

Safety Data Sheet



1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Product Name: **POTASSIUM HYDROXIDE SOLID (ALL GRADES)**

Other name(s): Caustic potash; potassium hydrate; lye.

Recommended Use of the Chemical and Restrictions on Use Chemical intermediate.

Supplier: Ixom Operations Pty Ltd (Incorporated in Australia)
NZBN: 9429041465226
Street Address: 166 Totara Street
Mt Maunganui South
New Zealand

Telephone Number: +64 9 368 2700
Facsimile: +64 9 368 2710
Emergency Telephone: **0 800 734 607 (ALL HOURS)**

Please ensure you refer to the limitations of this Safety Data Sheet as set out in the "Other Information" section at the end of this Data Sheet.

2. HAZARDS IDENTIFICATION

Classified as a Dangerous Good according to NZS 5433:2012 Transport of Dangerous Goods on Land.

Classified as hazardous according to criteria in the Hazardous Substances (Minimum Degrees of Hazard) Notice 2017 and the Hazardous Substances (Classification) Notice 2017.

SIGNAL WORD: DANGER

Subclasses:

Subclass 6.1 Category C - Substances which are acutely toxic.

Subclass 8.1 Category A - Substances that are corrosive to metals.

Subclass 8.2 Category B - Substances that are corrosive to dermal tissue.

Subclass 8.3 Category A - Substances that are corrosive to ocular tissue.

Subclass 9.1 Category D - Substances that are slightly harmful to the aquatic environment or are otherwise designed for biocidal action.

Subclass 9.3 Category B - Substances that are ecotoxic to terrestrial vertebrates.

Approval Number: HSR001546



Hazard Statement(s):

H290 May be corrosive to metals.

H301 Toxic if swallowed.

H314 Causes severe skin burns and eye damage.

H401 Toxic to aquatic life.

H432 Toxic to terrestrial vertebrates.

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Precautionary Statement(s):

Prevention:

P102 Keep out of reach of children.
P234 Keep only in original container.
P260 Do not breathe dust/fume/gas/mist/vapours/spray.
P264 Wash hands thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P273 Avoid release to the environment.

Response:

P301+P330+P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P301+P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
P303+P361+P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
P321 Specific treatment (see First Aid Measures on the Safety Data Sheet).
P363 Wash contaminated clothing before re-use.
P304+P340 IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing.
P310 Immediately call a POISON CENTER or doctor/physician.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P390 Absorb spillage to prevent material damage.
P391 Collect spillage.

Storage:

P405 Store locked up.
P406 Store in corrosive resistant container with a resistant inner liner.

Disposal:

P501 In case of a substance that is in compliance with a HSNO approval other than a Part 6A (Group Standards) approval, a label must provide a description of one or more appropriate and achievable methods for the disposal of a substance in accordance with the Hazardous Substances (Disposal) Notice 2017. This may also include any method of disposal that must be avoided.

3. COMPOSITION AND INFORMATION ON INGREDIENTS

Components	CAS Number	Proportion	Hazard Codes
Potassium hydroxide	1310-58-3	>=90%	H290 H302 H314 H318

4. FIRST AID MEASURES

For advice, contact a Poisons Information Centre (e.g. phone Australia 131 126; New Zealand 0800 764 766) or a doctor.

Inhalation:

Remove victim from area of exposure - avoid becoming a casualty. Remove contaminated clothing and loosen remaining clothing. Allow patient to assume most comfortable position and keep warm. Keep at rest until fully recovered. If patient finds breathing difficult and develops a bluish discolouration of the skin (which suggests a lack of oxygen in the blood - cyanosis), ensure airways are clear of any obstruction and have a qualified person give oxygen through a face mask. Apply artificial respiration if patient is not breathing. Seek immediate medical advice.

Skin Contact:

If spilt on large areas of skin or hair, immediately drench with running water and remove clothing. Continue to wash skin and hair with plenty of water (and soap if material is insoluble) until advised to stop by the Poisons Information Centre or a doctor. For skin burns, cover with a clean, dry dressing until medical help is available.

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Eye Contact:

Immediately wash in and around the eye area with large amounts of water for at least 15 minutes. Eyelids to be held apart. Remove clothing if contaminated and wash skin. Urgently seek medical assistance. Transport promptly to hospital or medical centre.

Ingestion:

Immediately rinse mouth with water. If swallowed, do NOT induce vomiting. Give a glass of water. Never give anything by the mouth to an unconscious patient. Seek immediate medical assistance.

Indication of immediate medical attention and special treatment needed:

Treat symptomatically. Can cause corneal burns.

5. FIRE FIGHTING MEASURES

Suitable Extinguishing Media:

Not combustible, however, if material is involved in a fire use: Fine water spray, normal foam, dry agent (carbon dioxide, dry chemical powder).

Hazchem or Emergency Action Code: 2W

Specific hazards arising from the chemical:

Non-combustible material. Corrosive substance.

Special protective equipment and precautions for fire-fighters:

Contact with metals may liberate hydrogen gas which is extremely flammable. Fire fighters to wear self-contained breathing apparatus and suitable protective clothing if risk of exposure to products of decomposition.

6. ACCIDENTAL RELEASE MEASURES

Emergency procedures/Environmental precautions:

Clear area of all unprotected personnel. Do not allow container or product to get into drains, sewers, streams or ponds. If contamination of sewers or waterways has occurred advise local emergency services.

Personal precautions/Protective equipment/Methods and materials for containment and cleaning up:

Wear protective equipment to prevent skin and eye contact and breathing in dust. Work up wind or increase ventilation. Cover with damp absorbent (inert material, sand or soil). Sweep or vacuum up, but avoid generating dust. Collect and seal in properly labelled containers or drums for disposal.

7. HANDLING AND STORAGE

Precautions for safe handling: Avoid skin and eye contact and breathing in dust. Keep out of reach of children. When using do not eat, drink or smoke. Wash hands before breaks and at the end of the work day.

Conditions for safe storage, including any incompatibilities: Store in a cool, dry, well ventilated place. Store away from incompatible materials described in Section 10. Store away from foodstuffs. Keep containers closed when not in use - check regularly for spills.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Potassium hydroxide: Ceiling 2 mg/m³

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As published by the New Zealand Workplace Health & Safety Authority.

WES - Ceiling (Workplace Exposure Standard - Ceiling). A concentration that should not be exceeded during any part of the working day.

These Workplace Exposure Standards are guides to be used in the control of occupational health hazards. All atmospheric contamination should be kept to as low a level as is workable. These workplace exposure standards should not be used as fine dividing lines between safe and dangerous concentrations of chemicals. They are not a measure of relative toxicity.

Appropriate engineering controls:

Ensure ventilation is adequate to maintain air concentrations below Workplace Exposure Standards. Keep containers closed when not in use.

If in the handling and application of this material, safe exposure levels could be exceeded, the use of engineering controls such as local exhaust ventilation must be considered and the results documented. If achieving safe exposure levels does not require engineering controls, then a detailed and documented risk assessment using the relevant Personal Protective Equipment (PPE) (refer to PPE section below) as a basis must be carried out to determine the minimum PPE requirements.

Individual protection measures, such as Personal Protective Equipment (PPE):

The selection of PPE is dependent on a detailed risk assessment. The risk assessment should consider the work situation, the physical form of the chemical, the handling methods, and environmental factors.

OVERALLS, SAFETY SHOES, CHEMICAL GOGGLES, GLOVES, DUST MASK.



Wear overalls, chemical goggles and impervious gloves. Avoid generating and inhaling dusts. If determined by a risk assessment an inhalation risk exists, wear a dust mask/respirator meeting the requirements of AS/NZS 1715 and AS/NZS 1716. Always wash hands before smoking, eating, drinking or using the toilet. Wash contaminated clothing and other protective equipment before storage or re-use.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state:	Flakes or Pellets
Colour:	White
Odour:	Odourless
Molecular Formula:	KOH
Solubility:	Soluble in water.
Specific Gravity:	2.044
Relative Vapour Density (air=1):	Not applicable
Vapour Pressure (20 °C):	Not applicable
Flash Point (°C):	Not applicable
Flammability Limits (%):	Not applicable
Autoignition Temperature (°C):	Not applicable
Melting Point/Range (°C):	360
Boiling Point/Range (°C):	1320

Product Name: POTASSIUM HYDROXIDE SOLID (ALL GRADES)
Substance No: 000031029101

Issued: 14/11/2019
Version: 6

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pH: 14 (10g/100 mL water)

10. STABILITY AND REACTIVITY

Reactivity:	Reacts violently with acids. Reacts with ammonium salts liberating ammonia gas.
Chemical stability:	Stable under normal conditions of use. Deliquescent. Absorbs carbon dioxide from the air.
Possibility of hazardous reactions:	Corrosive to metals in the presence of moisture. Corrosive to aluminium, tin, and zinc, liberating flammable hydrogen gas.
Conditions to avoid:	Avoid exposure to moisture. Avoid exposure to air. Avoid exposure to humidity. Avoid contact with organic materials .
Incompatible materials:	Incompatible with acids , ammonium salts , chlorinated hydrocarbons , water , many metals .
Hazardous decomposition products:	Oxides of potassium.

11. TOXICOLOGICAL INFORMATION

No adverse health effects expected if the product is handled in accordance with this Safety Data Sheet and the product label. Symptoms or effects that may arise if the product is mishandled and overexposure occurs are:

Ingestion:	Swallowing can result in nausea, vomiting, diarrhoea, abdominal pain and chemical burns to the gastrointestinal tract.
Eye contact:	A severe eye irritant. Corrosive to eyes; contact can cause corneal burns. Contamination of eyes can result in permanent injury.
Skin contact:	Contact with skin will result in severe irritation. Corrosive to skin - may cause skin burns.
Inhalation:	Breathing in dust may result in respiratory irritation.
Acute toxicity: Oral LD50 (rat): 273 mg/kg	
Skin corrosion/irritation:	Severe irritant (rabbit).
Serious eye damage/irritation:	Corrosive (rabbit).
Respiratory or skin sensitisation:	No information available.
Chronic effects:	
Mutagenicity:	No information available.
Carcinogenicity:	No component contained in this material is listed as carcinogenic according to the International Agency for Research on Cancer (IARC).
Reproductive toxicity:	No information available.
Specific Target Organ Toxicity (STOT) - single exposure:	No information available.
Specific Target Organ Toxicity (STOT) - repeated exposure:	No information available.
Aspiration hazard:	No information available.

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12. ECOLOGICAL INFORMATION

Ecotoxicity	Avoid contaminating waterways.
Persistence/degradability:	Biodegradation is not an applicable endpoint since the product is an inorganic chemical.
Bioaccumulative potential:	No information available.
Mobility in soil:	No information available.

13. DISPOSAL CONSIDERATIONS

Disposal methods:

Refer to local government authority for disposal recommendations. Dispose of contents/container in accordance with local/regional/national/international regulations.

14. TRANSPORT INFORMATION

Road and Rail Transport

Classified as a Dangerous Good according to NZS 5433:2012 Transport of Dangerous Goods on Land.



UN No:	1813
Transport Hazard Class:	8 Corrosive
Packing Group:	II
Proper Shipping Name or Technical Name:	POTASSIUM HYDROXIDE, SOLID
Hazchem or Emergency Action Code:	2W

Marine Transport

Classified as Dangerous Goods by the criteria of the International Maritime Dangerous Goods Code (IMDG Code) for transport by sea; DANGEROUS GOODS.

UN No:	1813
Transport Hazard Class:	8 Corrosive
Packing Group:	II
Proper Shipping Name or Technical Name:	POTASSIUM HYDROXIDE, SOLID

IMDG EMS Fire:	F-A
IMDG EMS Spill:	S-B

Air Transport

Classified as Dangerous Goods by the criteria of the International Air Transport Association (IATA) Dangerous Goods Regulations for transport by air; DANGEROUS GOODS.

UN No:	1813
Transport Hazard Class:	8 Corrosive
Packing Group:	II

Product Name: POTASSIUM HYDROXIDE SOLID (ALL GRADES)
Substance No: 000031029101

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Proper Shipping Name or Technical Name: POTASSIUM HYDROXIDE, SOLID

15. REGULATORY INFORMATION

Classification:

Classified as hazardous according to criteria in the Hazardous Substances (Minimum Degrees of Hazard) Notice 2017 and the Hazardous Substances (Classification) Notice 2017.

Subclasses:

Subclass 6.1 Category C - Substances which are acutely toxic.

Subclass 8.1 Category A - Substances that are corrosive to metals.

Subclass 8.2 Category B - Substances that are corrosive to dermal tissue.

Subclass 8.3 Category A - Substances that are corrosive to ocular tissue.

Subclass 9.1 Category D - Substances that are slightly harmful to the aquatic environment or are otherwise designed for biocidal action.

Subclass 9.3 Category B - Substances that are ecotoxic to terrestrial vertebrates.

Approval Number: HSR001546

Hazard Statement(s):

H290 May be corrosive to metals.

H301 Toxic if swallowed.

H314 Causes severe skin burns and eye damage.

H401 Toxic to aquatic life.

H432 Toxic to terrestrial vertebrates.

16. OTHER INFORMATION

Supplier Safety Data Sheet; 07/ 2018.

'Registry of Toxic Effects of Chemical Substances'. Ed. D. Sweet, US Dept. of Health & Human Services: Cincinnati, 2019.

This safety data sheet has been prepared by Ixom Operations Pty Ltd (Toxicology & SDS Services).

Reason(s) for Issue:

5 Yearly Revised Primary SDS

This SDS summarises to our best knowledge at the date of issue, the chemical health and safety hazards of the material and general guidance on how to safely handle the material in the workplace. Since Ixom Operations Pty Ltd cannot anticipate or control the conditions under which the product may be used, each user must, prior to usage, assess and control the risks arising from its use of the material.

If clarification or further information is needed, the user should contact their Ixom representative or Ixom Operations Pty Ltd at the contact details on page 1.

Ixom Operations Pty Ltd's responsibility for the material as sold is subject to the terms and conditions of sale, a copy of which is available upon request.