



1. Identification

Product identifier	Auto Dishwashing Liquid, Descaling	
Other means of identification	Chemwell material code: 1=01=07	
Recommended use of the chemical and restrictions on use	A highly concentrated, low foaming detergent, formulated for use in commercial dishwashing machines. This product is designed to remove most stains. It will leave the machines contents dry and streak free. It contains a descaling agent.	
Details of manufacturer or importer	Company Name	Chemwell Pty Ltd ABN 94 155 544 040
	Address	3 Clive St, Springvale, VIC, 3171
	Phone	03 9558 5678
	Email	chemwell@chemwell.com.au
	Website	www.chemwell.com.au
Emergency phone number	Police, Fire & Ambulance	000
	Poisons Information Centre	13 11 26

2. Hazard(s) Identification

This material is hazardous according to criteria of Safe Work Australia.

Considered as a 'Dangerous Good' by the Australian Code for transport of Dangerous Goods by Road and Rail.

Classification of the hazardous chemical	Acute Aquatic Toxicity 2 Acute Toxicity, Oral 4 Corrosive to metals 1 Eye Damage/Irritation 1 Skin Corrosion/Irritation 1
Hazard symbols	 
Signal word(s)	Danger
Hazard statement(s)	H290 - May be corrosive to metals H302 - Harmful if swallowed H314 - Causes severe skin burns and eye damage H401 - Toxic to aquatic life

Precautionary statement(s)	Prevention	<p>P234 - Keep only in original container.</p> <p>P260 - Do not breathe dust/fumes/gas/mist/vapours/spray.</p> <p>P264 - Wash thoroughly after handling.</p> <p>P280 - Wear protective gloves/protective clothing/eye protection/face protection.</p> <p>P270 - Do not eat, drink or smoke when using this product.</p> <p>P273 - Avoid release to the environment.</p>
	Response	<p>P301+312 - IF SWALLOWED: Call a POISON CENTER or doctor if you feel unwell.</p> <p>P330 - Rinse mouth.</p> <p>P301+330+331 - IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.</p> <p>P303+361+353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ shower.</p> <p>P363 - Wash contaminated clothing before reuse.</p> <p>P304+340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing.</p> <p>P310 - Immediately call a POISON CENTER or doctor.</p> <p>P321 - Specific treatment (see ... on this label).</p> <p>P305+351+338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do – continue rinsing.</p>
	Storage	<p>P405 - Store locked up.</p> <p>P406 - Store in a corrosive resistant container with a resistant inner liner.</p>
	Disposal	<p>P501 - Dispose of contents/container to in accordance with local regulation.</p>

3. Composition and Information on Ingredients

Name	Proportion
Potassium Hydroxide	10-30%
Tetrapotassium Pyrophosphate	<10%
Sodium Silicate Solution	<10%
Sodium Hypochlorite 12.5% solution	<10%

Disclosure of ingredient names is not required by the WHS Regulations for those ingredients that meet only physicochemical and/or environmental hazard classifications, or for nonhazardous ingredients.

There is no requirement to disclose the identity of ingredients for the following GHS health hazard categories because they fall outside the scope of the WHS Regulations:

- Acute toxicity – Category 5 (oral, dermal and inhalation)
- Skin; corrosion / irritation – Category 3
- Serious eye damage / eye irritation – Category 2B
- Aspiration hazard – Category 2
- Aquatic toxicity (all categories)
- Flammable gas – Category 2
- Ozone depletion.

4. First Aid Measures

Swallowed	Immediately rinse mouth out thoroughly with water and give water to drink. DO NOT induce vomiting. Seek medical advice.
Eye	Immediately irrigate eyes with large amounts of water for at least 15 minutes with eyelids held open. Take care not to rinse contaminated water into the non-affected eye. Removal of contact lenses after an eye injury should only be undertaken by skilled personnel. Seek medical advice.
Skin	Immediately wash affected area with large amounts of water. Remove any contaminated clothing and wash before re-use. Seek medical advice if pain or irritation persists.
Inhaled	For all but minor symptoms seek medical advice. Not considered a normal feature of use.
First Aid Facilities	Standard first aid facilities.
Advice to Doctor	Treat symptomatically based on judgement of doctor and individual reactions of patient.

5. Fire Fighting Measures

Suitable extinguishing equipment	Use water spray, alcohol-resistant foam, dry agent (carbon dioxide, dry chemical powder).
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<p>Specific hazards arising from the chemical</p>	<p>During a fire, smoke may contain the original material in addition to combustion products of varying composition which may be toxic and/or irritating. Hazardous products of combustion for each ingredient are:</p> <p>Potassium Hydroxide: Gives off hydrogen by reaction with metals.</p> <p>Tetrapotassium Pyrophosphate: Oxides of phosphorus, potassium oxides.</p> <p>Sodium Silicate Solution: Aqueous solution, not flammable under normal conditions of use.</p> <p>Flammable hydrogen gas may be produced on prolonged contact with metals such as aluminium, tin, lead and zinc.</p> <p>Sodium Hypochlorite 12.5% solution: Under fire conditions this product may emit toxic and/or irritating vapours and gases including chlorine gas and hydrogen chloride gas.</p>
<p>Special protective equipment and precautions for fire fighters</p>	<p>Wear positive-pressure, self-contained breathing apparatus (SCBA) and protective fire fighting clothing (includes fire fighting helmet, coat, trousers, boots, and gloves). Avoid contact with this material during fire fighting operations. If contact is likely, change to full chemical resistant fire fighting clothing with self-contained breathing apparatus. If this is not available, wear full chemical resistant clothing with self-contained breathing apparatus and fight fire from a remote location. For protective equipment in post-fire or non-fire clean-up situations, refer to the relevant section.</p> <p>Container may rupture from gas generation in a fire situation. Violent steam generation or eruption may occur upon application of direct water stream to hot liquids.</p> <p>HazChem (EAC): 2X</p>

6. Accidental Release Measures

<p>Personal precautions, protective equipment and emergency procedures</p>	<p>Personnel involved in the clean-up should wear protective clothing as listed in section 8. Use clean, non-sparking tools and equipment. Avoid breathing vapours and contact with skin and eyes. Remove contaminated clothing and wash before reuse.</p> <p>Eliminate all sources of ignition. Increase ventilation.</p> <p>Avoid walking through spilled product as it may be slippery. Stop leak if safe to do so. Clean up all spills immediately. Clear area of all unnecessary personnel.</p>
<p>Environmental precautions</p>	<p>Prevent from entering into soil, ditches, sewers, waterways and/or groundwater. See Section 12, Ecological Information.</p>
<p>Methods and materials for containment and cleaning up</p>	<p>Avoid walking through spilled product as it may be slippery. Stop leak if safe to do so. This may involve tipping container on its side. Clean up all spills immediately. Clear area of all unnecessary personnel. If safe to do so repack leaking container into new container.</p> <p>Place inert, absorbent, non-combustible material onto spillage. Wipe up. Place in a suitable, labelled container for waste disposal.</p>

7. Handling and Storage

Handling	Observe good personal hygiene practices and recommended procedures. Wash thoroughly after handling. Check Section 8 for details of personal protective measures, and make sure that those measures are followed. The measures detailed below under "Storage" should be followed during handling in order to minimise risks to persons using the product in the workplace. Also, avoid contact or contamination of product with incompatible materials listed in Section 10.
Storage	Store in a cool, well ventilated area. Check containers periodically for corrosion and leaks. Containers should be kept closed in order to minimise contamination. Containers should be protected against any form of physical damage. Have appropriate fire extinguishers available in and near storage area. Make sure that the product does not come into contact with substances listed under "Incompatibilities" in Section 10.

8. Exposure Controls and Personal Protection

Exposure standards	<p>No value assigned for this specific material by Safe Work Australia. However, Exposure Standard(s) for ingredient(s) are:</p> <p>Potassium Hydroxide: No Data Available</p> <p>Tetrapotassium Pyrophosphate: No Data Available</p> <p>Sodium Silicate Solution: Sodium Silicate: TWA - 5 mg/m³, STEL - 5 mg/m³</p> <p>Sodium Hypochlorite 12.5% solution: Chlorine: Peak Limitation = 3 mg/m³ (1 ppm) Sodium hydroxide: Peak Limitation = 2 mg/m³</p>
Biological limits	<p>Biological limits for ingredient(s) are:</p> <p>Potassium Hydroxide: No information available on biological limit values for this product.</p> <p>Tetrapotassium Pyrophosphate: No information available on biological limit values for this product.</p> <p>Sodium Silicate Solution: None specified.</p>

	Sodium Hypochlorite 12.5% solution: None specified.
Engineering controls	Engineering controls are used to remove a hazard or place a barrier between the worker and the hazard. Well-designed engineering controls can be highly effective in protecting workers and will typically be independent of worker interactions to provide this high level of protection. The basic types of engineering controls are: Process controls which involve changing the way a job activity or process is done to reduce the risk. Enclosure and/or isolation of emission source which keeps a selected hazard "physically" away from the worker and ventilation that strategically "adds" and "removes" air in the work environment.
Personal protective equipment (PPE)	Safety glasses with side shields. Chemical protective gloves.

9. Physical and Chemical Properties

Appearance (physical state, colour etc.)
Odour
Odour threshold
pH
Melting point/freezing point
Initial boiling point and boiling range
Flash point
Evaporation rate
Flammability (solid, gas)
Upper/lower flammability or explosive limits
Vapour pressure
Vapour density
Relative density
Solubility

Partition coefficient: n-octanol/water
Auto-ignition temperature
Decomposition temperature
Viscosity

10. Stability and Reactivity

Reactivity
Chemical stability
Possibility of hazardous reactions
Conditions to avoid
Incompatible materials
Hazardous decomposition products

11. Toxicological Information

Acute Toxicity, Dermal	Not Applicable
Acute Toxicity, Dusts And Mists	Not Applicable
Acute Toxicity, Gases	Not Applicable
Acute Toxicity, Inhalation	Not Applicable
Acute Toxicity, Oral	Category 4
Acute Toxicity, Vapours	Not Applicable
Skin Corrosion/Irritation	Category 1
Eye Damage/Irritation	Category 1
Respiratory Sensitization	Not Applicable
Skin Sensitization	Not Applicable
Germ Cell Mutagens	Not Applicable
Carcinogenicity	Not Applicable
Reproductive Toxicity	Not Applicable
Specific Target Organ Toxicity RE	Not Applicable
Specific Target Organ Toxicity SE	Not Applicable

Toxicological Information for Potassium Hydroxide**General Information:**

Acute toxicity LD50 Oral - rat - 333 mg/kg

Skin corrosion/irritation Skin - rabbit Result: Severe skin irritation - 24 h

Serious eye damage/eye irritation Eyes - rabbit Result; Corrosive to eyes (OECD Test Guideline 405)

Respiratory or skin sensitisation no data available

Germ cell mutagenicity no data available

Carcinogenicity IARC; No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

Eye Irritant: Causes severe burns.

Ingestion: Harmful if swallowed. Causes severe burns. Causes vomiting, severe pain, diarrhea.

Inhalation: Causes severe burns. Causes difficulty breathing, low blood pressure, sleepiness, cyanoderma and pulmonary congestion, cough, pain. If enough is inhaled can cause lung edema after 5-72 hours.

Skin Irritant: Causes severe burns.

Carcinogen Category: No Data Available

Toxicological Information for Tetrapotassium Pyrophosphate

General Information LD50 Dermal - rabbit - >4640mg/kg

Eyes - rabbit

Result: Moderate eye irritation

(OECD Test Guideline 405)

Eye Irritant Causes cause severe irritation. May cause redness, burns.

Ingestion May be harmful if swallowed. May cause burns to mouth and oesophagus, nausea, vomiting and diarrhoea.

Inhalation May be harmful if inhaled. Causes respiratory tract irritation.

Skin Irritant May be harmful if absorbed through skin. Causes moderate skin irritation.

Carcinogen Category No Data Available

Toxicological Information for Sodium Silicate Solution**Acute Toxicity - Oral**

LD50, rat: 1280 mg/kg (as 100%).

The acute oral toxicity of this product has not been tested. When sodium silicates were tested on a 100% solids basis, their single dose acute oral LD50 in rats ranged from 1280 mg/kg (above) to 3200 mg/kg. The acute oral lethality resulted from nonspecific causes. These products contain 30-60% sodium silicate this each overall product has an acute oral toxicity LD50 (rat): >2000 mg/kg.

Serious eye damage/irritation

Severe irritant. Produced corneal, iridal and conjunctival irritation.

Skin corrosion/irritation

Irritant. When tested for primary skin irritation potential, this material produced irritation with a primary irritation index of 3 to abraded skin and 0 to intact skin. Human experience confirms that irritation occurs when this material gets on clothes at the collar, cuffs or other areas where abrasion may occur.

Subchronic/Chronic Toxicity

In a study of rats fed sodium silicate in drinking water for three months at 200, 600 and 1800 ppm, changes were reported in the blood chemistry of some animals but no specific changes to the organs of the animals due to sodium silicate administration were observed in any of the dosage groups. Another study reported adverse effects to the kidneys of dogs fed sodium silicate in their diet at 2.4 g/kg/day for 4 weeks, whereas rats fed the same dosage did not develop any treatment-related effects. Decreased numbers of births and survival to weaning was reported for rats fed sodium silicate in their drinking water at 600 and 1200 ppm.

Other Information

Special Studies: Sodium silicate was not mutagenic to the bacterium E. Coli when tested in a mutagenicity bioassay. There are no known reports of carcinogenicity of sodium silicates. Frequent ingestion over extended periods of time of gram quantities of silicates is associated with the formation of kidney stones and other siliceous urinary calculi in humans. Sodium silicate is not listed by IARC, NTP or OSHA as a carcinogen.

Toxicological Information for Sodium Hypochlorite 12.5% solution

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 mists or aerosols may produce respiratory irritation. Delayed (up to 48 hours) fluid build-up in the lungs may occur.

Acute toxicity: No LD50 data available for the product. For the constituent SODIUM HYPOCHLORITE: Oral LD50 (mice): 5800 mg/kg

Serious eye damage/irritation:

Moderate irritant (rabbit). Standard Draize test

Chronic effects: No information available for the product.

12. Ecological Information

Acute Aquatic Toxicity	Category 2
Chronic Aquatic Toxicity	Not Applicable

Ecological Information for Water

None specified.

Ecological Information for Potassium Hydroxide

Ecotoxicity Toxicity to fish LC50 - *Gambusia affinis* (Mosquito fish) - 80 mg/l - 96 h

Persistence/Degradability The methods for determining the biological degradability are not applicable to inorganic substances.

Mobility No Data Available

Environmental Fate Do NOT let product reach waterways, drains and sewers.

Bioaccumulation Potential No Data Available

Environmental Impact No Data Available

Ecological Information for Tetrapotassium Pyrophosphate

Ecotoxicity No ecological information available for this product

Persistence/Degradability No information available on persistence/degradability for this product.

Mobility No information available on mobility for this product.

Environmental Fate Do NOT let product reach waterways, drains and sewers

Bioaccumulation Potential No information available on bioaccumulation for this product

Environmental Impact No Data Available

Ecological Information for Sodium Silicate Solution

Ecological Information Avoid contaminating waterways. Soluble in water. Sinks and mixes with water. Only water will evaporate from this material.

Ecotoxicity The following data is reported for sodium silicates on a 100% solids basis: A 96 hour median tolerance for fish (*Gambusia affinis*) of 2320 ppm; a 96 hour median tolerance for water fleas (*Daphnia magna*) of 247 ppm; a 96 hour median tolerance for snail eggs (*Lymnea*) of 632 ppm; and a 96 hour median tolerance for Amphipoda of 160 ppm. These products contain 30-60% sodium silicate.

Persistence and degradability This material is not persistent in aquatic systems but its high pH when undiluted or unneutralised is acutely harmful to aquatic life. Diluted material rapidly depolymerises to yield dissolved silica in a form that is indistinguishable from natural dissolved silica. It does not contribute to BOD. This material does not bioaccumulate except in species that use silica as a structural material such as diatoms and siliceous sponges. Neither silica nor sodium will appreciably bioconcentrate up the food chain.

Mobility Expected to be mobile in soil. Diluted material rapidly depolymerises to yield dissolved silica in a form that is indistinguishable from natural dissolved silica.

Ecological Information for Sodium Hypochlorite 12.5% solution

Ecotoxicity Avoid contaminating waterways.

For SODIUM HYPOCHLORITE:

Persistence/degradability: This material is biodegradable.

Aquatic toxicity: Very toxic to aquatic organisms.

48hr LC50 (fish): 0.07 - 5.9 mg/L.

Ecological Information for Disodium Ethylene Diamine Tetraacetate Dihydrate

Ecotoxicity No Data Available

Persistence/Degradability No Data Available

Mobility No Data Available

Environmental Fate Avoid contaminating waterways, drains and sewers.

Bioaccumulation Potential No Data Available

Environmental Impact No Data Available

13. Disposal considerations

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.

14. Transport Information

Considered as a 'Dangerous Good' by the Australian Code for transport of Dangerous Goods by Road and Rail.

UN Number	1719
Proper shipping name or Technical Name	Caustic alkali liquid, n.o.s.
Transport hazard class	8
Packing Group	I
Environmental hazards for Transport Purposes	Classified as having an acute aquatic toxicity.
Special Precautions for user	None specified
Additional Information	None specified
Hazchem or Emergency Action Code	2X

15. Regulatory Information

No information in this section.

16. Other information

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