

# Potassium nitrate

## Safety Data Sheet

according to Regulation (EU) 2015/830

Date of issue: 07/09/2010 Revision date: 05/04/2017

Supersedes 16/09/2011

**P0519**

Version: 2.0

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

#### 1.1. Product identifier

Product form : Substance  
 Substance 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)6-30109355 (outside office hours)

Organisation/Company	Address	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 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 [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, open flames, sparks. - No smoking

**2.3. Other hazards**

No additional information available

**SECTION 3: Composition/information on ingredients****3.1. Substances**

Name : Potassium nitrate

CAS-No. : 7757-79-1

EC-No. : 231-818-8

Name	Product identifier	%
Potassium nitrate	(CAS-No.) 7757-79-1 (EC-No.) 231-818-8	>= 99

Full text of H-statements: see section 16

**3.2. Mixtures**

Not applicable

**SECTION 4: First aid measures****4.1. Description of first aid measures**

First-aid measures after inhalation : Assure fresh air breathing. 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

**SECTION 5: Fire-fighting 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.

Prohibitions 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.

**SECTION 8: Exposure controls/personal protection****8.1. Control parameters**

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

**8.2. Exposure controls****Hand protection:**

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

**Eye protection:**

Protective goggles

**Skin and body protection:**

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

**Respiratory protection:**

Wear a respirator conforming to EN140 with Type A/P2 filter or better

**SECTION 9: Physical and chemical properties****9.1. Information on basic physical and chemical properties**

Physical state	: Solid
Appearance	: Crystalline powder.
Molecular mass	: 101,1 g/mol
Colour	: White.
Odour	: Odourless.
Odour threshold	: No data available
pH	: 0 (5 - 7,5) (50 g/l at 20 °C)
Relative evaporation rate (butylacetate=1)	: No data available
Melting point	: 334 °C
Freezing point	: No data available
Boiling point	: 400
Flash point	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: > 400 °C
Flammability (solid, gas)	: No data available
Vapour pressure	: No data available
Relative vapour density at 20 °C	: No data available
Relative density	: No data available
Density	: 2,11 g/cm <sup>3</sup>
Solubility	: Water: 320 g/l (at 20 °C)
Log Pow	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidising properties	: No data available

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Explosive limits : No data available

### 9.2. Other information

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

## 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 toxicological effects

Acute toxicity : Not classified

Potassium nitrate (7757-79-1)	
LD50 oral rat	> 2000 mg/kg OECD 425
LD50 dermal rat	> 5000 mg/kg OECD 402
LC50 inhalation rat (mg/l)	> 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

Aspiration hazard : Overexposure to vapours may result in headache, nausea and reduced blood pressure. Irritating

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

### SECTION 12: Ecological information

#### 12.1. Toxicity

Potassium nitrate (7757-79-1)	
LC50 fish 1	> 98,9 mg/l Oncorhynchus mykiss (Rainbow trout)
EC50 Daphnia 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. 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 ADN / ADR / IATA / IMDG

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

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ADR	IMDG	IATA	ADN
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
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
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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

### 14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

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

No REACH Annex XVII restrictions

Potassium nitrate is not on the REACH Candidate List

Potassium nitrate is not on the REACH Annex XIV List

#### 15.1.2. National regulations

Ensure all national/local regulations are observed

#### Germany

VwVwS Annex reference : Water hazard class (WGK) 1, low hazard to waters (Classification according to VwVwS, Annex 1 or 2; ID No. 346)

12th Ordinance Implementing the Federal Immission Control Act - 12.BImSchV : Is not subject of the 12. BImSchV (Hazardous Incident Ordinance)

#### Netherlands

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

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

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Borstvoeding : The substance is not listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Vruchtbaarheid : The substance is not listed



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NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Ontwikkeling : The substance is not listed

### 15.2. Chemical safety assessment

No additional information available

## SECTION 16: Other information

Indication of changes:

2.1	Classification according to Directive 67/548/EEC [DSD] or 1999/45/EC [DPD]	Removed	Obsolete
8.2	Hand protection	Modified	Specified material, thickness, et cetera of gloves
9.1	Boiling point	Added	
9.1	Decomposition temperature	Added	

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:

Ox. Sol. 2	Oxidising Solids, Category 2
H272	May intensify fire; oxidiser

SDS Biochemicals version 2017

*This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product*