

Material Safety Data Sheet

Product Name	<u>Potassium Chloride</u>
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Section 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE

1.1. Product identification:

Product Description: Potassium Chloride

Synonyms: NA

CAS-No: 7447-40-7

EC-No.: 231-211-8

Molecular Formula: KCl

REACH Registration No: A registration number is not available for this substance as the substance or its use are exempted from registration according to Article 2 REACH Regulation (EC) No 1907/2006, the annual tonnage does not require a registration, or the registration is envisaged for a later registration deadline.

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

Recommended Use: Laboratory chemicals

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SECTION 2: HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture:

Not a hazardous substance or mixture according to Regulation (EC) No. 1272/2008. **2.2.**

Label Elements:

Not a hazardous substance or mixture according to Regulation (EC) No. 1272/2008. **2.3.**

Other Hazards:

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1. Substances: Potassium Chloride

3.2. Mixtures:

Component	CAS-No	EC-No.	Weight %
Potassium Chloride	7447-40-7	231-211-8	> 95

SECTION 4: FIRST AID MEASURES

4.1. Description of first aid measures:

- **General advice**

Consult a physician. Show this safety data sheet to the doctor in attendance. • **If**

- **inhaled**

Remove to fresh air. Get medical attention immediately if symptoms occur. If not breathing, give artificial respiration.

- **If Contact with skin**

Wash off immediately with plenty of water for at least 15 minutes. Get medical attention immediately, if symptoms occur.

- **In case of eye contact**

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.

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Get medical attention.

- **If swallowed**

Do NOT induce vomiting. Get medical attention if symptoms occur.

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

Irritant effects, Nausea, Vomiting, cardiovascular disorders

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- Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Unsuitable Extinguishing Media- For this substance/mixture no limitations of extinguishing agents are given.

5.2. Special hazards arising from the substance or mixture:

Not Combustible.

Ambient fire may liberate hazardous vapours.

Fire may cause evolution of: Hydrogen chloride gas, Potassium oxides

5.3. Advice for firefighters:

Special protective equipment for firefighters:

Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.

5.4 Further Information:

Suppress (knock down) gases/vapours/mists with a water spray jet. Prevent fire extinguishing water from contaminating surface water or the ground water system.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures:

Use personal protective equipment. Avoid dust formation. Avoid breathing vapours, mist or gas. Avoid breathing dust.

For personal protection see section 8.

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6.2. Environmental precautions:

Do not let product enter drains.

6.3. Methods and material for containment and cleaning up:

Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

6.4. Reference to other sections:

For disposal see Sections 13.

SECTION 7: HANDLING AND STORAGE

7.1. Precautions for safe handling:

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

7.2. Conditions for safe storage, including any incompatibilities:

Keep containers tightly closed in a dry & well-ventilated place.

7.3. Specific end use(s):

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters:

Components with workplace control parameters

8.2. Exposure Controls:

Appropriate Engineering Controls:

Technical measures and appropriate working operations should be given priority over the use of personal protective equipment. See section 7.1.

Personal Protective Equipment:

Protective clothing needs to be selected specifically for the workplace, depending on concentrations and quantities of the hazardous substances handled. The chemical resistance of the protective equipment should be enquired at the respective supplier.

Eye & Face Protection

Safety glasses

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Body Protection

Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work-place., The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace. **Respiratory Protection**

Required when dusts are generated.

Recommended Filter type: Filter P 1 (acc. to DIN 3181) for solid particles of inert substances 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. **Environmental Exposure Controls**

Do not let product enter drains.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties:

- **Appearance:** White
- **Physical State:** Solid
- **Odor:** Odorless
- **Odor Threshold:** No data available
- **pH:** 6.0-7.0 (20°C)
- **Melting Point:** 770 °C
- **Critical Temperature:** No data available
- **Vapor Pressure:** 0.01 hPa at 20 °C
- **Relative Density:** No data available
- **Density:** 1.987 g/cm³
- **Auto-Ignition Temperature:** No data available
- **Decomposition Temperature:** No data available
- **Volatility:** No data available
- **Bulk Density:** ca.1,000 kg/m³
- **Viscosity, dynamic:** No data available
- **Viscosity, Kinematic:** No data available
- **Water/Oil Dist. Co eff.:** No data available

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- **Partition Co-efficient: n-octanol/Water:** No data available
- **Ionicity (in Water):** No data available
- **Lower Explosion Limit:** No data available
- **Upper Explosion Limit:** No data available
- **Boiling Point/Range:** 1420 °C at 1.013 hPa
- **Specific Gravity:** No data available
- **Flash Point:** No data available

9.2. Other information:

Molecular Formula: KCl

Molecular Weight: 74.54 g/mol

SECTION 10: STABILITY AND REACTIVITY

10.1. Reactivity:

No data available.

10.2. Chemical stability:

The product is chemically stable under standard ambient conditions (room temperature).

Hygroscopic.

10.3. Possibility of hazardous reactions:

Violent reactions possible with: Strong oxidizing agents

10.4. Conditions to avoid:

Incompatible products. Excess heat. Avoid dust formation. Exposure to moist air or water. **10.5.**

Incompatible materials:

Strong acids, Strong oxidizing agents

10.6. Hazardous decomposition products:

Hazardous decomposition products formed under fire conditions. - Hydrogen chloride gas, Potassium oxides.

Other decomposition products - No data available

In the event of fire: see section 5

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SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute Oral toxicity

LD50 Oral - Rat - female - 3.020 mg/kg

Remarks: (ECHA)

Acute inhalation toxicity

No data available

Acute dermal toxicity

No data available

Skin irritation

No data available

Eye irritation

No data available

Sensitisation

No data available

Germ cell mutagenicity

Ames test

Salmonella typhimurium

Result: negative

In vitro mammalian cell gene mutation test

mouse lymphoma cells

Result: negative

Mutagenicity (mammal cell test): chromosome aberration.

Chinese hamster lung cells

Result: positive

Carcinogenicity

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

Reproductive toxicity

No data available

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Teratogenicity

No data available

Specific target organ toxicity - single exposure

No data available

Specific target organ toxicity - repeated exposure

No data available

Aspiration hazard

No data available

11.2 Further Information:

Repeated dose toxicity - Rat - male - Oral - 2 yr - No observed adverse effect level - 1.820 mg/kg –
Lowest observed adverse effect level - 110 mg/kg

(ECHA)

RTECS: TS8050000

hyperkalemia, Nausea, Vomiting, Abdominal pain, Diarrhoea, Constipation., Paresthesia., Thirst,
Dizziness, Rash, pruritus, Weakness, muscle cramps, minor psychiatric changes, minor visual changes

To the best of our knowledge, the chemical, physical, and toxicological properties have not been
thoroughly investigated.

SECTION 12: ECOLOGICAL INFORMATION

12.1. Toxicity:

Toxicity to fish

Static test LC50 - Pimephales promelas (fathead minnow) - 880 mg/l - 96 h
(OECD Test Guideline 203)

Toxicity to daphnia and other aquatic invertebrates

Static test EC50 - Daphnia magna (Water flea) - 440 - 880 mg/l – 48 h
(OECD Test Guideline 202)

Toxicity to algae

Static test ErC50 - Desmodesmus subspicatus (green algae) - > 100 mg/l - 72 h
(OECD Test Guideline 201)

Toxicity to bacteria

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Static test EC50 - activated sludge - > 1.000 mg/l - 3 h
(OECD Test Guideline 209)

12.2 Persistence and degradability:

The methods for determining biodegradability are not applicable to inorganic substances. **12.3**

Bioaccumulate potential:

No data available

12.4 Mobility in soil:

No data available

12.5 Results of PBT and vPvB assessment

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher. **12.6 Other adverse effects:**

Discharge into the environment must be avoided.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product

Offer surplus and non-recyclable solutions to a licensed disposal company. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

Contaminated packaging

Dispose of as unused product.

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SECTION 14: Transport information

	Land transport (ADR/RID)	Air transport (IATA)	Sea transport (IMDG)
14.1 UN number	Not classified as dangerous in the meaning of transport regulations.		
14.2 Proper shipping name	Not classified as dangerous in the meaning of transport regulations.		
14.3 Class	Not classified as dangerous in the meaning of transport regulations.		
14.4 Packing group	Not classified as dangerous in the meaning of transport regulations.		
14.5 Environmentally hazardous	Not classified as dangerous in the meaning of transport regulations.		
14.6 Special precautions for user	Not classified as dangerous in the meaning of transport regulations.		

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture:

National legislation

Storage class 10 - 13

15.2 Chemical safety assessment:

For this product a chemical safety assessment was not carried out

SECTION 16: Other information

Training advice:

Provide adequate information, instruction and training for operators.

References: Not available

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