



SAFETY DATA SHEET

99-100.5%

POTASSIUM CHLORIDE

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. PRODUCT IDENTIFIER

Product name: Potassium Chloride
Product No.: POTCH
CAS-No.: 7447-40-7
REACH: 01-2119539416-36
EC No.: 231-211-8
Synonym: Potassium salt, Potassium Chloride KCl, Muriate of potash
Chemical Formula: KCl

1.2. RELEVANT IDENTIFIED USES OF THE SUBSTANCE OR MIXTURE AND USES ADVISED AGAINST

Recommended use: For making fertilizer;
In water as a completion fluid in petroleum and natural gas operations, as well as being an alternative to sodium chloride in household water softener units;
As a chemical feedstock, it is used for the manufacture of potassium hydroxide and potassium metal;
In medicine, lethal injections, scientific applications, food processing, soaps, and as a sodium-free substitute for table salt.

1.3. DETAILS OF THE SUPPLIER OF THE SAFETY DATA SHEET

HD Chemicals LTD
UNIT 9 Scott Business Park
PL2 2PB Plymouth UK

Contact Person responsible for SDS: Mr Peter Konefal, e-mail: contact@hdchemicals.co.uk

SECTION 2: HAZARDS IDENTIFICATION

2.1. CLASSIFICATION OF THE SUBSTANCE OR MIXTURE

Classification 67/548/EEC: Not Classified



Classification – EC 1272/2008: Not Classified

2.2. LABEL ELEMENTS

No labelling requirements

SIGNAL WORDS

Not Classified

RISK PHRASES

Not Classified

HAZARD PHRASES

Not Classified

PROTECTION PHRASES

Not Classified

SAFETY PHRASES

Not Classified

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

67/548/EEC/1999/45/EC

Composition information – main constituents

Substance name	Mol. Formula	REACH	Typical conc. (%w/w)	EINECS No.	CAS-No.	Classification
Potassium Chloride	KCl	01-2119539416-36	99-100.5%	231-211-8	7447-40-7	Not Classified



EC 1272/2008

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SECTION 4: FIRST AID MEASURES**4.1. DESCRIPTION OF FIRST AID MEASURES**

First-aid measures general: No known delayed effects. If you feel unwell after used with this product, consult a physician. Show this safety data sheet to the doctor in attendance.

Inhalation: Move the exposed person to fresh air and keep comfortable for breathing. Seek medical attention if you feel unwell.

Ingestion: Do not induce vomiting. Get medical attention if symptoms occur.

Skin contact: Wash skin with plenty of water. Remove contaminated clothing. Seek medical attention if irritation or symptoms persist.

Eye contact: Rinse eyes with water as a precaution. Seek medical attention if irritation or symptoms persist.

4.2. MOST IMPORTANT SYMPTOMS AND EFFECTS, BOTH ACUTE AND DELAYED

Inhalation: Inhalation of dust in high concentration may cause irritation of respiratory system.

Ingestion: Ingestion may cause stomach discomfort.

Skin contact: Prolonged contact may cause redness and irritation.

Eye contact: May cause slight irritation.

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: The product is non-combustible. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Water spray, carbon dioxide (CO₂), dry chemical powder, foam.

Unsuitable extinguishing media: Do not use a heavy water stream.

5.2. SPECIAL HAZARDS ARISING FROM THE SUBSTANCE OR MIXTURE

Non-combustible, but thermal decomposition can lead to release of irritating gases and vapours. Hazardous Combustion Products: hydrogen chloride gas, potassium oxides, chlorides.

5.3. ADVICE FOR FIRE-FIGHTERS

Because fire may produce toxic thermal decomposition products, wear a self-contained breathing apparatus with a full face piece operated in pressure-demand or positive-pressure mode. Wear protective clothing. Follow the general fire precautions indicated in the workplace.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES

Wear suitable protective equipment in compliance with national legislation to prevent any contamination of skin, eyes and personal clothing. Select appropriate protective clothing for the size of the spillage. Ensure adequate ventilation of the working area. Avoid contact with skin and eyes. Avoid formation of dust. Avoid breathing dust, vapours, mist or gas.

6.2. ENVIRONMENTAL PRECAUTIONS

Should not be released into the environment. Local authorities should be advised if significant spillages cannot be contained. Keep away from drains, surface and ground water.

6.3. METHODS AND MATERIAL FOR CONTAINMENT AND CLEANING UP

Collect powder using special dust vacuum cleaner with particle filter or carefully sweep into container. Clean spillage area thoroughly with plenty of water. Avoid generation and spreading of dust. Wear appropriate respiratory protection, safety glasses and overalls as a precaution. Store away from other materials.



SECTION 7: HANDLING AND STORAGE

7.1. PRECAUTIONS FOR SAFE HANDLING

Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Provide appropriate exhaust ventilation at places where dust is formed. Keep away from food, drink and animal feeding stuffs. Do not eat, drink or smoke when using this product. Remove and wash contaminated clothing and gloves, including the inside, before re-use. Wash hands before breaks and after work.

7.2. CONDITIONS FOR SAFE STORAGE, INCLUDING ANY INCOMPATIBILITIES

Keep in a cool, dry, well ventilated area. Keep containers tightly closed.

7.3. SPECIFIC END USE(S)

See section 1.2.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. CONTROL PARAMETERS/EXPOSURE GUIDELINES

Occupational Exposure Limit Values (Potassium Chloride) GB:

CAS NO	Exposure limit	Value	Name of Agent
7447-40-7	TWA – 8 Hrs	N/A	N/A
7447-40-7	STEL – 15 Min	N/A	N/A

Engineering controls:

None under normal use conditions but if user operations generate dust, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne dust levels.

Ensure adequate ventilation, especially in confined areas. Ensure that eyewash stations and safety showers are close to the workstation location. Wash hands before breaks and at the end of the working day. Keep away from foodstuffs, beverages and feed.

Protective equipment:

Use protective goggles with side-shields (European standard - EN 166), gloves (European standard - EN 374) and long sleeved clothing to prevent skin, body and eyes exposure.



PROTECTION WEAR



HAND PROTECTION



EYE PROTECTION



DUST MASK

- Respiratory equipment:** In case of insufficient ventilation, wear suitable respiratory equipment. Dust production: dust mask with filter type P1.
- Skin and body protection:** Use suitable protective gloves. PVC or rubber gloves are recommended.
- Eye/Face protection:** Use eye protection. Safety goggles/face shield are recommended.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. INFORMATION ON BASIC PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Solid
Colour:	Crystalline, White
Odour:	Odourless
Initial boiling point (°C):	Not available
Melting point (°C):	770 °C
Freezing point:	No data available
Relative density:	1.98 g/cm ³
Specific gravity / density:	Not available
Vapour density:	Not available
Vapour pressure:	Not available
Flash point (°C):	Not applicable
Molecular mass:	74.55 g/mol



Auto-ignition temperature: Not applicable
Oxidizing properties: Not applicable
Decomposition temperature: Not available
Molecular formula: KCl

SECTION 10: STABILITY AND REACTIVITY

10.1. REACTIVITY

No specific reactivity hazards associated with this product.

10.2. CHEMICAL STABILITY

Potassium Chloride is stable under normal temperature conditions and under recommended usage and storage.

10.3. POSSIBILITY OF HAZARDOUS REACTIONS

Non-combustible, but thermal decomposition can lead to release of irritating gases and vapours. Hazardous Combustion Products: hydrogen chloride gas, potassium oxides, chlorides.

10.4. CONDITIONS TO AVOID

Avoid moisture, heat and contact with water. Avoid dust formation.

10.5. INCOMPATIBLE MATERIALS

Strong oxidising agents, strong acids, strong alkalies.

10.6. HAZARDOUS DECOMPOSITION

None under normal conditions. Non-combustible, but thermal decomposition can lead to release of irritating gases and vapours. Hazardous Combustion Products: hydrogen chloride, potassium oxides, chlorides.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1. INFORMATION ON TOXICOLOGICAL EFFECTS

TOXIC DOSE **LD50 Oral – Rat – 3020 mg/kg**



Inhalation:	Inhalation of dust in high concentration may cause irritation of respiratory system.
Ingestion:	Ingestion may cause stomach discomfort.
Skin contact:	Prolonged contact may cause redness and irritation.
Eye contact:	May cause slight irritation.

SECTION 12: ECOLOGICAL INFORMATION

12.1. TOXICITY

Aquatic toxicity to fish:	LC50/96h: 880 mg/l Pimephales promelas
Aquatic toxicity to water flea:	EC50/48h: 440 mg/l Daphnia magna
Aquatic toxicity to freshwater algae:	EC50/72h: > 100 mg/l

12.2. PERSISTENCE AND DEGRADABILITY

The product solely consists of inorganic compounds which are not biodegradable.

12.3. BIOACCUMULATIVE POTENTIAL

Bioaccumulation is unlikely.

12.4. MOBILITY

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.

12.5. RESULTS OF PBT AND vPvB ASSESSMENT

No data available.

12.6. OTHER ADVERSE EFFECTS

No data available.

SECTION 13: DISPOSAL CONSIDERATIONS

Waste disposal recommendations: Disposal of Potassium Chloride should be in accordance with local and national legislation. Processing, use or contamination of this product may change the waste management options. Should not be released into the environment. Dispose of container and unused



contents in accordance with applicable member state and local requirements. Empty remaining contents. Do not re-use empty containers.

Uncleaned packaging: Disposal must be made according to official regulations.

SECTION 14: TRANSPORT INFORMATION

IMDG

UN number	N/A
UN proper shipping name	N/A
Transport hazard class(es)	N/A
Packing group	N/A

ADR/RID

UN number	N/A
UN proper shipping name	N/A
Transport hazard class(es)	N/A
Packing group	N/A

IATA

UN number	N/A
UN proper shipping name	N/A
Transport hazard class(es)	N/A
Packing group	N/A

SECTION 15: REGULATORY INFORMATION

15.1. SAFETY, HEALTH AND ENVIRONMENTAL REGULATIONS/LEGISLATION SPECIFIC FOR THE SUBSTANCE OR MIXTURE

1. Health and Safety at Work Act 1974. The Control of Substances Hazardous to Health Regulations 2002 (S.I 2002 No. 2677) with amendments.
2. The Chemicals (Hazard Information and Packaging for Supply) Regulations 2009 (S.I 2009 No. 716).
3. Safety Data Sheets for Substances and Preparations. Classification and Labelling of Substances and Preparations Dangerous for Supply.
4. REACH – Exempted in accordance with Annex V.7

15.2 CHEMICAL SAFETY ASSESSMENT

No chemical safety assessment has been carried out.



SECTION 16: OTHER INFORMATION

General information

The information contained in this safety data sheet is provided in accordance with the requirements of the regulations. The product should not be used for purposes other than those shown in section 1 without first referring to the supplier and obtaining written handling instruction. As the specific conditions of use of the product are outside the suppliers control, the user is responsible for ensuring that the requirements of relevant legislation are complied with.

Revision Comments

This information is provided in a revised format to that previously produced.

Revision Date: 01/10/2018

Revision: 01

Safety Data Sheet Status Approved.

Date printed 01/10/2018

Signature Initials P.K.

DISCLAIMER:

If this product is re-distributed and re-formulated for sale, details of its hazards and recommended methods for safe handling must be passed to customers. Customers are urged to ensure that the product is entirely suitable for their own purpose. It is the customer's responsibility to ensure that a suitable and sufficient assessment of the risks created by a work activity using this product is undertaken before this product is used.

NOTE:

The information contained in this Safety Data Sheet does not constitute the users own assessment of workplace risk as required by other Health & Safety Legislation (e.g. the Health and Safety at Work Act,1974;the control of Substances Hazardous to Health Regulations,1988). The data given here is based on current knowledge and experience. The purpose of this data sheet is to describe the products in terms of their safety requirements. The data does not signify any warranty with regard to the product's properties.