

Creation Date 07-Aug-2009

Revision Date 07-Feb-2014

Revision Number 4

**SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING****1.1. Product identifier**

Product Description:	Potassium chloride
Cat No. :	P/4240/70, P/4240/65, P/4240/62, P/4240/53, P/4240
Synonyms	KCl.
CAS-No	7447-40-7
EC-No.	231-211-8
Molecular Formula	Cl K

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

Recommended Use	Laboratory chemicals
Uses advised against	No Information available

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

Company	Fisher Scientific UK Bishop Meadow Road, Loughborough, Leicestershire LE11 5RG, United Kingdom
E-mail address	begel.sdsdesk@thermofisher.com

**1.4. Emergency telephone number**

Tel: 01509 231166  
Chemtrec US: (800) 424-9300  
Chemtrec EU: 001 (202) 483-7616

**SECTION 2: HAZARDS IDENTIFICATION****2.1. Classification of the substance or mixture****CLP Classification - Regulation (EC) No 1272/2008****Physical hazards**

Based on available data, the classification criteria are not met

**Health hazards**

Based on available data, the classification criteria are not met

**Environmental hazards**

Based on available data, the classification criteria are not met

**Classification according to EU Directives 67/548/EEC or 1999/45/EC****R-phrases(s)** none

*For the full text of the R-phrases and H-Statements mentioned in this Section, see Section 16*

**2.2. Label elements**

**Hazard Statements****Precautionary Statements****2.3. Other hazards**

No information available.

## SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

**3.1. Substances**

Component	CAS-No	EC-No.	Weight %	CLP Classification - Regulation (EC) No 1272/2008	DSD Classification - 67/548/EEC
Potassium chloride	7447-40-7	EEC No. 231-211-8	>95	-	-

For the full text of the R-phrases and H-Statements mentioned in this Section, see Section 16

## SECTION 4: FIRST AID MEASURES

**4.1. Description of first aid measures**

<b>Eye Contact</b>	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Obtain medical attention.
<b>Skin Contact</b>	Wash off immediately with plenty of water for at least 15 minutes. Get medical attention immediately if symptoms occur.
<b>Ingestion</b>	Do not induce vomiting. Obtain medical attention.
<b>Inhalation</b>	Move to fresh air. If breathing is difficult, give oxygen. Get medical attention immediately if symptoms occur.
<b>Protection of First-aiders</b>	No special precautions required.

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

No information available

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

**Notes to Physician**                      Treat symptomatically

## SECTION 5: FIREFIGHTING MEASURES

**5.1. Extinguishing media****Suitable Extinguishing Media**

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment

**Extinguishing media which must not be used for safety reasons**

No information available.

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

Thermal decomposition can lead to release of irritating gases and vapors

**Hazardous Combustion Products**

## Potassium chloride

Hydrogen chloride gas.

**5.3. Advice for firefighters**

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

**SECTION 6: ACCIDENTAL RELEASE MEASURES****6.1. Personal precautions, protective equipment and emergency procedures**

Ensure adequate ventilation. Use personal protective equipment. Avoid dust formation.

**6.2. Environmental precautions**

Should not be released into the environment. See Section 12 for additional ecological information.

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

Sweep up or vacuum up spillage and collect in suitable container for disposal. Avoid dust formation.

**6.4. Reference to other sections**

Refer to protective measures listed in Sections 8 and 13.

**SECTION 7: HANDLING AND STORAGE****7.1. Precautions for safe handling**

Wear personal protective equipment. Ensure adequate ventilation. Avoid contact with skin, eyes and clothing. Avoid ingestion and inhalation. Avoid dust formation.

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

Keep containers tightly closed in a dry, cool and well-ventilated place.

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

Use in laboratories

**SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION****8.1. Control parameters****Exposure limits**

List source(s):

Component	Bulgaria	Croatia	Ireland	Cyprus	Czech Republic
Potassium chloride	TWA: 5.0 mg/m <sup>3</sup>				

Component	Latvia	Lithuania	Luxembourg	Malta	Romania
Potassium chloride	TWA: 5 mg/m <sup>3</sup>	TWA: 5 mg/m <sup>3</sup>			

Component	Russia	Slovak Republic	Slovenia	Sweden	Turkey
Potassium chloride	MAC: 5 mg/m <sup>3</sup>				

**Biological limit values**

This product, as supplied, does not contain any hazardous materials with biological limits established by the region specific regulatory bodies.

## Potassium chloride

**Monitoring methods**

BS EN 14042:2003 Title Identifier: Workplace atmospheres. Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents.

MDHS14/3 General methods for sampling and gravimetric analysis of respirable and inhalable dust

**Derived No Effect Level (DNEL)** No information available.

<u>Route of exposure</u>	<b>Acute effects (local)</b>	<b>Acute effects (systemic)</b>	<b>Chronic effects (local)</b>	<b>Chronic effects (systemic)</b>
Oral Dermal Inhalation				

**Predicted No Effect Concentration (PNEC)** No information available.

**8.2. Exposure controls****Engineering Measures**

None under normal use conditions..

**Personal protective equipment****Eye Protection**

Safety glasses with side-shields (European standard - EN 166)

**Hand Protection**

Protective gloves

<b>Glove material</b>	<b>Breakthrough time</b>	<b>Glove thickness</b>	<b>EU standard</b>	<b>Glove comments</b>
Natural rubber Nitrile rubber Neoprene PVC	See manufacturers recommendations	-	EN 374	(minimum requirement)

**Skin and body protection**

Wear appropriate protective gloves and clothing to prevent skin exposure

Inspect gloves before use.

Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. (Refer to manufacturer/supplier for information)

Ensure gloves are suitable for the task: Chemical compatability, Dexterity, Operational conditions, User susceptibility, e.g. sensitisation effects, also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion. Remove gloves with care avoiding skin contamination.

**Respiratory Protection**

No protective equipment is needed under normal use conditions.

**Large scale/emergency use**

Use a NIOSH/MSHA or European Standard EN 136 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced..

**Recommended Filter type:** Particle filter.

**Small scale/Laboratory use**

Maintain adequate ventilation

**Hygiene Measures**

Handle in accordance with good industrial hygiene and safety practice

**Environmental exposure controls**

No information available.

**SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES****9.1. Information on basic physical and chemical properties**

## Potassium chloride

<b>Appearance</b>	White	
<b>Physical State</b>	Solid.	
<b>Odor</b>	odorless	
<b>Odor Threshold</b>	No data available	
<b>pH</b>	6	50g/L (20°C)
<b>Melting Point/Range</b>	770°C / 1418°F	
<b>Softening Point</b>	No data available	
<b>Boiling Point/Range</b>	1420°C / 2588°F	@ 760 mmHg
<b>Flash Point</b>	No information available.	<b>Method</b> - No information available.
<b>Evaporation Rate</b>	Not applicable	Solid
<b>Flammability (solid,gas)</b>	No information available.	
<b>Explosion Limits</b>	No data available.	
<b>Vapor Pressure</b>	No data available	
<b>Vapor Density</b>	Not applicable	Solid
<b>Specific Gravity / Density</b>	1.987 g/cm3	
<b>Bulk Density</b>	No data available	
<b>Water Solubility</b>	340 g/l (20°C)	
<b>Solubility in other solvents</b>	No information available.	
<b>Partition Coefficient (n-octanol/water)</b>		
<b>Autoignition Temperature</b>	Not applicable	
<b>Decomposition temperature</b>	No data available	
<b>Viscosity</b>	Not applicable	Solid
<b>Explosive Properties</b>	No information available.	
<b>Oxidizing Properties</b>	No information available.	
<b>9.2. Other information</b>		
<b>Molecular Formula</b>	Cl K	
<b>Molecular Weight</b>	74.54	

## SECTION 10: STABILITY AND REACTIVITY

**10.1. Reactivity**

None known, based on information available.

**10.2. Chemical stability**

Hygroscopic.

**10.3. Possibility of hazardous reactions****Hazardous Polymerization**  
**Hazardous Reactions**Hazardous polymerization does not occur.  
None under normal processing.**10.4. Conditions to avoid**

Incompatible products, Excess heat, Avoid dust formation, Exposure to moist air or water.

**10.5. Incompatible materials**

Strong oxidizing agents.

**10.6. Hazardous decomposition products**

Hydrogen chloride gas.

## SECTION 11: TOXICOLOGICAL INFORMATION

### 11.1. Information on toxicological effects

#### Product Information

#### (a) acute toxicity;

Oral

Based on available data, the classification criteria are not met

Dermal

No data available

Inhalation

No data available

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Potassium chloride	2600 mg/kg ( Rat )		

#### (b) skin corrosion/irritation;

No data available

#### (c) serious eye damage/irritation;

No data available

#### (d) respiratory or skin sensitization;

Respiratory

No data available

Skin

No data available

#### (e) germ cell mutagenicity;

No data available

#### (f) carcinogenicity;

No data available

There are no known carcinogenic chemicals in this product

#### (g) reproductive toxicity;

No data available

#### (h) STOT-single exposure;

No data available

#### (i) STOT-repeated exposure;

No data available

Target Organs

None known.

#### (j) aspiration hazard;

Not applicable

Solid

#### Other Adverse Effects

See actual entry in RTECS for complete information The toxicological properties have not been fully investigated.

#### Symptoms / effects, both acute and delayed

No information available.

## SECTION 12: ECOLOGICAL INFORMATION

### 12.1. Toxicity

#### Ecotoxicity effects

Component	Freshwater Fish	Water Flea	Freshwater Algae	Microtox
Potassium chloride	750-1020 mg/L LC50 96 h 1060 mg/L LC50 96 h	EC50: 825 mg/L/48h	EC50: 2500 mg/L/72h	

### 12.2. Persistence and degradability

Persistence

Soluble in water, Persistence is unlikely, based on information available.

Degradability

Not relevant for inorganic substances.

Potassium chloride

<b>12.3. Bioaccumulative potential</b>	Bioaccumulation is unlikely
<b>12.4. Mobility in soil</b>	The product is water soluble, and may spread in water systems. Will likely be mobile in the environment due to its water solubility. Highly mobile in soils.
<b>12.5. Results of PBT and vPvB assessment</b>	No data available for assessment
<b>12.6. Other adverse effects</b>	
<b>Endocrine Disruptor Information</b>	This product does not contain any known or suspected endocrine disruptors
<b>Persistent Organic Pollutant</b>	This product does not contain any known or suspected substance
<b>Ozone Depletion Potential</b>	This product does not contain any known or suspected substance

## SECTION 13: DISPOSAL CONSIDERATIONS

<b>13.1. Waste treatment methods</b>	
<b>Waste from Residues / Unused Products</b>	Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.
<b>Contaminated Packaging</b>	Empty remaining contents. Dispose of in accordance with local regulations. Do not re-use empty containers.
<b>European Waste Catalogue (EWC)</b>	According to the European Waste Catalogue, Waste Codes are not product specific, but application specific
<b>Other Information</b>	Waste codes should be assigned by the user based on the application for which the product was used

## SECTION 14: TRANSPORT INFORMATION

<b>IMDG/IMO</b>	Not regulated
<b>14.1. UN number</b>	
<b>14.2. UN proper shipping name</b>	
<b>14.3. Transport hazard class(es)</b>	
<b>14.4. Packing group</b>	
<b>ADR</b>	Not regulated
<b>14.1. UN number</b>	
<b>14.2. UN proper shipping name</b>	
<b>14.3. Transport hazard class(es)</b>	
<b>14.4. Packing group</b>	
<b>IATA</b>	Not regulated
<b>14.1. UN number</b>	
<b>14.2. UN proper shipping name</b>	
<b>14.3. Transport hazard class(es)</b>	
<b>14.4. Packing group</b>	
<b>14.5. Environmental hazards</b>	No hazards identified
<b>14.6. Special precautions for user</b>	No special precautions required
<b>14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</b>	Not applicable, packaged goods

## SECTION 15: REGULATORY INFORMATION

Potassium chloride

**SECTION 15: REGULATORY INFORMATION****15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture**

International Inventories X = listed

Component	EINECS	ELINCS	NLP	TSCA	DSL	NDSL	PICCS	ENCS	CHINA	AICS	KECL
Potassium chloride	231-211-8	-		X	X	-	X	X	X	X	X

**National Regulations**

WGK Classification Hazardous to water/Class 1

Component	Germany - Water Classification (VwVWS)	Germany - TA-Luft Class
Potassium chloride	WGK 1	

Component	France - INRS (Tables of occupational diseases)
Potassium chloride	Tableaux des maladies professionnelles (TMP) - RG 67

Take note of Control of Substances Hazardous to Health Regulations (COSHH) 2002 and 2005 Amendment

Take note of Dir 94/33/EC on the protection of young people at work

Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work

**15.2. Chemical safety assessment**

A Chemical Safety Assessment/Report (CSA/CSR) has not been conducted

**SECTION 16: OTHER INFORMATION****Full text of R-phrases referred to under sections 2 and 3**

Not applicable

**Legend****CAS** - Chemical Abstracts Service**EINECS/ELINCS** - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances**PICCS** - Philippines Inventory of Chemicals and Chemical Substances**IECSC** - China Inventory of Existing Chemical Substances**KECL** - Existing and Evaluated Chemical Substances**WEL** - Workplace Exposure Limit**ACGIH** - American Conference of Industrial Hygiene**DNEL** - Derived No Effect Level**RPE** - Respiratory Protective Equipment**LC50** - Lethal Concentration 50%**NOEC** - No Observed Effect Concentration**PBT** - Persistent, Bioaccumulative, Toxic**ADR** - European Agreement Concerning the International Carriage of Dangerous Goods by Road**IMO/IMDG** - International Maritime Organization/International Maritime Dangerous Goods Code**OECD** - Organisation for Economic Co-operation and Development**BCF** - Bioconcentration factor**TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory**DSL/NDSL** - Canadian Domestic Substances List/Non-Domestic Substances List**ENCS** - Japan Existing and New Chemical Substances**AICS** - Australian Inventory of Chemical Substances**NZIoC** - New Zealand Inventory of Chemicals**TWA** - Time Weighted Average**IARC** - International Agency for Research on Cancer**PNEC** - Predicted No Effect Concentration**LD50** - Lethal Dose 50%**EC50** - Effective Concentration 50%**POW** - Partition coefficient Octanol:Water**vPvB** - very Persistent, very Bioaccumulative**ICAO/IATA** - International Civil Aviation Organization/International Air Transport Association**MARPOL** - International Convention for the Prevention of Pollution from Ships**ATE** - Acute Toxicity Estimate**VOC** - Volatile Organic Compounds**Key literature references and sources for data**

Suppliers safety data sheet,

Chemadvisor - LOLI,

Merck index,

RTECS



**Training Advice**

Chemical hazard awareness training, incorporating labelling, Safety Data Sheets (SDS), Personal Protective Equipment (PPE) and hygiene.

**Creation Date** 07-Aug-2009

**Revision Date** 07-Feb-2014

**Revision Summary**

**Reason for revision** Update to Format, (M)SDS sections updated, 4, 8, 9, 11, 12, 16.

**This safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006**

**Disclaimer**

The information provided on 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 a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as 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 material or in any process, unless specified in the text.

**End of Safety Data Sheet**