection.  
P370+P378 - In case of fire: Use media other than 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

No additional information available

## 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	> 99

## 3.2. Mixtures

Not applicable

## SECTION 4: First aid measures

## 4.1. Description of first aid measures

First-aid measures after inhalation : Allow affected person to breathe fresh air. Get medical advice/attention. Overexposure to vapours may result in cough.

First-aid measures after skin contact : Remove affected clothing and wash all exposed skin area with mild soap and water, followed by warm water rinse.

First-aid measures after eye contact : Rinse immediately with plenty of water.

First-aid measures after ingestion : Rinse mouth. Seek medical attention if ill effect develops.

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

No additional information available

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

No additional information available

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**SECTION 5: Firefighting measures****5.1. Extinguishing media**

- Suitable extinguishing media : Water spray.
- Unsuitable extinguishing media : Strong water jet. Carbon dioxide (CO<sub>2</sub>), dry chemical powder, foam.

**5.2. Special hazards arising from the substance or mixture**

- Fire hazard : Potentially combustible ingredients may ignite, causing fire to spread, increasing risk of burns or injuries.
- Hazardous decomposition products in case of fire : When exposed to heat, may decompose liberating hazardous gases. - NO<sub>x</sub>.

**5.3. Advice for firefighters**

- Precautionary measures fire : Do not enter fire area without proper protective equipment, including respiratory protection.
- Firefighting instructions : Exercise caution when fighting any chemical fire.

**SECTION 6: Accidental release measures****6.1. Personal precautions, protective equipment and emergency procedures**

- General measures : No open flames. No smoking. Spill should be handled by trained cleaning personnel properly equipped with respiratory and eye protection.

**6.1.1. For non-emergency personnel**

No additional information available

**6.1.2. For emergency responders**

No additional information available

**6.2. Environmental precautions**

Prevent entry to sewers and public waters. Notify authorities if product enters sewers or public waters.

**6.3. Methods and material for containment and cleaning up**

- Methods for cleaning up : On land, sweep or shovel into suitable containers. Keep in suitable, closed containers for disposal. Dispose in a safe manner in accordance with local/national regulations. Dilute residues and flush.

**6.4. Reference to other sections**

No additional information available

**SECTION 7: Handling and storage****7.1. Precautions for safe handling**

- Precautions for safe handling : Use good housekeeping practices during storage, transfer, handling, to avoid excessive dust accumulation. Store and handle as though always a potential fire and health hazard exists.
- Hygiene measures : Ensure prompt removal from eyes, skin and clothing.

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

- Storage conditions : Hygroscopic. Store in dry, well-ventilated area. Store at room temperature. Keep in fireproof place. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
- Information on mixed storage : Reducing agents. Keep away from combustible materials.

**7.3. Specific end use(s)**

For professional use only. Duchefa Biochemie B.V. products are intended only for "in vitro laboratory" research purposes.

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### SECTION 8: Exposure controls/personal protection

#### 8.1. Control parameters

##### 8.1.1 National occupational exposure and biological limit values

Potassium nitrate (7757-79-1)	
Bulgaria - Occupational Exposure Limits	
Local name	Калиев нитрат
OEL TWA	5 mg/m <sup>3</sup>
Regulatory reference	Наредба № 13 от 30.12.2003 г. за защита на работещите от рискове, свързани с експозиция на химични агенти при работа (изм. и доп. ДВ. бр. 47 от 2021 г., в сила от 04.06.2021 г.)
Latvia - Occupational Exposure Limits	
Local name	Kālija nitrāts
OEL TWA	5 mg/m <sup>3</sup>
Regulatory reference	Ministru kabineta 2007. gada 15. maija noteikumiem Nr. 325 (Grozījumi Ministru kabineta 2011. gada 1. februārī noteikumiem Nr. 92)
Lithuania - Occupational Exposure Limits	
Local name	Kalio nitratas
IPRV (OEL TWA)	5 mg/m <sup>3</sup>
Regulatory reference	LIETUVOS HIGIENOS NORMA HN 23:2011 (Nr. V-695/A1-272, 2018-06-12)

##### 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)	
PNEC (STP)	
PNEC sewage treatment plant	18 mg/l

Additional information : Provide local exhaust or general room ventilation to minimize exposure to dust.

##### 8.1.5. Control banding

No additional information available

#### 8.2. Exposure controls

##### 8.2.1. Appropriate engineering controls

No additional information available

##### 8.2.2. Personal protection equipment

###### 8.2.2.1. Eye and face protection

Eye protection			
Type	Field of application	Characteristics	Standard
Protective goggles	Dust		EN 166

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## 8.2.2.2. Skin protection

## Skin and body protection:

If skin contact or contamination of clothing is likely, protective clothing should be worn.

Hand protection					
Type	Material	Permeation	Thickness (mm)	Penetration	Standard
Gloves	Nitrile rubber (NBR)	6 (> 480 minutes)	0,11		EN ISO 374

## 8.2.2.3. Respiratory protection

## Respiratory protection:

Dust production: dust mask with filter type P2

## 8.2.2.4. Thermal hazards

No additional information available

## 8.2.3. Environmental exposure controls

No additional information available

## SECTION 9: Physical and chemical properties

## 9.1. Information on basic physical and chemical properties

Physical state	: Solid
Colour	: White.
Appearance	: Crystalline powder.
Molecular mass	: 101,1 g/mol
Odour	: Odourless.
Odour threshold	: Not available
Melting point	: 334 °C
Freezing point	: Not available
Boiling point	: 400
Flammability	: Not available
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	: > 400 °C
pH	: 0 (5 – 7,5) (50 g/l at 20 °C)
pH solution	: Not available
Viscosity, kinematic	: Not applicable
Solubility	: Water: 320 g/l (at 20 °C)
Partition coefficient n-octanol/water (Log Kow)	: Not available
Vapour pressure	: Not available
Vapour pressure at 50°C	: Not available
Density	: 2,11 g/cm <sup>3</sup>
Relative density	: 2,11 Type: 'relative density'
Relative vapour density at 20°C	: Not applicable
Particle size	: 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

Bulk density :  $\approx 800 \text{ kg/m}^3$

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**SECTION 10: Stability and reactivity****10.1. Reactivity**

Stable under normal conditions.

**10.2. Chemical stability**

Stable under normal conditions.

**10.3. Possibility of hazardous reactions**

Reacts violently with : Reducing agents. Acids. Contact with combustible material may cause fire.

**10.4. Conditions to avoid**

Keep away from naked flames/heat.

**10.5. Incompatible materials**

Reducing agents.

**10.6. Hazardous decomposition products**

When heated to decomposition, emits dangerous fumes: - NOx.

**SECTION 11: Toxicological information****11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008**

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 OECD 425
LD50 oral	> 2000 mg/kg bodyweight Animal:
LD50 dermal rat	> 5000 mg/kg OECD 402
LC50 Inhalation - Rat	> 0,527 mg/l/4h OECD 403

Skin corrosion/irritation : Slightly irritating to the skin  
pH: 0 (5 – 7,5) (50 g/l at 20 °C)Serious eye damage/irritation : Not classified  
pH: 0 (5 – 7,5) (50 g/l at 20 °C)

Respiratory or skin sensitisation : Not classified

Germ cell mutagenicity : Not classified

Carcinogenicity : Not classified

Reproductive toxicity : Not classified

STOT-single exposure : Not classified

STOT-repeated exposure : Not classified

**Potassium nitrate (7757-79-1)**

NOAEL (oral, rat, 90 days)	≥ 1500 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 422 (Combined Repeated Dose Toxicity Study with the Reproduction / Developmental Toxicity Screening Test)
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Aspiration hazard : Overexposure to vapours may result in headache, nausea and reduced blood pressure. Irritating

**11.2. Information on other hazards****11.2.1. Endocrine disrupting properties**

No additional information available

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**11.2.2. Other information**

Other information : See actual entry in RTECS for complete information:TT370000

**SECTION 12: Ecological information****12.1. Toxicity**

Hazardous to the aquatic environment, short-term (acute) : Not classified

Hazardous to the aquatic environment, long-term (chronic) : Not classified

Potassium nitrate (7757-79-1)	
LC50 - Fish [1]	> 98,9 mg/l Oncorhynchus mykiss (Rainbow trout)
EC50 - Crustacea [1]	490 mg/l EC50 48h - Daphnia magna [mg/l]

**12.2. Persistence and degradability**

No additional information available

**12.3. Bioaccumulative potential**

No additional information available

**12.4. Mobility in soil**

No additional information available

**12.5. Results of PBT and vPvB assessment**

No additional information available

**12.6. Endocrine disrupting properties**

No additional information available

**12.7. Other adverse effects**

Additional information : Prevent entry to sewers and public waters

**SECTION 13: Disposal considerations****13.1. Waste treatment methods**

Waste treatment methods : Dispose of this material and its container at hazardous or special waste collection point. Dispose in a safe manner in accordance with local/national regulations.

**SECTION 14: Transport information**

In accordance with ADR / IMDG / IATA / ADN

**14.1. UN number or ID number**

UN-No. (ADR) : UN 1486  
UN-No. (IMDG) : UN 1486  
UN-No. (IATA) : UN 1486  
UN-No. (ADN) : UN 1486

**14.2. UN proper shipping name**

Proper Shipping Name (ADR) : POTASSIUM NITRATE  
Proper Shipping Name (IMDG) : POTASSIUM NITRATE  
Proper Shipping Name (IATA) : Potassium nitrate  
Proper Shipping Name (ADN) : POTASSIUM NITRATE

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Transport document description (ADR)	: UN 1486 POTASSIUM NITRATE, 5.1, III, (E)
Transport document description (IMDG)	: UN 1486 POTASSIUM NITRATE, 5.1, III
Transport document description (IATA)	: UN 1486 Potassium nitrate, 5.1, III
Transport document description (ADN)	: UN 1486 POTASSIUM NITRATE, 5.1, III

### 14.3. Transport hazard class(es)

#### ADR

Transport hazard class(es) (ADR)	: 5.1
Danger labels (ADR)	: 5.1



#### IMDG

Transport hazard class(es) (IMDG)	: 5.1
Danger labels (IMDG)	: 5.1



#### IATA

Transport hazard class(es) (IATA)	: 5.1
Danger labels (IATA)	: 5.1



#### ADN

Transport hazard class(es) (ADN)	: 5.1
Danger labels (ADN)	: 5.1



### 14.4. Packing group

Packing group (ADR)	: III
Packing group (IMDG)	: III
Packing group (IATA)	: III
Packing group (ADN)	: III

### 14.5. Environmental hazards

Dangerous for the environment	: No
Marine pollutant	: No
Other information	: Clean up even minor leaks or spills if possible without unnecessary risk

### 14.6. Special precautions for user

#### Overland transport

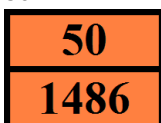
Classification code (ADR)	: O2
Limited quantities (ADR)	: 5kg
Excepted quantities (ADR)	: E1
Packing instructions (ADR)	: P002, IBC08, LP02, R001
Special packing provisions (ADR)	: B4



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Mixed packing provisions (ADR)	: MP10
Portable tank and bulk container instructions (ADR)	: T1, BK1, BK2
Portable tank and bulk container special provisions (ADR)	: TP33
Tank code (ADR)	: SGAV
Tank special provisions (ADR)	: TU3
Vehicle for tank carriage	: AT
Transport category (ADR)	: 3
Special provisions for carriage - Bulk (ADR)	: VC1, VC2, AP6, AP7
Special provisions for carriage - Loading, unloading and handling (ADR)	: CV24
Hazard identification number (Kemler No.)	: 50
Orange plates	:



Tunnel restriction code (ADR)	: E
EAC code	: 1Z

**Transport by sea**

Special provisions (IMDG)	: 964, 967
Limited quantities (IMDG)	: 5 kg
Excepted quantities (IMDG)	: E1
Packing instructions (IMDG)	: P002, LP02
IBC packing instructions (IMDG)	: IBC08
IBC special provisions (IMDG)	: B3
Tank instructions (IMDG)	: T1, BK2, BK3
Tank special provisions (IMDG)	: TP33
EmS-No. (Fire)	: F-A
EmS-No. (Spillage)	: S-Q
Stowage category (IMDG)	: A
Stowage and handling (IMDG)	: SW23
Properties and observations (IMDG)	: White crystals or powder. Soluble in water. Mixtures with combustible material are readily ignited and may burn fiercely. Harmful if swallowed.
MFAG-No	: 140

**Air transport**

PCA Excepted quantities (IATA)	: E1
PCA Limited quantities (IATA)	: Y546
PCA limited quantity max net quantity (IATA)	: 10kg
PCA packing instructions (IATA)	: 559
PCA max net quantity (IATA)	: 25kg
CAO packing instructions (IATA)	: 563
CAO max net quantity (IATA)	: 100kg
ERG code (IATA)	: 5L

**Inland waterway transport**

Classification code (ADN)	: O2
Limited quantities (ADN)	: 5 kg
Excepted quantities (ADN)	: E1
Carriage permitted (ADN)	: B
Equipment required (ADN)	: PP
Provisions prior to loading (ADN)	: LO04
Provisions for carriage in bulk (ADN)	: CO02
Number of blue cones/lights (ADN)	: 0
Additional requirements/Remarks (ADN)	: CO02 and LO04 apply only when this substance is carried in bulk or without packaging

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**14.7. Maritime transport in bulk according to IMO instruments**

Not applicable

**SECTION 15: Regulatory information****15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture****15.1.1. EU-Regulations****REACH Annex XVII (Restriction List)**

Not listed on REACH Annex XVII

**REACH Annex XIV (Authorisation List)**

Not listed on REACH Annex XIV (Authorisation List)

**REACH Candidate List (SVHC)**

Not listed on the REACH Candidate List

**PIC Regulation (Prior Informed Consent)**

Not listed on the PIC list (Regulation EU 649/2012)

**POP Regulation (Persistent Organic Pollutants)**

Not listed on the POP list (Regulation EU 2019/1021)

**Ozone Regulation (1005/2009)**

Not listed on the Ozone Depletion list (Regulation EU 1005/2009)

**Explosives Precursors Regulation (2019/1148)**

Contains substance(s) listed on the Explosives Precursors list (Regulation EU 2019/1148 on the marketing and use of explosives precursors)

**ANNEX II REPORTABLE EXPLOSIVES PRECURSORS**

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](https://ec.europa.eu/home-affairs/system/files/2021-11/list_of_competent_authorities_and_national_contact_points_en.pdf)**Drug Precursors Regulation (273/2004)**

Contains no substance(s) listed on the Drug Precursors list (Regulation EC 273/2004 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**

Ensure all national/local regulations are observed.

**Germany**

- Water hazard class (WGK) : WGK 1, Slightly hazardous to water (Classification according to VwVwS, Annex 1 or 2; ID No. 346).
- Chemicals Prohibition Ordinance (ChemVerbotsV) : This product is subject to ChemVerbotsV Annex 2 Entry 2. The following requirement must be observed: Basic requirements for the implementation of the submission (according to § 8 paragraph 1, 3 and 4).
- Hazardous Incident Ordinance (12. BImSchV) : Is not subject of the Hazardous Incident Ordinance (12. BImSchV)

**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

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

### 15.2. Chemical safety assessment

No additional information available

## SECTION 16: Other information

Indication of changes			
Section	Changed item	Change	Comments
	Issue date	Modified	
	Supersedes	Modified	
2.1	Classification according to Regulation (EC) No. 1272/2008 [CLP]	Modified	
2.2	Precautionary statements (CLP)	Modified	

Abbreviations and acronyms:	
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
CLP	Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008
DPD	Dangerous Preparations Directive 1999/45/EC
DSD	Dangerous Substances Directive 67/548/EEC
LD50	Median lethal dose
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006
SDS	Safety Data Sheet
ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods
PBT	Persistent Bioaccumulative Toxic

Data sources : Supplier.

Full text of H- and EUH-statements:	
H272	May intensify fire; oxidiser.
Ox. Sol. 2	Oxidising Solids, Category 2

Safety Data Sheet (SDS), EU Ducheфа 2023