

SAFETY DATA SHEET

1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Product Name: Caustic Potash
Other Identifier: Potassium Hydroxide
Supplier: Big Bubble
ABN: 51 290 656 636
Street Address: 18 Elliott Street
Midvale
Western Australia
Telephone Number: +61 08 9274 1992
Poisons Information Centre: 131 126 Australia

2. HAZARDS IDENTIFICATION

Road and Rail; Classified as Dangerous Goods by the criteria of the Australian Dangerous Goods Code (ADG Code) for transport by Road and Rail; DANGEROUS GOODS.

Globally Harmonised System

Hazard Classification

Hazardous according to the criteria of the Globally Harmonised System of Classification and Labelling of Chemicals (GHS)

Hazard Categories

Corrosive to Metals - Category 1
Acute Toxicity (Oral) - Category 4
Skin Corrosion/Irritation - Category 1B
Serious Eye Damage/Irritation - Category 1

Pictogram



Name of pictogram
Corrosive



Exclamation

Signal Word
Danger

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Hazard Statements

H290 May be corrosive to metals.
H302 Harmful if swallowed.
H314 Causes severe skin burns and eye damage.

Precautionary Statement

Prevention

P270 Do not eat, drink or smoke when using this product.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P260 Do not breathe dusts or mists.

Response

P301 + P330 + P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303 + P361 + P353 IF ON SKIN (or hair): Remove/take off immediately all contaminated clothing. Rinse skin with water/shower.
P304 + P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310 Immediately call a POISON CENTER or doctor/physician.
P363 Wash contaminated clothing before reuse.
P390 Absorb spillage to prevent material damage.

Storage

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

Disposal

P501 Dispose of contents/container in accordance with local / regional / national / international regulations.

Poisons Schedule: S6

3. COMPOSITION/INFORMATION ON INGREDIENTS

Components	CAS Number	Proportion
Potassium Hydroxide	1310-58-3	<=100%

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 at once.

Ingestion: IF SWALLOWED: Rinse mouth, then drink plenty of water. Do NOT induce vomiting. Immediately call a Poison Centre or doctor/physician for advice. Keep victim calm and warm - Obtain immediate medical care. Never give anything by mouth to an unconscious person.

Eye Contact: IF IN EYES: Immediately flush eyes with running water for several minutes, holding eyelids open and occasionally lifting the upper and lower lids. Remove contact lenses if present and easy to do. Continue rinsing for at least 15 minutes. Immediately call a Poison Centre or doctor/physician for advice - Obtain immediate medical care.

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Skin Contact:	IF ON SKIN (or hair): Remove contaminated clothing and shoes immediately. Flush skin and hair with running water or at least 15 minutes. For gross contamination, drench contaminated clothing and skin with plenty of water before removing clothes. For minor skin contact, avoid spreading material on unaffected skin. Immediately call a Poison Centre or doctor/physician for advice. In case of burns, cover with a clean, dry dressing - Obtain immediate medical care.
Inhalation:	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a Poison Centre or doctor/physician for advice. Apply resuscitation if victim is not breathing - Do not use direct mouth to mouth method if victim ingested or inhaled the substance; use alternative respiratory method or proper respiratory device. Administer oxygen if breathing is difficult. Keep victim calm and warm Obtain immediate medical care.
Medical attention and special treatment:	Symptoms may be delayed - Medical observation and assessment is recommended for all exposures. Treat symptomatically. Ensure that attending medical personnel are aware of the identity and nature of the product(s) involved, and take precautions to protect themselves. May aggravate pre-existing eye, skin and respiratory conditions (including asthma and other breathing disorders).

5. FIRE FIGHTING MEASURES

General	If safe to do so, move undamaged containers from fire area. Cool containers with water spray until well after fire is out. Avoid getting water inside containers.
Flammability Conditions	Non-combustible; Material does not burn.
Suitable Extinguishing Media:	If material is involved in a fire, use dry chemical, Carbon dioxide (CO ₂), foam or water spray for extinction - Do not use water jets.
Fire and Explosion Hazards	Risk of violent reaction or explosion: Contact with metals may evolve flammable hydrogen gas. Contact with moisture or water may generate sufficient heat to ignite combustible materials. Containers may explode when heated.
Hazardous combustion products:	Fire or heat will produce irritating, toxic and/or corrosive gases, including Potassium oxides.
Precautions for fire fighters and special protective equipment:	Contain runoff from fire control water or dilution water - Runoff may be toxic and/or corrosive and pollute waterways. Liquid-tight chemical protective clothing (splash suit) in combination with self-contained breathing apparatus (SCBA) should be worn. Hazchem: 2W

6. ACCIDENTAL RELEASE MEASURES

General Response Procedure	Ventilate enclosed spaces before entering. ELIMINATE all ignition sources (no smoking, flares, sparks or flames). Do not touch or walk through spilled material. Avoid dust formation. Do not breathe dust; Prevent contact with eyes, skin and clothing.
Clean Up Procedure	Collect material (sweep or vacuum up) and place it into suitable containers for later disposal (see SECTION 13).

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Containment:	Stop leak if safe to do so – Prevent entry into waterways, drains or confined areas. Prevent dust cloud. Cover with dry earth, sand or other non-combustible material followed by a plastic sheet to minimise spreading or contact with rain. Do NOT get water inside containers.
Decontamination:	Wash away remainder with plenty of water.
Environmental Precautions:	Spillages and decontamination runoff should be prevented from entering drains and watercourses.
Evacuation Criteria:	Spill or leak area should be isolated immediately. Keep unauthorised personnel away. Keep upwind and to higher ground. Large spill: Consider initial downwind evacuation of areas within at least 250 m; Immediately contact Police or Fire Brigade.
Personal Precautionary Measures:	Do not touch damaged containers or spilled material unless wearing appropriate protective clothing (see SECTION 8). Large spill: Wear self-contained breathing apparatus (SCBA) and chemical splash suit.

7. HANDLING AND STORAGE

This material must be stored, maintained and used in accordance with the relevant regulations.

Conditions for safe storage:	Store in a cool, dry and well-ventilated place, in an area having corrosion-resistant concrete floor. Keep container tightly closed - Check regularly for spills. Avoid exposure to moisture/humidity. Avoid exposure to air. Keep away from food, feedstuffs and incompatible materials (see SECTION 10). Store locked up. Keep only in the original container or corrosive resistant container/container with a resistant inner liner.
Precautions for safe handling:	Safety showers and eyewash facilities should be provided within the immediate work area for emergency use. Ensure adequate ventilation (local exhaust or respiratory protection required). Handle in accordance with good industrial hygiene and safety practice. Avoid dust formation. Do not breathe dust; Prevent contact with eyes, skin and clothing. Wear protective gloves/protective clothing/eye protection/face protection (see SECTION 8). To avoid violent reaction, ALWAYS add material to water and NEVER water to material. Absorb spillage to prevent material damage.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure control measures:	SUBSTANCE: Potassium hydroxide (CAS No. 1310-58-3): - Safe Work Australia Exposure Standard: TWA = 2 mg/m ³ (Peak limitation). - New Zealand WES: TWA = 2 mg/m ³ (Ceiling). - NIOSH REL: TWA = 2 mg/m ³ (Ceiling).
Biological Monitoring	No information available.
Engineering Controls	A system of local and/or general exhaust is recommended to keep employee exposures as 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.

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Personal Protective Equipment

Eye and Face Wear appropriate eye protection to prevent eye contact. Recommended: Chemical goggles or Face-shield and safety glasses. Use equipment for eye protection tested and approved under appropriate government standards.

Skin Wear appropriate personal protective clothing to prevent skin contact. Recommended: Overalls, safety shoes. The type of protective equipment must be selected according to the concentration and amount of the hazardous substance(s) at the specific workplace. Wear protective gloves. Recommended (full/splash contact): Impervious gloves, e.g. Nitrile rubber (Minimum layer thickness: 0.11 mm; Break through time: 480 min).

Respiratory Wear respiratory protection in case of inadequate ventilation or if an inhalation risk exists. Recommended: Full-face particle respirator (filter type N100 or P3) as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards.

Work Hygienic Practices Do not eat, drink or smoke when using this product. Wash hands before breaks and at the end of workday. Wash contaminated clothing and other protective equipment before storage or re-use.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state:	Solid
Colour:	Colourless, white, off-white or slightly yellow
Auto Ignition temperature:	No Data Available
Decomposition Temperature:	No Data Available
Evaporation Rate:	No Data Available
Flammability:	No Data Available
Flash Point:	No Data Available
Boiling Point:	1,324 °C
Melting point:	380 °C
Freezing Point	No Data Available
Odour:	Odourless
Odour Threshold:	No Data Available
Partition coefficient: n-octanol/water	No Data Available

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pH:	13.5 0.1 M soln.
Density:	2.04 g/cm ³
Relative Vapour Density:	No Data Available
Solubility:	110 g/100 ml water - Soluble in ethanol 25°C
Upper Flammability Limit	
Lower Flammability Limit:	No Data Available
Molecular Weight:	56.10 g/mol
Explosive limits:	No Data Available
Vapour density:	No Data Available
Vapour pressure:	1 mmHg (@ 714 °C)
Viscosity:	No Data Available
Biopersistence:	No Data Available
Crystallinity:	No Data Available
Dustiness:	No Data Available
Particle size:	No Data Available
Redox potential:	No Data Available
Release of invisible flammable vapours and gases	No Data Available
Saturated Vapour Concentration	No Data Available
Specific Gravity:	2.04 (Water = 1)
Additional Characteristics:	Deliquescent - Rapidly absorbs Carbon dioxide and water from air.
Non-flammable That Could Contribute Unusual Hazards to a Fire:	Contact with moisture or water may generate sufficient heat to ignite combustible materials.
Properties That May Initiate or Contribute to Fire Intensity	Non-combustible; Material does not burn.
Reactions That Release Gases or Vapours	Fire or heat will produce irritating, toxic and/or corrosive gases, including Potassium oxides.
Release of Invisible Flammable Vapours and Gases	Contact with metals may evolve flammable hydrogen gas.

10. STABILITY AND REACTIVITY

General Information: The substance is a strong base, it reacts violently with acid and is corrosive in moist air to metals such as zinc, aluminium, tin and lead, evolving flammable hydrogen gas. Reacts with ammonium

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	salts to produce ammonia and causing fire hazard. Attacks some forms of plastics, rubber or coatings. Rapidly absorbs carbon dioxide and water from air. Contact with moisture or water will generate heat.
Chemical stability:	This material is stable under recommended storage at normal temperature and pressure.
Conditions to avoid:	Avoid dust formation. Avoid exposure to moisture/humidity. Avoid exposure to air. Avoid contact with organic materials.
Incompatible materials:	Incompatible/reactive with strong acids, water, metals (when wet), ammonium salts, halogenated hydrocarbons, maleic anhydride.
Hazardous decomposition products:	Fire or heat will produce irritating, toxic and/or corrosive gases, including Potassium oxides.
Hazardous reactions or Polymerisation:	Will not occur.

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:

Acute Toxicity:	Harmful if swallowed; Corrosive to the gastrointestinal tract, causing abdominal pain, burning sensation, perforation of upper and lower gastrointestinal tissues, shock or collapse.
Ingestion:	
Eye contact:	Causes serious eye damage; Corrosive to eyes, causing redness, pain, blurred vision, severe deep burns; Can result in permanent injury, blindness.
Skin contact:	Causes severe skin burns; Corrosive to skin, causing redness, pain, blisters, liquefaction of skin and damage to underlying tissues, deep and painful wounds.
Skin sensitiser:	Not considered to be a skin sensitiser.
Acute Toxicity Ingestion:	Acute toxicity (Oral): - LD50, Rats: 273 - 1,230 mg/kg bw.
Germ Cell mutagenicity:	Chronic, systemic health effects are not expected.
Carcinogenicity:	Chronic, systemic health effects are not expected.
Reproductive toxicity:	Chronic, systemic health effects are not expected.
STOT (repeated exposure):	Corrosive to the respiratory tract, causing burning sensation, cough, sore throat, laboured breathing, shortness of breath, possible pulmonary edema. Symptoms may be delayed.
STOT (repeated exposure):	Chronic, systemic health effects are not expected. Prolonged or repeat skin exposures can result in dermatitis.

12. ECOLOGICAL INFORMATION

Ecotoxicity	Aquatic toxicity: - LC50, Fish (<i>Gambusia affinis</i>): 80 mg/l (96 h). - EC50, Crustacea (<i>Daphnia magna</i>): 660 mg/l (48 h). - EC50, Algae (<i>Nitzschia linearis</i>): 1,337 mg/l (120 h).
Persistence and degradability	This material is believed to exist in the disassociated state in the environment.
Bioaccumulative potential	Not expected to bioconcentrate in organisms.

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Mobility	Not expected to be absorbed in soil due to its dissociation properties and high water solubility.
Environmental Fate:	This material is alkaline and may raise the pH of surface waters with low buffering capacity. Harmful to aquatic life - Prevent entry into drains and waterways.

13. DISPOSAL CONSIDERATIONS

Disposal methods: Dispose of in accordance with all local, state and federal regulations. All empty packaging should be disposed of in accordance with Local, State, and Federal Regulations or recycled/reconditioned at an approved facility. Or refilled at Big Bubble in Midvale.

14. TRANSPORT INFORMATION

Road and Rail Transport Classified as Dangerous Goods by the criteria of the Australian Dangerous Goods Code (ADG Code) for transport by Road and Rail; DANGEROUS GOODS.

UN number:	1813
Proper shipping name;	POTASSIUM HYDROXIDE, SOLID
DG Class	8 Corrosive Substances
Packing group	II
EPG	37 Toxic And/Or Corrosive Substances Non-Combustible
Special Precaution for user	No Data Available
Hazchem	II

Marine Transport

UN number:	1813
Proper shipping name;	POTASSIUM HYDROXIDE, SOLID
DG Class	8 Corrosive Substances
Packing group	II
EPG	37 Toxic And/Or Corrosive Substances Non-Combustible
Special Precaution for user	No Data Available
Hazchem	II

Air Transport

UN number:	1813
Proper shipping name;	POTASSIUM HYDROXIDE, SOLID
DG Class	8 Corrosive Substances
Packing group	II
EPG	37 Toxic And/Or Corrosive Substances Non-Combustible
Special Precaution for user	No Data Available
Hazchem	II

15. REGULATORY INFORMATION

Poisons Schedule: Schedule 6

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POTASSIUM HYDROXIDE (excluding its salts and derivatives) **except:**

- a) when included in Schedule 5 or Schedule 10;
- b) in preparations containing 5 per cent or less of potassium hydroxide being:
 - i) solid preparations, the pH of which in a 10 g/L aqueous solution is 11.5 or less; or
 - ii) liquid or semi-solid preparations, the pH of which is 11.5 or less.

A - For advice, contact a Poisons Information Centre (e.g. phone Australia 13 11 26; New Zealand 0800 764 766) or a doctor (at once).

G3 – If swallowed, do NOT induce vomiting.

E2 – If in eyes, hold eyelids apart and flush the eye continuously with running water. Continue flushing until advised to stop by a Poisons Information Centre (e.g. phone Australia 13 11 26; New Zealand 0800 764 766) or a doctor, or for at least 15 minutes.

S1 - If skin or hair contact occurs, remove contaminated clothing and flush skin and hair with running water.

Warning Statements

2 - Corrosive.

10 - May produce severe burns.

78 - Attacks skin and eyes.

Safety Direction

3 - Wear eye protection when mixing or using.

5 - Wear protective gloves when mixing or using.

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16. OTHER INFORMATION

Revision date: 30/03/2022

Reason for issue: Update SDS

Key/Legend:

< Less Than

> Greater Than

AICS Australian Inventory of Chemical Substances

atm Atmosphere

CAS Chemical Abstracts Service (Registry Number)

cm² Square Centimetres

CO₂ Carbon Dioxide

COD Chemical Oxygen Demand

deg C (°C) Degrees Celcius

g Grams

g/cm³ Grams per Cubic Centimetre

g/l Grams per Litre

HSNO Hazardous Substance and New Organism

IDLH Immediately Dangerous to Life and Health

immiscible Liquids are insoluble in each other.

inHg Inch of Mercury

inH₂O Inch of Water

K Kelvin

kg Kilogram

kg/m³ Kilograms per Cubic Metre

LC₅₀ LC stands for lethal concentration. LC₅₀ is the concentration of a material in air which causes the death of 50% (one half) of a group of test animals. The material is inhaled over a set period of time, usually 1 or 4 hours.

LD₅₀ LD stands for Lethal Dose. LD₅₀ is the amount of a material, given all at once, which causes the death of 50% (one half) of a group of test animals.

ltr or L Litre

m³ Cubic Metre

mbar Millibar

mg Milligram

mg/24H Milligrams per 24 Hours

mg/kg Milligrams per Kilogram

mg/m³ Milligrams per Cubic Metre

Misc or Miscible Liquids form one homogeneous liquid phase regardless of the amount of either component present.

mm Millimetre **mmH₂O** Millimetres of Water

mPa.s Millipascals per Second

N/A Not Applicable

NIOSH National Institute for Occupational Safety and Health

NOHSC National Occupational Health and Safety Commission

OECD Organisation for Economic Co-operation and Development

PEL Permissible Exposure Limit

Pa Pascal

ppb Parts per Billion

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ppm Parts per Million^{[1][1]}_{SEP}
ppm/2h Parts per Million per 2 Hours^{[1][1]}_{SEP}
ppm/6h Parts per Million per 6 Hours^{[1][1]}_{SEP}
psi Pounds per Square Inch^{[1][1]}_{SEP}
R Ranking^{[1][1]}_{SEP}
RCP Reciprocal Calculation Procedure
STEL Short Term Exposure Limit
TLV Threshold Limit Value^{[1][1]}_{SEP} the Tonne^{[1][1]}_{SEP}
TWA Time Weighted Average
ug/24H Micrograms per 24 Hours
UN United Nations
wt Weight

This material safety data sheet has been prepared by Midland Chemicals

This MSDS 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. No liability is accepted whether direct or indirect from its application since the conditions of final use are outside Midland Chemicals control. The end user is obliged to conform to relevant government regulations and/or patent laws applicable in their respective States of Countries.