

SAFETY DATA SHEET

PRODUCT NAME: POTASSIUM CHLORIDE

Issue Date: May 23

IDENTIFICATION

Product Name: Potassium Chloride
Other Names: Potassium monochloride; Muriate of potash; Potassium muriate
Product Code: ZPCHLO
Uses: Fertilizer, source of potassium salts, pharmaceutical preparations, photography, spectroscopy, buffer solutions. Mill addition in porcelain enamels. Substitute for common salt. Food additive 508.
Supplier: HamChem Hamilton Chemicals Ltd, 75 Ruffell Rd, Te Rapa Park, Hamilton
Phone: 07 974 4971 Email: sales@hamchem.nz Web: www.hamchem.co.nz

- In emergency dial 111, and then ask for Fire, Ambulance or Police as necessary.
- In case of poisoning phone National Poisons Centre – 0800 764 766

HAZARDS IDENTIFICATION



GHS Classifications

Eye Irritation – Category 2

Signal Word: Warning

Hazard Statements:

H319 – Causes serious eye irritation

Prevention:

P264 – Wash hands thoroughly after handling

P280 – Wear eye/face protection

Response:

P305+P351+P338 – IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P337+P313 – If eye irritation persists: Get medical advice/attention.

COMPOSITION & INFORMATION ON INGREDIENTS

Chemical Entity	CAS No.	Proportion (%)
Potassium Chloride	7447-40-7	>90%

FIRST AID MEASURES

Principal routes of exposure are usually by inhalation of generated dust and skin contact with the material.

Main symptoms caused by exposure: Nausea, headache, shortness of breath, diarrhea, vomiting, dehydration, eye and skin redness may develop following exposure

Swallowed: If swallowed do NOT induce vomiting. If vomiting occurs, lean patient forward, or place on left side (head down position, if possible) to maintain open airway and prevent aspiration. Observe the patient carefully. Never give liquid to a person showing signs of being sleepy or with reduced awareness i.e. becoming unconscious. Give water to rinse out mouth, then provide liquid slowly and as much as casualty can comfortably drink. Seek medical advice.

Eye: If this product comes into contact with the eyes; wash out immediately with fresh running water. Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids. If pain persists or recurs, seek medical attention. Removal of contact lenses after eye injury should only be undertaken by skilled personnel.

Skin: If skin contact occurs, immediately remove all contaminated clothing, including footwear. Flush skin and hair with running water (and soap if available). Seek medical attention in event of irritation.

Inhaled: If dust is inhaled, remove from contaminated area. Encourage patient to blow nose to ensure clear breathing passages. Ask patient to rinse mouth with water, but not to drink water. Seek immediate medical attention.

PPE required for First Aiders: See Section – Exposure Controls & Personal Protection.

Notes to physician: Treat symptomatically based on individual reactions of patient and judgement of Doctor.

Note: In an emergency dial 111, for advice, contact a Poison Centre (0800 764 766)

FIRE FIGHTING MEASURES

Extinguishing Media: Use extinguishing media suitable for surrounding area; water spray, dry chemical, foam or carbon dioxide.

Fire Fighting: Alert Fire Brigade and tell them location and nature of hazard. Clear fire area of all non-emergency personnel. Stay upwind, eliminate ignition sources. Wear breathing apparatus plus protective gloves. Prevent, by any means available, spillage from entering drains or water courses. Use firefighting procedures suitable for surrounding area. DO NOT approach containers suspected to be hot. Cool fire exposed containers with water spray from a protected location. If safe to do so, remove containers from path of fire. Equipment should be thoroughly decontaminated after use.

Fire/Explosion Hazard: Non-combustible.

Hazards from combustion products: In a fire, product may decompose on heating and produce toxic/corrosive fumes: i.e. potassium oxides, and hydrogen chlorides. Irritating gases will be emitted in the event of a fire.

Personal Protective Equipment: Firefighters should wear a positive-pressure self-contained breathing apparatus (SCBA) and protective firefighting clothes (including firefighting helmet, coat, trousers, boots and gloves).

ACCIDENTAL RELEASE MEASURES

Only fully trained personnel should be involved in handling chemicals. See Exposure Controls & Personal Protection section of SDS for advice.

Minor Spills: Clean up all spills immediately, remove all ignition sources. Wear protective clothing, impervious gloves and safety glasses. Avoid contact with skin and eyes. Use dry clean-up procedures and avoid generating dust. Sweep up and shovel into suitable containers and store for disposal later.

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Major Spills: Personnel involved in the clean-up should wear full protective clothing. Evacuate all unnecessary personnel. Eliminate all sources of ignition. Increase ventilation, avoid generating dust. If necessary, wet down with water and dike for disposal later. Stop leak if safe to do so. Vacuum up (consider explosion proof machines designed to be grounded during use). Do NOT let product reach drains or waterways. If product does enter a waterway advise Emergency Services or your Local Waste Authority. Collect in a labelled container and seal for disposal. Use spark-proof tools and equipment. Wash spill area with plenty of water after removal of contaminant. Decontamination run-off should be prevented from entering drains and water courses.

Emergency Response Planning Guidelines (AIHA 2016): No ERPGs have been set for this substance by the American Industrial Hygiene Association.

Protective Action Criteria (PAC) – SCAPA 2016: No PACs have been set for this substance by the US Department of Energy Subcommittee on Consequence Assessment and Protective Actions (SCAPA)

HANDLING & STORAGE

Procedure for Handling: Operators should be trained in procedures for safe use of this material. Use good occupational work practice. Avoid generating and breathing dust. Avoid contact with skin and eyes. Avoid contact with incompatible materials. Avoid all ignition sources and sources of heat. Avoid physical damage to containers. Handle and open container with care. Use in a well ventilated area. Always wash hands with soap and water after handling or if accidental exposure occurs. Work clothes should be laundered separately. Ensure an eye bath and safety shower are available and ready for use. Observe good personal hygiene practices. Take precautionary measures against static discharges by bonding and grounding equipment.

Suitable Packaging: Original packaging. Check all containers are labeled and free from leaks.

Storage Incompatibility: Segregate from strong oxidizing agents.

Storage Requirements: Store in original packaging. Keep containers securely sealed. No smoking, naked lights or ignition sources. Store in a cool, dry, well-ventilated area, out of direct sunlight. Store away from incompatible materials and foodstuffs. Protect containers against physical damage and check regularly for leaks.

EXPOSURE CONTROLS & PERSONAL PROTECTION

Exposure standards:

New Zealand WES 2022	Total Dust:	10mg/m ³ (time weighted average)
New Zealand WES 2022	Respirable Dust:	3mg/m ³ (time weighted average)

No exposure limits set for Potassium Chloride by WorkSafe New Zealand, Safe Work Australia or Health and Safety Executive (HSE) in Great Britain.

Engineering controls:

Ventilation System: A system of local and/or general exhaust is recommended to keep employee exposures low as possible. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area. Refer to 'A Simple guide to local exhaust ventilation' found on the WorkSafe New Zealand website.

Personal protective equipment:

Personal Respirators: For conditions of use where exposure to dust or mist is apparent and engineering controls are not feasible, a particulate respirator (NIOSH type N95 or better filters) may be worn. If oil particles (e.g. lubricants, cutting fluids, glycerine, etc.) are present, use a NIOSH type R or P filter. For emergencies where the exposure levels are not known, use a full-face positive-pressure, air-supplied respirator. **WARNING:** air-purifying respirators do not protect workers in oxygen-deficient atmospheres.

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Skin Protection: Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact. Refer to AS/NZ 2161.1:2000 Occupational Protective Gloves – Selection, use and maintenance. Dispose of contaminated gloves after use. Suitable gloves should be selected based on penetration time, rates of diffusion and break through time.

Eye Protection: Use approved chemical safety goggles and a full face shield where splashing is possible. Refer to personal eye protection Part 1: Eye and face protectors for occupational applications, Australian/New Zealand Standard 1337.1:2010. Maintain eye wash fountain in work area.

Other: Cotton washable overalls buttoned to the neck and wrist and washable hat and PVC apron. Ensure that there is ready access to an emergency shower. Ensure that there is ready access to an eye wash unit.

PHYSICAL & CHEMICAL PROPERTIES

Appearance:	White, off white or pink powder
State:	Solid
Odour:	Odourless
Molecular Weight:	74.55
Melting Range:	773°C
Boiling Range:	1420°C (sublimation)
Solubility in water:	347g/L (Easily soluble)
pH:	~7 (50g/L, 20°C)
Specific Gravity:	2 g/cm ³
Bulk Density:	~1010kg/m ³
Volatile Component:	Not applicable
Relative Vapour Density:	Not applicable
Vapour Pressure:	Not applicable
Auto ignition Temperature:	Not applicable
Flash Point:	Not applicable
Lower Explosive Limit:	Not applicable
Upper Explosive Limit:	Not applicable
Decomposition Temperature:	Not applicable
Viscosity:	Not applicable
Evaporation Rate:	Not applicable

STABILITY & REACTIVITY

Chemical stability: Product is stable under normal conditions of use, storage and temperature.

Conditions to avoid: Avoid excessive heat, direct sunlight, static discharges, moisture, and temperature extremes. Keep containers dry and tightly closed to avoid moisture absorption and contamination.

Incompatible materials: Incompatible with Bromine Trifluoride, Sulphuric Acid, Potassium Permanganate, other strong oxidizing agents, strong acids and sources of ignition.

Hazardous decomposition products: Thermal decomposition can lead to release of Hydrogen Chlorides and Potassium Oxides.

Hazardous reactions: Hazardous polymerisation will not occur.

TOXICOLOGICAL INFORMATION**Acute Health Effects:**

Swallowed: The material may be discomforting to the gastro-intestinal tract. Its use as a food additive indicates good tolerance in small amounts, but excessive amounts or overuse may bring irritant and/or harmful effects. Ingestion may result in nausea, abdominal irritation, pain and vomiting.

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Eye: Dust may produce eye discomfort causing smarting, pain and redness. The material may be irritating to the eye, with prolonged contact causing inflammation. Repeated or prolonged exposure to irritants may produce conjunctivitis.

Skin: Not considered an irritant through normal use. The material may be discomforting to the skin and may cause drying of the skin if exposure is prolonged. Irritation and skin reactions are possible with sensitive skin.

Inhalation: The dust is discomforting to the upper respiratory tract causing cough and sore throat.

Chronic Health Effects: Prolonged or repeated contact may cause drying with cracking, irritation, and possibly followed by dermatitis.

Toxicity:

Acute Oral Toxicity, Rat, LD₅₀: 2600 mg/kg [CCID].

Acute Dermal Toxicity, LD₅₀: No data available.

Acute Inhalation Toxicity, LC₅₀: No data available.

Irritation/Corrosion:

Skin: Classified as irritating to humans [CCID].

Eyes: Indicated as causing severe irritation in rabbits [CCID].

Carcinogenic effects: Not classified or listed by IARC, NTP, OSHA, EU and ACGIH.

Mutagenic effects: Not available.

Reproductive or developmental effects: Not available.

Aspiration hazard: Not available.

Specific target organ toxicity: Not available.

Sensitisation (respiratory/contact): Not available.

ECOLOGICAL INFORMATION

Ecotoxicity: Product is considered as ecotoxic to terrestrial vertebrates.

Ecotoxicity Data:

Acute Oral Toxicity

Mouse, LD₅₀: 383 mg/kg [CCID].

Fish, (*Pimephales promelas*), 96h LC₅₀: 880 mg/L [PAN]

Fish, (*Oncorhynchus mykiss*), 48h LC₅₀: 1610 mg/L [PAN]

Crustacean, (*Austropotamobius pallipes pall*), 96 LC₅₀: 350 mg/L [PAN]

Algae 72 or 96h EC₅₀: Not available.

Chronic

Fish, (*Pimephales promelas*), 7d LOEC: 500 mg/L [PAN]

Fish, (*Pimephales promelas*), 7d NOEC: 250 - 500 mg/L [PAN]

Persistence and Degradability: Not available.

Mobility: Not available.

Bioaccumulation: Not available.

BOD and COD: Not available.

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Products of Biodegradation: Not available.

Toxicity of the Products of Biodegradation: Not available.

DO NOT discharge into sewer or waterways.

DISPOSAL CONSIDERATIONS

Disposal of Hazardous Substances is subject to the Resource Management Act and Council By-Laws in addition to HSNO requirements. Do not dispose with household rubbish.

Product: Recycle wherever possible. Special hazard may exist - specialist advice may be required. The product may be treated so that it is no longer hazardous by a means other than dilution. This includes incineration at an approved site or burial in a landfill in such a manner that it will not lead to any adverse health effects to any person or exceed any TEL (tolerable exposure limit) set by the Authority for this substance. Treatment in a biological wastewater treatment system with prior approval and arrangement is also permissible providing that the substance is rendered non-hazardous and does not pose any adverse effects to human health or the environment. Consult an approved Waste Management company for disposal options.

Packaging: Recycle wherever possible. Special hazard may exist - specialist advice may be required. Packaging should be rendered incapable of containing any material. Puncture containers to prevent re-use and bury at an authorised landfill. Empty containers may be decontaminated. The residual contents of the package must be diluted to below the thresholds for the respective hazard and the diluted residue is 1% or less of the volume of the package. Alternatively, consult an approved Waste Management company for disposal options or dispose of at an approved waste disposal facility. Observe all label safeguards until containers are cleaned and destroyed. Where possible retain label warnings and SDS and observe all notices pertaining to the product.

TRANSPORT INFORMATION

NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS: UN, IATA, IMDG.
Not classified as a Dangerous Good under NZS 5433 Transport of Dangerous Goods on Land.

REGULATORY INFORMATION

HSNO Classifications: 6.4A

EPA Approval #: HSR002684 – Water Treatment Chemicals (Subsidiary Hazard) Group Standard 2020

OTHER INFORMATION

End of SDS.