



Section 1: Identification of the Material and Supplier

Product Name: Zapp

Other Names: Alkaline solution containing potassium hydroxide.

Proper shipping name (ADG Code): Caustic alkali liquid, n.o.s.
(Potassium hydroxide, disodium trioxosilicate)

Recommended use: As a grill, plate and oven cleaner.
Use as directed on the product label.

Supplier: Hunters Products (TAS) Pty. Ltd.,
A.C.N. 004 601 263

HEAD OFFICE

60 Gleadow Street,
INVERMAY TAS 7248
Tel: 03 6331 4755
Fax: 03 6334 1065

HOBART OFFICE

105 Albert Road,
MOONAH TAS 7009
Tel: 03 6228 7955
Fax: 03 6228 7988

BURNIE OFFICE

22 Pearl Street,
WIVENHOE TAS 7320
Tel: 03 6431 9627
Fax: 03 6432 2083

Emergency Phone Numbers:

Transport/Fire Emergency: 000 (Emergency services)
Medical Emergency: 131126 (Poisons Information Centre)

Section 2: Hazards Identification

Classified as hazardous according to criteria of Worksafe Australia.

Dangerous goods.

Risk Phrases: R: 35 Causes severe burns.

Safety Phrases: S: 1/2 Keep locked up and out of the reach of children.
S: 26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S: 36/37/39 Wear suitable protective clothing, gloves and eye/face protection.
S: 45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

Section 3: Composition/Information on Ingredients

Ingredients:

Potassium hydroxide	[1310-58-3]	10 - 30 %
Sodium metasilicate pentahydrate	[10213-79-3]	< 10 %
Sodium hydroxide	[1310-73-2]	< 10 %
Water	[7732-18-5]	to 100 %

Section 4: First Aid Measures

For advice, contact a Poisons Information Centre (Phone 131126) or a doctor.

Swallowed: If swallowed, do NOT induce vomiting.

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

Eyes: If in eyes, hold eyelids apart and flush the eye continuously with running water. Continue flushing until advised to stop by the Poisons Information Centre or a doctor, or for at least 15 minutes.

Inhaled: Remove from exposure, rest and keep warm. Seek medical advice.

First Aid facilities:

Mandatory: Eye wash. Hand wash basin.

Recommended: Emergency shower if handling industrial quantities.

Advice to Doctor:

Product is a mixture containing a moderate proportion of potassium hydroxide. Corrosive by all routes. Risk of serious eye damage. If swallowed, may cause holes in stomach and intestines; gastric lavage may be contraindicated. Contact Poisons Information Centre.

Aggravated medical conditions:

No specific data found.

Section 5: Fire Fighting Measures

HAZCHEM Code: 2 R

Evacuate: No.

Extinguishant: Water fog or fine water spray.

Risk of violent reaction or explosion: No.

Products of combustion: Water vapour, oxides of potassium and sodium.

Protective Equipment: Full protective clothing, including breathing apparatus and protective gloves.

Section 6: Accidental Release Measures

Emergency Procedures:

Dilute.

For large spills:

Contain spillages with sand or earth. Transfer both liquid and solids to suitable container(s). Treat residues as for small spills.

For small spills:

If local regulations permit, mop up with plenty of water and run to waste, diluting greatly with running water. Otherwise, absorb on inert absorbent and transfer to suitable container. Wash site of spillage thoroughly with water and detergent. Ventilate area to dispel any residual vapours.

Section 7: Handling and Storage

Precautions for safe handling:

Avoid contact with skin and eyes.
Keep away from acids, active metals.

Conditions for safe storage:

Store in a cool, well ventilated place, out of reach of children. Large quantities should be stored in a banded dangerous goods store. Store in original container. Keep container tightly closed and out of direct sunlight. Keep away from acids, active metals, ammonium compounds, organic halides, wood or wood products. Protect from physical damage. Clean up all spills and splashes promptly; avoid secondary accidents.

Incompatibles:

Acids, active metals (such as aluminium, tin, zinc), ammonium compounds, combustible materials, nitro compounds, organic halogen compounds.

Section 8: Exposure Controls/Personal Protection

National Exposure Standards:

ES-TWA:	Potassium hydroxide	2 mg/m ³
	Sodium hydroxide	2 mg/m ³
ES-STEL:	None assigned.	
ES-PEAK:	Potassium hydroxide	2 mg/m ³
	Sodium hydroxide	2 mg/m ³

Notations: None assigned.

[Peak] indicates a ceiling concentration which should not be exceeded, even momentarily.

Biological Limit Values: No data found.

Engineering Controls:

Avoid using aluminium, tin, zinc, galvanised iron, wood or wood products as materials of construction.
Ensure adequate ventilation (same as outdoors) when using.
If handling industrial quantities, or if vapour risk exists, consider local mechanical exhaust/extraction to keep airborne contamination as low as possible and at least below the TLV.

Personal Protective Equipment:

Avoid contact with skin and eyes. Avoid breathing aerosols.
Personal protection to be selected from those recommended below, as appropriate to mode of use, quantity handled and degree of hazard:-

Normal Use:

Eye/face protection
Gloves, rubber or plastic.

Industrial Quantities:

Face shield or safety glasses
Gloves, rubber or plastic
Plastic apron, sleeves and boots
Impervious overalls.

Section 9: Physical and Chemical Properties

Appearance: Clear, almost colourless, mobile liquid.
Odour: Odourless.
pH: 14 Very alkaline.
13.5 As a 1 % solution in water.
Vapour Pressure: No data.
Vapour Density: No data.
Boiling Point: About 120 °C
Melting Point: No data.
Volatiles: 72 % [water]
Volatile Organic Compounds (VOC): Nil.
Evaporation Rate: No data.
Solubilities: Miscible with water in all proportions.
Specific Gravity/Density: About 1.3 g/mL @ 20 °C
Flash Point: None.
Flammable Limits: None.
Dust Explosion: Not applicable.
Auto-ignition Temperature: No data.

Other Information:

Very alkaline mixture. Will react vigorously or violently with acids or acidic compounds. Corrodes active metals, such as aluminium, tin or zinc, generating hydrogen, a flammable gas. Contact with ammonium compounds may generate ammonia, a toxic gas. Will absorb carbon dioxide from the air, forming carbonates. May react with organic halogen compounds, especially trichloroethylene. May form shock-sensitive salts with nitro compounds. Will attack wood and wood products. May attack glass on prolonged contact. Slippery when spilled.

Section 10: Stability and Reactivity

- Chemical Stability:** Stable under normal conditions.
- Conditions to Avoid:** Incompatible materials, prolonged exposure to air.
- Incompatible Materials:** Acids and acidic compounds, active metals, ammonium compounds, glass, nitro compounds, organic halides, wood and paper products.
- Hazardous Decomposition Products:** Oxides of potassium and sodium.
- Hazardous Reactions:** May react violently with acids.
Dissolves active metals, with evolution of hydrogen.
May generate ammonia from ammonium compounds.
May react violently with organic halides.
May form shock-sensitive salts with nitro compounds.

Section 11: Toxicological Information

Health Effects:

No data available for the mixture. Information presented relates to individual ingredients.

- Acute:**
- Swallowed:** Corrosive. May cause serious burns to the mouth, throat and gastrointestinal system. May cause a burning pain in the throat and epigastrium, nausea, vomiting, abdominal pains and diarrhoea (occasionally bloody), fall in blood pressure, death. May cause burns and perforation of the stomach and intestines, and the sites of subsequent scarring have been associated with the development of stomach cancer.
 - Skin:** Corrosive. May cause severe, deep burns. Mists or aerosols may cause small burns.
 - Eyes:** Corrosive. Risk of serious eye damage, and permanent impairment of sight. May cause redness, pain and blurred vision. Liquid splashes into the eye may rapidly cause severe tissue damage and deep burns.
 - Inhaled:** An unlikely route owing to the low volatility of ingredients. Inhalation of aerosols may cause serious lung damage, and pulmonary oedema (fluid build-up in the lungs). Onset of symptoms may be delayed.
- Chronic:** Repeated slight skin exposure may lead to irritation, dermatitis and/or burns.

LD₅₀: Potassium hydroxide 273 mg/kg oral, rat.
Sodium metasilicate 1,153 mg/kg oral, rat.
770 mg/kg oral, mouse.

Section 12: Ecological Information

Ecotoxicity: Harmful to aquatic organisms.
Persistence and degradability: No data.
Mobility: Readily transported by water.
Environmental Fate: No data.
Bioaccumulative potential: No data.
Other adverse environmental effects: No data.

Section 13: Disposal Considerations

The generator of any wastes from this product is responsible for its proper classification, transport and disposal.

Consult appropriate local and State regulations.

Disposal methods and containers:

Avoid disposal to natural waters or the environment.
Do not use containers of aluminium, tin, zinc, galvanised iron, or glass.

Special precautions for landfill or incineration:

Unsuitable for incineration.
May be unsuitable for some landfill sites.

Section 14: Transport Information

UN Number: UN 1719
UN Proper shipping name: Caustic alkali liquid, n.o.s.
(potassium hydroxide, disodium trioxosilicate)
Class and subsidiary risk: 8 Corrosive.
Packaging group: II
Special precautions for user: Do not store or transport with dangerous goods of classes 1, 4.3, 5.1, 5.2, 7, 8 (acids), foodstuff or foodstuff empties.
HAZCHEM Code: 2 R

Material for export: Regulated.
Refer to **IMO/IMDG** and **IATA/ICAO**.

Section 15: Regulatory Information

Poisons (SUSDP): Schedule 6
Potassium hydroxide > 5 %.

Dangerous Goods: Yes. UN 1719 8/II 2 R.

Carcinogen: **Australia** **IARC** **NTP** **RTECS**
No. No. No. No.

Agricultural and Veterinary Chemicals Act: Not applicable.

Australian Inventory of Chemical Substances (AICS): Listed.

Other National/International Regulations: No data.

Section 16: Other information

Date of MSDS update: July 2007
Complete review and re-write of all sections.

Abbreviations:

NOHSC - National Occupational Health and Safety Commission.
ACGIH - American Conference of Governmental Industrial Hygienists.
MAK - Maximum workplace concentration - Germany,
(*maximale Arbeitsplatzkonzentration*)
IARC - International Agency for Research on Cancer (France).
NPT - National Toxicology Program (USA).
RTECS - Registry of Toxic Effects of Chemical Substances.

Literature references:

Other Available Sources of Data:

National Code of Practice for the Preparation of Material Safety Data Sheets 2nd Edition [2011(2003)] - NOHSC.
Australian Dangerous Goods Code.
Standard for the Uniform Scheduling of Drugs and Poisons - AHMAC.
Exposure Standards for Atmospheric Contaminants in the Occupational Environment [1003]- NOHSC.
List of Designated Hazardous Substances [1005] - NOHSC.
Merck Index - Merck Inc.
Sax's Dangerous Properties of Industrial Materials - Lewis.
Handbook of Toxic and Hazardous Chemicals and Carcinogens - Sittig.
Handbook of Reactive Chemical Hazards - Bretherick.
Hawley's Condensed Chemical Dictionary - Wiley Interscience.
AUSREG's Chemical Data Package for PCs - AUSREG Consultancy.