

**Potassium chloride a.r.**

Revision: 18.03.2025

Product code: AC14.00932

Page 1 of 12

**SECTION 1: Identification of the substance/mixture and of the company/undertaking****1.1. Product identifier**

Potassium chloride a.r.

REACH Registration Number: 01-2119494917-18-XXXX  
CAS No: 3811-04-9  
Index No: 017-004-00-3  
EC No: 223-289-7

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

Reagents and laboratory chemicals  
Only for laboratory and analysis purposes.

**Uses advised against**

Do not use for private purposes (household).

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

Company name: AnalytiChem Services, Unipessoal, Lda  
Street: Rua de Júlio Dinis 676 7º  
Place: N-4050-320 Porto  
Telephone: +351 226002917  
E-mail: info@analyticchem.com  
Contact person: SDS service department  
E-mail: SDS@analyticchem.com  
Internet: www.analyticchem.com  
Responsible Department: SDS service department

**Supplier or manufacturer details**

Company name: AnalytiChem Belgium NV  
Street: Industriezone "De Arend" 2  
Place: B-8210 Zedelgem  
Telephone: +32 50 28 83 20  
E-mail: info.be@analyticchem.com  
Contact person: SDS service department  
E-mail: SDS@analyticchem.com  
Responsible Department: AnalytiChem  
EU-Belgium: AnalytiChem Belgium, Industriezone "De Arend" 2, 8210 Zedelgem, Belgium, +32 50 28 83 20  
EU-Germany: AnalytiChem Germany, Stempelstrasse 6, 47167 Duisburg, Germany, +49 203 51 94 – 200  
EU-Netherlands: AnalytiChem Netherlands, Communicatieweg 7, 3641 SG Mijdrecht, The Netherlands, +31 297 286848  
UK: AnalytiChem UK, Unit 7 Launton Business Center, Murdock Road, Bicester, OX26 4XB, England, +44 1869 355 500  
USA: AnalytiChem USA, 227 China Road, Winslow, Maine, 04901, United States, +1 800-244-8378  
Canada: AnalytiChem Canada, 21800 Clark Graham Avenue, Baie d'Urfe, H9X 4B6, Canada, +1 514-457-0701  
Australia: ORE Research & Exploration Pty Ltd, 37A Hosie Street, Bayswater North, 3153, Australia, +61 3 9729 0333

**1.4. Emergency telephone number:**

+44 20 3807 3798 (CHEMTREC)

## Potassium chlorate a.r.

Revision: 18.03.2025

Product code: AC14.00932

Page 2 of 12

## Further Information

No data available

## SECTION 2: Hazards identification

## 2.1. Classification of the substance or mixture

## Regulation (EC) No 1272/2008

Ox. Sol. 1; H271

Acute Tox. 3; H301

Full text of hazard statements: see SECTION 16.

## 2.2. Label elements

## Regulation (EC) No 1272/2008

Signal word: Danger

Pictograms:



## Hazard statements

H271 May cause fire or explosion; strong oxidiser.

H301 Toxic if swallowed.

## Precautionary statements

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.

P301+P310 IF SWALLOWED: Immediately call a POISON CENTER/doctor.

P371+P380+P375 In case of major fire and large quantities: Evacuate area. Fight fire remotely due to the risk of explosion.

## 2.3. Other hazards

No data available

## SECTION 3: Composition/information on ingredients

## 3.1. Substances

Sum formula: KClO<sub>3</sub>

Molecular weight: 122,55 g/mol

## Relevant ingredients

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
Classification (Regulation (EC) No 1272/2008)				
3811-04-9	potassium chlorate			100 %
	223-289-7	017-004-00-3	01-2119494917-18-XXXX	
	Ox. Sol. 1, Acute Tox. 3; H271 H301			

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

## Potassium chloride a.r.

Revision: 18.03.2025

Product code: AC14.00932

Page 3 of 12

**Specific Conc. Limits, M-factors and ATE**

CAS No	EC No	Chemical name	Quantity
		Specific Conc. Limits, M-factors and ATE	
3811-04-9	223-289-7	potassium chloride	100 %
		inhalation: LC50 = > 5,1 mg/l (dusts or mists); dermal: LD50 = > 2000 mg/kg; oral: ATE 100 mg/kg	

**Further Information**

This product does not contain substances of very high concern according to Regulation (EC) No 1907/2006 (REACH), Article 57 above the respective regulatory concentration limit of = 0.1 % (w/w).

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

No data available

**After inhalation**

Provide fresh air.  
If breathing is irregular or stopped, administer artificial respiration.  
Call a physician immediately.

**After contact with skin**

Wash immediately with: Water  
Take off immediately all contaminated clothing and wash it before reuse.

**After contact with eyes**

Rinse immediately carefully and thoroughly with eye-bath or water.  
In case of eye irritation consult an ophthalmologist.  
Remove contact lenses, if present and easy to do. Continue rinsing.

**After ingestion**

Rinse mouth immediately and drink plenty of water.  
Call a physician immediately.

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

Irritant  
Cough, Dyspnoea  
Cyanosis (blue coloured blood)  
Headache  
Vomiting  
Gastrointestinal complaints

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

No data available

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

Co-ordinate fire-fighting measures to the fire surroundings.

**Unsuitable extinguishing media**

no restriction

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

Non-combustible solids  
Decomposition with: Danger of explosion  
Oxidizing

**Potassium chloride a.r.**

Revision: 18.03.2025

Product code: AC14.00932

Page 4 of 12

Hazardous combustion products  
In case of fire may be liberated:  
Hydrogen chloride (HCl)  
Handle with care - avoid bumps, friction and impact.

**5.3. Advice for firefighters**

Do not inhale explosion and combustion gases.  
Avoid contact with skin, eyes and clothes.  
In case of fire: Wear self-contained breathing apparatus.

**Additional information**

Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.  
Move undamaged containers from immediate hazard area if it can be done safely.  
Use water spray jet to protect personnel and to cool endangered containers.

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

Do not breathe dust.

**For non-emergency personnel**

Provide adequate ventilation.  
Use personal protection equipment.  
Avoid contact with skin, eyes and clothes.  
Remove persons to safety.  
Emergency procedures  
Consult an expert  
Do not breathe dust/fume/gas/mist/vapours/spray.

**For emergency responders**

Precautionary statements For emergency responders : Personal protection equipment: see section 8

**6.2. Environmental precautions**

Do not allow to enter into surface water or drains.

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

Cover drains.  
Prevent spread over a wide area (e.g. by containment or oil barriers).  
Collect in closed and suitable containers for disposal.  
Take up carefully when dry. Take up dust-free and set down dust-free.

**For cleaning up**

Clean contaminated articles and floor according to the environmental legislation.

**Other information**

Provide adequate ventilation.  
Do not breathe dust/fume/gas/mist/vapours/spray.  
Wear breathing apparatus if exposed to vapours/dusts/aerosols.

**6.4. Reference to other sections**

Safe handling: see section 7  
Personal protection equipment: see section 8  
Disposal: see section 13

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

## Potassium chloride a.r.

Revision: 18.03.2025

Product code: AC14.00932

Page 5 of 12

**Advice on safe handling**

Handle and open container with care.  
Provide adequate ventilation.  
Avoid contact with skin, eyes and clothes.  
Avoid dust formation. Do not breathe dust.  
Handle with care - avoid bumps, friction and impact.

**Advice on protection against fire and explosion**

Keep away from combustible material.  
Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

**Advice on general occupational hygiene**

Take off contaminated clothing.  
Wash hands before breaks and after work.  
When using do not eat or drink.

**Further information on handling**

Draw up and observe skin protection programme.  
Take off contaminated clothing and wash it before reuse.  
Wash hands before breaks and after work.

**7.2. Conditions for safe storage, including any incompatibilities****Requirements for storage rooms and vessels**

Keep container tightly closed and dry.  
Keep away from combustible material.  
Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

**Hints on joint storage**

Take national regulations into account.

**Further information on storage conditions**

storage temperature +5°C - +30°C

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

Laboratory chemicals

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

CAS No	Substance	Exposure route	Effect	Value
	DNEL type			
3811-04-9	potassium chloride			
	Consumer DNEL, long-term	inhalation	systemic	0,3 mg/m <sup>3</sup>
	Consumer DNEL, long-term	dermal	systemic	0,13 mg/kg bw/day
	Worker DNEL, long-term	inhalation	systemic	0,7 mg/m <sup>3</sup>
	Worker DNEL, long-term	dermal	systemic	5 mg/kg bw/day
	Consumer DNEL, long-term	oral	systemic	0,05 mg/kg bw/day

Revision: 18.03.2025

**Potassium chloride a.r.**

Product code: AC14.00932

Page 6 of 12

**PNEC values**

CAS No	Substance	
Environmental compartment		Value
3811-04-9	potassium chloride	
Freshwater		1,15 mg/l
Marine water		1,15 mg/l
Freshwater sediment		4,14 mg/kg
Marine sediment		4,14 mg/kg
Secondary poisoning		12,78 mg/kg
Micro-organisms in sewage treatment plants (STP)		115 mg/l
Soil		3,83 mg/kg

**8.2. Exposure controls****Appropriate engineering controls**

Technical measures and the application of suitable work processes have priority over personal protection equipment.

**Individual protection measures, such as personal protective equipment****Eye/face protection**

Suitable eye protection: goggles.

**Hand protection**

Suitable examples are gloves of KCL GmbH, D-36124 Eichenzell, e-mail: vertrieb@kcl.de with the following specification (test according to EN 374):

By long-term hand contact

Recommended glove articles KCL 741 Dermatril® L

Suitable material: NBR (Nitrile rubber) 0,11 mm

Wearing time with permanent contact: > 480 min

By short-term hand contact

Recommended glove articles KCL 741 Dermatril® L

Suitable material: NBR (Nitrile rubber) 0,11 mm

Wearing time with occasional contact (splashes): > 480 min

The breakthrough times stated above were determined by KCL in laboratory tests acc. to EN374 with samples of the recommended glove types. This recommendation applies only to the product stated in the safety data sheet supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN374 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: [www.kcl.de](http://www.kcl.de)).

**Skin protection**

Wear suitable protective clothing.

Take off immediately all contaminated clothing.

Wash hands before breaks and after work.

The choice of body protection depends on the concentration and quantity of hazardous substances. The chemical resistance of protective agents must be clarified with their suppliers.

**Respiratory protection**

Wear breathing apparatus if exposed to vapours/dusts/aerosols.

Filtering device with filter or ventilator filtering device of type: B-(P2)

The entrepreneur has to ensure that maintenance, cleaning and testing of respiratory protective devices are carried out according to the instructions of the producer. These measures have to be properly documented.

Revision: 18.03.2025

**Potassium chloride a.r.**

Product code: AC14.00932

Page 7 of 12

**Thermal hazards**

No data available

**Environmental exposure controls**

Do not allow to enter into surface water or drains.

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

Physical state:	solid
Colour:	white
Odour:	odourless
Odour threshold:	No data available
Melting point/freezing point:	356 °C
Boiling point or initial boiling point and boiling range:	400 °C
Flammability:	not determined
Lower explosion limits:	not determined
Upper explosion limits:	not determined
Flash point:	X
Auto-ignition temperature:	No data available
Decomposition temperature:	>400 °C
pH-Value (at 20 °C):	~ 5,6 (73 g/l)
Viscosity / kinematic:	No data available
Water solubility: (at 20 °C)	73 g/l
Solubility in other solvents	not determined
Dissolution rate:	No data available
Partition coefficient n-octanol/water:	not determined
Dispersion stability:	No data available
Vapour pressure:	No data available
Vapour pressure:	No data available
Density:	2,34 g/cm <sup>3</sup>
Relative density:	No data available
Bulk density:	~ 1200 - 1400 kg/m <sup>3</sup>
Relative vapour density:	not determined
Particle characteristics:	No data available

**9.2. Other information****Information with regard to physical hazard classes****Explosive properties**

No data available

**Sustained combustibility:**

No data available

**Self-ignition temperature**

Solid:

not determined

Gas:

not applicable

**Oxidizing properties**

The product is: oxidising, Oxidising.

**Other safety characteristics****Evaporation rate:**

not determined

**Solvent separation test:**

No data available

**Solvent content:**

0%

Revision: 18.03.2025

**Potassium chlorate a.r.**

Product code: AC14.00932

Page 8 of 12

Solid content:	100%
Sublimation point:	No data available
Softening point:	No data available
Pour point:	No data available
Viscosity / dynamic:	No data available
Flow time:	No data available

**Further Information**

No data available

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

Possibility of hazardous reactions. oxidising, Oxidising.

Handle with care - avoid bumps, friction and impact.

**10.2. Chemical stability**

The product is stable under storage at normal ambient temperatures.

**10.3. Possibility of hazardous reactions**

Metal powder, Combustible substance, arsenic resin, sulphuric acid, Alcohols

Hydrocarbons, Reducing agent, White/yellow phosphor

Fluorine, Alkali metals, Nitric acid

Ammonia (NH3), Sulphur dioxide (SO2), Hydrogen iodide (HI)

**10.4. Conditions to avoid**

Handle with care - avoid bumps, friction and impact.

Heat

**10.5. Incompatible materials**

No data available

**10.6. Hazardous decomposition products**

In case of fire may be liberated:

SECTION 5: Firefighting measures

**Further information**

No data available

**SECTION 11: Toxicological information****11.1. Information on hazard classes****Toxicokinetics, metabolism and distribution**

No data available

**Acute toxicity**

Toxic if swallowed.

Mucous membrane irritation in the mouth, throat, esophagus and gastrointestinal tract.

**Potassium chloride a.r.**

Revision: 18.03.2025

Product code: AC14.00932

Page 9 of 12

CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
3811-04-9	potassium chloride				
	oral	ATE 100 mg/kg			
	dermal	LD50 > 2000 mg/kg	Rabbit	Study report (1991)	EPA OPP 81-2
	inhalation (4 h) dust/mist	LC50 > 5,1 mg/l	Rat	Study report (2010)	OECD Guideline 436

**Irritation and corrosivity**

Skin corrosion/irritation: Based on available data, the classification criteria are not met.

Serious eye damage/eye irritation: Based on available data, the classification criteria are not met.

Upon skin contact: slight irritation.

In case of eye contact: mild irritation.

**Sensitising effects**

Based on available data, the classification criteria are not met.

**Carcinogenic/mutagenic/toxic effects for reproduction**

Germ cell mutagenicity: Based on available data, the classification criteria are not met.

Carcinogenicity: Based on available data, the classification criteria are not met.

Reproductive toxicity: Based on available data, the classification criteria are not met.

**STOT-single exposure**

Based on available data, the classification criteria are not met.

**STOT-repeated exposure**

Based on available data, the classification criteria are not met.

**Aspiration hazard**

Based on available data, the classification criteria are not met.

**Information on likely routes of exposure**

No data available

**Specific effects in experiment on an animal**

No data available

**Additional information on tests**

No data available

**Practical experience**

No data available

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

This substance does not have endocrine disrupting properties with respect to non-target organisms.

**Other information**

Liver and kidney damage

**Further information**

Irritant

Cough, Dyspnoea

Cyanosis (blue coloured blood)

Headache

Vomiting

Gastrointestinal complaints

**SECTION 12: Ecological information**

## Potassium chloride a.r.

Revision: 18.03.2025

Product code: AC14.00932

Page 10 of 12

**12.1. Toxicity**

Based on available data, the classification criteria are not met.

CAS No	Chemical name					
	Aquatic toxicity	Dose	[h]   [d]	Species	Source	Method
3811-04-9	potassium chloride					
	Acute fish toxicity	LC50 mg/l	> 1000 96 h	Oncorhynchus mykiss	REACH Registration Dossier	EPA OPP 72-1
	Acute algae toxicity	ErC50 mg/l	1,9 72 h	other algae: Nitzschia closterium	REACH Registration Dossier	other: Standard 72h growth inhibition bi
	Acute crustacea toxicity	EC50 mg/l	> 1151 48 h	Daphnia magna	REACH Registration Dossier	EPA OPP 72-2
	Fish toxicity	NOEC mg/l	>= 500 36 d	Danio rerio	REACH Registration Dossier	OECD Guideline 210
	Crustacea toxicity	NOEC mg/l	>= 575 21 d	Daphnia magna	REACH Registration Dossier	OECD Guideline 211
	Acute bacteria toxicity	EC50 mg/l ( )	> 1151 3 h	activated sludge, domestic	REACH Registration Dossier	OECD Guideline 209

**12.2. Persistence and degradability**

The methods for determining the biological degradability are not applicable to inorganic substances.

**12.3. Bioaccumulative potential**

No data available

**Partition coefficient n-octanol/water**

CAS No	Chemical name	Log Pow
3811-04-9	potassium chloride	< -2,9

**12.4. Mobility in soil**

No data available

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

This substance does not meet the PBT/vPvB criteria of UK REACH.

**12.6. Endocrine disrupting properties**

This substance does not have endocrine disrupting properties with respect to non-target organisms.

**12.7. Other adverse effects**

No data available

**Further information**

Avoid release to the environment.

Do not allow to enter into surface water or drains.

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

Waste disposal according to directive 2008/98/EC, covering waste and dangerous waste.

Do not allow to enter into surface water or drains.

**Potassium chloride a.r.**

Revision: 18.03.2025

Product code: AC14.00932

Page 11 of 12

Do not mix with other wastes.

Send to a physico-chemical treatment facility under observation of official regulations.

**Contaminated packaging**

Handle contaminated packages in the same way as the substance itself.

The allocation of waste identity numbers/waste descriptions must be carried out according to the EEC, specific to the industry and process.

**SECTION 14: Transport information****Land transport (ADR/RID)**

<b>14.1. UN number or ID number:</b>	UN 1485
<b>14.2. UN proper shipping name:</b>	POTASSIUM CHLORATE
<b>14.3. Transport hazard class(es):</b>	5.1
<b>14.4. Packing group:</b>	II
Hazard label:	5.1
Classification code:	O2
Limited quantity:	1 kg
Excepted quantity:	E2
Transport category:	2
Hazard No:	50
Tunnel restriction code:	E

**Inland waterways transport (ADN)**

<b>14.1. UN number or ID number:</b>	UN 1485
<b>14.2. UN proper shipping name:</b>	POTASSIUM CHLORATE
<b>14.3. Transport hazard class(es):</b>	5.1
<b>14.4. Packing group:</b>	II
Hazard label:	5.1
Classification code:	O2
Limited quantity:	1 kg
Excepted quantity:	E2

**Marine transport (IMDG)**

<b>14.1. UN number or ID number:</b>	UN 1485
<b>14.2. UN proper shipping name:</b>	POTASSIUM CHLORATE
<b>14.3. Transport hazard class(es):</b>	5.1
<b>14.4. Packing group:</b>	II
Hazard label:	5.1
Special Provisions:	-
Limited quantity:	1 kg
Excepted quantity:	E2
EmS:	F-H, S-Q

**Air transport (ICAO-TI/IATA-DGR)**

<b>14.1. UN number or ID number:</b>	UN 1485
<b>14.2. UN proper shipping name:</b>	POTASSIUM CHLORATE
<b>14.3. Transport hazard class(es):</b>	5.1
<b>14.4. Packing group:</b>	II
Hazard label:	5.1
Limited quantity Passenger:	2.5 kg
Passenger LQ:	Y544
Excepted quantity:	E2
IATA-packing instructions - Passenger:	558
IATA-max. quantity - Passenger:	5 kg
IATA-packing instructions - Cargo:	562

**Potassium chloride a.r.**

Revision: 18.03.2025

Product code: AC14.00932

Page 12 of 12

IATA-max. quantity - Cargo: 25 kg

**14.5. Environmental hazards**

ENVIRONMENTALLY HAZARDOUS: No

**14.6. Special precautions for user**

Warning: Oxidising substances.

**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****EU regulatory information**

Restrictions on use (REACH, annex XVII):

Entry 3

Information according to Directive P8 OXIDISING LIQUIDS AND SOLIDS

2012/18/EU (SEVESO III):

Marketing and use of explosives precursors (Regulation (EU) 2019/1148):

Acquisition, introduction, possession or use of this product by the general public is restricted by Regulation (EU) 2019/1148. All suspicious transactions, and significant disappearances and thefts should be reported to the relevant national contact point.

**National regulatory information**

Employment restrictions: Observe restrictions to employment for juveniles according to the 'juvenile work protection guideline' (94/33/EC). Observe employment restrictions under the Maternity Protection Directive (92/85/EEC) for expectant or nursing mothers.

Water hazard class (D): 2 - obviously hazardous to water

**SECTION 16: Other information****Changes**

This data sheet contains changes from the previous version in section(s): 1,2,6,8,9,11,14,15.

**Abbreviations and acronyms**

Ox. Sol. 1: Oxidising solids, hazard category 1

Acute Tox. 3: Acute toxicity, hazard category 3

ADR: Accord européen sur le transport des marchandises dangereuses par Route

(European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonized System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service

LC50: Lethal concentration, 50%

LD50: Lethal dose, 50%

**Relevant H and EUH statements (number and full text)**

H271 May cause fire or explosion; strong oxidiser.  
H301 Toxic if swallowed.