

1. IDENTIFICATION OF MATERIAL AND SUPPLIER

Product Name: Dishwasher Liquid

Other Names:

Recommended use of the chemical and restrictions on use: A highly concentrated low foaming liquid detergent designed for use in commercial dishwashing machines via automatic dispensing equipment. NOT for manual use.

Supplier: Stelco Chemicals International Pty Ltd

ABN: 17 151 834 347

Street Address: 46 – 48 Henderson Road
Rowville VIC 3178
Australia

Telephone: 61 3 9757 3100

Facsimile: 61 3 9763 8243

Emergency Telephone Number: 0412 318 882

2. HAZARDS IDENTIFICATION

Classified as Hazardous according to the criteria of the WHS Regulations.

GHS classification:

Acute toxicity – category 4
Skin corrosion/irritation – category 1A
Serious eye damage/Eye irritation – category 1
Acute aquatic toxicity – category 1
Chronic aquatic toxicity – category 1

Signal word: DANGER

Pictograms:

GHS05: Corrosion

GHS07: Exclamation mark

GHS09: Environment



Hazard statements:

EUH031: Contact with acids liberates toxic gas.
H302: Harmful if swallowed.
H314: Causes severe skin burns and eye damage.
H318: Causes serious eye damage.
H400: Very toxic to aquatic life.
H410: Very toxic to aquatic life with long lasting effect.

Precautionary statements:

P264: Wash hands thoroughly after handling.

P270: Do not eat, drink or smoke when using this product.

P260: Do not breathe dusts or mists.

P280: Wear protective gloves/protective clothing/eye protection/face protection.

Response:

P301 + P312 + P330 + P331: IF SWALLOWED: Call a POISON CENTRE or doctor/ physician if you feel unwell. 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.

P363: Wash contaminated clothing before use.

P304 + P340 + P310: 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.

P321: Specific treatment (see First Aid Measures on Safety Data Sheet).

P305 + P351 + P338 + P310: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTRE or doctor/physician.

Storage:

P405: Store locked up.

Disposal:

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

3. COMPOSITION AND INFORMATION ON INGREDIENTS

Components	CAS Number	Proportion
Potassium Hydroxide	1310-58-3	10-25%
Sodium Hypochlorite	7681-52-9	5-10%
Non – Hazardous components		>60%

4. FIRST AID MEASURES

Description of first aid measures

For advice, contact a Poisons Information Centre (Phone Australia 131 126) or a doctor.

Inhalation:	Remove victim from 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. Seek medical advice if effects persist.
Skin contact:	Wash contaminated skin with plenty of water. Remove contaminated clothing and wash before reuse. If irritation occurs seek medical advice.
Eye contact:	Immediately irrigate with copious quantities of water for at least 15 minutes. Eyelids to be held open. Remove clothing if contaminated and wash skin. Seek immediate medical assistance.
Ingestion:	Rinse mouth with water. Give water to drink. Do NOT induce vomiting. Seek medical assistance.

Symptoms caused by exposure

Symptoms/effects:

No adverse health effects expected if the product is handled in accordance with this Safety Data Sheet and the product label.

Symptoms that may arise if the product is mishandled are:

Symptoms/effects after inhalation:

Cough. Sore throat. Burning sensation. Shortness of breath.

Symptoms/effects after skin contact:

Redness. Pain. Serious skin burns. Blisters.

Symptoms/effects after eye contact:

Redness. Pain. Blurred vision. Severe burns.

Symptoms/effects after ingestion:

Abdominal pain. Burns in mouth and throat. Burning sensation in the throat and chest. Nausea. Vomiting. Shock or collapse.

Chronic symptoms:

Can irritate the lungs. Repeated exposure may cause bronchitis to develop with coughing, phlegm, and/or shortness of breath.

Skin allergy may occur with itching, redness and/or a rash.

Medical attention and special treatment

Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing equipment:

Not combustible, however, if involved in a fire use: Water fog (or if unavailable fine water spray), foam, dry agent (carbon dioxide, dry chemical powder).

Specific hazards arising from the chemical:

Non-combustible material.

Hazchem Code: 2X**Special protective equipment and precautions for firefighters:**

Not combustible. Can decompose upon heating, liberating toxic fumes including those of chlorine. If safe to do so, remove containers from path of fire. Keep containers cool with water spray. Fire fighters to wear self-contained breathing apparatus if risk of exposure to products of decomposition.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures:

Slippery when spilt. Avoid accidents clean up immediately. Clear area of all unprotected personnel. Wear protective equipment to prevent skin and eye contamination and inhalation of vapour. Work up wind or increase ventilation.

Environmental precautions:

Avoid release to the environment. If contamination of sewers or waterways has occurred advise local emergency services.

Methods and materials for containment and cleaning up:

Contain – prevent run off into drains and waterways. Use absorbent (soil, sand or other inert material) 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 of vapours. Keep out of reach of children.

Conditions for safe storage:

Store in a cool (below 40°C), dry place out of direct sunlight in a well-ventilated area. Store away from acids, reducing agents. Store away from foodstuffs.

This material is Scheduled Poison S5 and Dangerous Good Class 8 and must be stored, maintained and used in accordance with the relevant regulations

8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

Exposure control measures:

No value assigned for this specific material by Safe Work Australia. However, Exposure Standard(s) for constituents(s):

Potassium hydroxide: TWA = 2 mg/m³ Peak limitation

Chlorine: TWA = 3mg/m³ Peak Limitation

As published by the National Occupational Health and Safety Commission.

TWA – The time-weighted average airborne concentration over an eight-hour working day, for a five-day working week over an entire working life.

Peak Limitation – a ceiling concentration which should not be exceeded over a measurement period which should be as short as possible but not exceeding 15 minutes.

These 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 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.

Engineering controls:

Ensure ventilation is adequate and that air concentrations of components are controlled below quoted Exposure Standards. Use with local exhaust ventilation. Keep containers closed when not in use.

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

OVERALLS, SAFETY SHOES, CHEMICAL GOGGLES, GLOVES(S), DUST MASK. Avoid skin and eye contact and inhalation of vapour. Wear overalls, chemical goggles and impervious gloves. If risk of inhalation exists, wear air supplied 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 storing or reusing.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance and Odour: Liquid, pale yellow with slight chlorine odour.

Specific Gravity: 1.2

pH (10% aq. soln.): >12

Solubility in water: Miscible

10. STABILITY AND REACTIVITY

Reactivity:	Sodium Hypochlorite is a strong oxidizing agent. Water soluble. Decomposes into chlorine and oxygen gases in hot water. When heated or on contact with acids, they produce highly toxic fumes of chlorine gas. Can react with sulfuric acid to produce heat and chlorine gas. Potassium Hydroxide is a strong base dissolved in water. Reacts exothermically with all acids. Slowly dissolves glass. Attacks aluminium and zinc to generate flammable hydrogen gas.
Chemical stability:	Stable under normal ambient and anticipated storage and handling conditions of temperature and pressure. The amount of chlorine diminished with time.
Possibility of hazardous reactions:	Hazardous polymerisation will not occur. Reacts exothermically with acids liberating toxic gas (chlorine).
Conditions to avoid:	Avoid contact with foodstuffs. Avoid contact with acids.
Incompatible materials:	Incompatible with acids, metals, metal salts, ethylene diamine tetra acetic acid.
Hazardous decomposition products:	Chlorine.

11. TOXICOLOGICAL INFORMATION

Information on toxicological effects

Acute toxicity:

POTASSIUM HYDROXIDE: Oral: LD50 (rat): 284mg/kg.

SODIUM HYPOCHLORITE: Oral: Not classified, LD50(rat): 8910 mg/kg bw, > 5000 mg/kg bw, 8200 mg/kg bw. Dermal: Not classified, LD50 (rabbit): > 10000 mg/kg.

Skin corrosion/irritation:

POTASSIUM HYDROXIDE: classified as Category 1B since it was corrosive in rabbit test and that it has corrosivity on humans. Based on human data, concentrations of 0.5–2.0 % are irritating to the skin, while a concentration greater than 2.0 % is corrosive

SODIUM HYPOCHLORITE: classified into Category 1. In rabbit tests, irritation scores for erythema and edema (8 maximum) were 1.2 for 2% solution, 5.3 for 20% solution, 5.2 for 35% solution, and 5.3 for 50% solution.

Serious eye damage/irritation:

POTASSIUM HYDROXIDE: classified as Category 1, since there are statements of irreversible damage with humans, and of corrosive in rabbit test.

SODIUM HYPOCHLORITE: In Draize tests using rabbits treated with 5% solution, scores were 11 out of 110 for the dose of 0.01 ml, and 40 out of 110 for the dose of 0.1 ml. In other Draize tests using rabbits treated with 50% solution, the score was 48 out of 110 on Day 21 after the application in rabbits whose eyes were not rinsed (the scores were 27 out of 110 in rabbits whose eyes were rinsed 4 minutes after the application, and 0 out 110 in rabbits whose eyes were rinsed 21 days after the application), which is considered highly irritating.

Respiratory or skin sensitisation: No sufficient data available.

Germ cell mutagenicity: Not expected to be mutagenic.

Cancerogenicity: Not expected to be carcinogenic.

Reproductive toxicity: Not expected to impair fertility.

Specific Target Organ Toxicity (STOT): - single exposure:

POTASSIUM HYDROXIDE: classified into Category 1 (respiratory systems) according to the statement that inhalation exposure to the particles or the mist will cause such damages as burns to the nose and bronchial tube and result even in lung edemas.

SODIUM HYPOCHLORITE: classified into Category 3 (respiratory tract irritation) based on the description that the substance causes coughing and choking through inhalation of the mist, and it may cause severe respiratory tract irritation and pulmonary edema. Furthermore, several cases of accidental intake of bleach by humans were documented in which corrosiveness of the substance affected the esophagus and stomach. Also, the intake of the solution was reported to have caused hemorrhagic ulcer accompanied with necrosis of the stomach and intestine.

Specific Target Organ Toxicity (STOT): - repeated exposure: No data available

Aspiration hazard: POTASSIUM HYDROXIDE: classified into Category 1 based on the statement of die of pneumonia by aspiration.

Likely routes of exposure: skin and/or eye contact

Early symptoms and delayed health effects from exposure:

- Ingestion:** Abdominal pain. Difficulty in swallowing. Possible esophageal perforation. Irritation of the oral mucous membranes. Burns to the gastric/intestinal mucosa. Blood in vomit. AFTER ABSORPTION OF LARGE QUANTITIES: Change in the blood composition. Disturbances of heart rate. FOLLOWING SYMPTOMS MAY APPEAR LATER: Bleeding of the gastrointestinal tract. Low arterial pressure. Blood in stool. Shock.
- Skin contact:** Contact may result in irritation, redness, pain, caustic burns/corrosion of the skin. Slow-healing wounds. Prolonged or repeated contact may result in ulceration.
- Eye contact:** Highly corrosive. Contact may result in irritation, lacrimation, pain, redness, conjunctivitis and corneal burns with possible permanent damage. Blindness.
- Inhalation:** Dry/sore throat. Corrosion of the upper respiratory tract. Respiratory difficulties. FOLLOWING SYMPTOMS MAY APPEAR LATER: Possible oedema of the upper respiratory tract. Possible inflammation of the respiratory tract. Possible laryngeal spasm/oedema. Risk of pneumonia.

12. ECOLOGICAL INFORMATION

- Ecotoxicity:** SODIUM HYPOCHLORITE: 24h EC50 = 0.005 mg/L (chlorine concentration) for crustaceans (a species of the genus, Ceriodaphnia).
- Persistence and degradability:** Miscible with water. Hypochlorites are non-persistent in the environment.
- Bioaccumulative potential:** No accumulation potential as hypochlorite gradually decomposes into a salt and oxygen.
- Mobility in soil:** Miscible with water. May leach to groundwater with resultant toxicity to aquatic organisms.
- Other adverse effects:** May release toxic chlorine gas.

13. DISPOSAL CONSIDERATIONS

Disposal methods:

Refer to State Land Waste Management Authority. Decontamination and destruction of containers should be considered.

14. TRANSPORT INFORMATION

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



UN No: 3266
 Proper shipping name or technical name: CORROSIVE LIQUID, BASIC, INORGANIC, N.O.S (CONTAINS POTASSIUM HYDROXIDE & HYPOCHLORITE)
 Transport hazard class: 8 Corrosive
 Packing Group number: II
 Hazchem or Emergency Action Code: 2X

Marine Transport: Classified as Dangerous Goods by the criteria of the International Maritime Dangerous Goods Code (IMDG) for transport by sea.

UN No: 3266
 Proper shipping name or technical name: CORROSIVE LIQUID, BASIC, INORGANIC, N.O.S (CONTAINS POTASSIUM HYDROXIDE & HYPOCHLORITE)
 Transport hazard class: 8 Corrosive
 Packing Group number: II
 Hazchem or Emergency Action Code: 2X

Air Transport: Classified as Dangerous Goods by the criteria of the International Air Transport Association (IATA) for transport by air.

UN No: 3266
 Proper shipping name or technical name: CORROSIVE LIQUID, BASIC, INORGANIC, N.O.S (CONTAINS POTASSIUM HYDROXIDE & HYPOCHLORITE)
 Transport hazard class: 8 Corrosive
 Packing Group number: II
 Hazchem or Emergency Action Code: 2X

15. REGULATORY INFORMATION

Poisons Schedule Number: S5

All the constituents of this material are listed on the Australian Inventory of Chemical Substances (AICS).

16. OTHER INFORMATION

This Safety Data sheet has been prepared by Stelco Chemicals International Pty Ltd.

This SDS summarises at the date of issue our best knowledge of the health and safety information of the product, and in particular how to safely handle and use the product in the workplace. As each workplace is different each user must, prior to use, review this SDS in the context of how the user intends to handle and use the product in the workplace.

If clarification or further information is needed to ensure that an appropriate assessment can be made, the user should contact Stelco Chemicals International Pty Ltd at the contact details on page 1.