Material Safety Data Sheet
Crystal Clear

1. STATEMENT OF HAZARDOUS NATURE, CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Classified as hazardous according to criteria of NOHSC Australia. Classified as Dangerous Goods Class 8 according to the ADG Code.

Product Use:
Detergent for use in both manual and automatic feed glass washing machines. See label or application sheet for details of methods of use.

Supplier:
Trojan Hospitality Pty Limited
ABN: 15 002 478 800
Address: 2-6 Perry Street CAMPSIE NSW 2194
Telephone: +61 2 9789 3366 Facsimile: +61 2 9787 3232
Emergency Telephone: 1800 033 111 (All Hours)

2. INGREDIENTS

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>CAS No.</th>
<th>CONCENTRATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Potassium hydroxide</td>
<td>1310-58-3</td>
<td>12.5%</td>
</tr>
<tr>
<td>Amphoteric surfactant</td>
<td>Confidential</td>
<td>&lt; 5%</td>
</tr>
<tr>
<td>Sequestering agent</td>
<td>Confidential</td>
<td>&lt; 10%</td>
</tr>
<tr>
<td>Alkylene glycol</td>
<td>Confidential</td>
<td>&lt; 5%</td>
</tr>
<tr>
<td>Other ingredients non-hazardous according to NOHSC criteria</td>
<td>Balance to 100%</td>
<td></td>
</tr>
</tbody>
</table>

3. HEALTH HAZARDS IDENTIFICATION

APPROVED CRITERIA:
Classification: Classified as a Workplace Hazardous Substance
SUSDP Classification: Schedule 6 Poison
ADG Code Classification: Classified as Class 8, Packing Group II
UN No.: 3266
HAZCHEM Code: 2R
Initial Emergency Procedure Guide: 37

POTENTIAL HEALTH EFFECTS
Health effects are likely to occur from overexposure. No adverse health effects expected if safety precautions are followed.

Acute Swallowed: Ingestion causes severe burns of the mouth and the oesophagus, nausea, vomiting and oedema of the pharynx and in the worst case may cause perforation of the gastrointestinal tract and heart failure may occur.

Eye: Contact of this substance with the eyes may cause severe and permanent damage with possible loss of sight.

Skin: Contact of this substance with the skin causes severe burns and possible necrosis (tissue death). Repeated contact with dilute solution may cause de-fatting of skin and lead to contact dermatitis.

Inhaled: Inhalation of mist or aerosol may cause pulmonary congestion, breathing difficulties and burns to throat and mucus membranes of nose. Possible loss of consciousness.

Chronic (long-term) effects: None known. No ingredient reported as sensitizing or carcinogenic in animal tests.
Carcinogen status: Not classified by NOHSC, NTP or IARC

4. FIRST AID MEASURES
For advice, contact a Poison Information Centre (Phone 131 126 anywhere in Australia), or a doctor.

Inhalation: If mist or aerosol has been inhaled, remove from contaminated area. Apply artificial respiration if not breathing. Consult a doctor if symptoms arise.
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Skin contact: If skin or hair contact occurs, remove contaminated clothing and flush skin and hair immediately with running water until the skin is no longer slippery. Consult a doctor if symptoms arise.

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

Ingestion: If swallowed, do NOT induce vomiting. Rinse mouth with water. Give a glass of water to drink. Consult a doctor or transfer to hospital immediately. Caustic ingredients and surfactants present represent an aspiration hazard.

5. FIRE-FIGHTING MEASURES

Fire and explosion hazards: Corrosive liquid. Not flammable or combustible.
Extinguishing media: Do not use water jets. Use extinguishing media appropriate to surrounding fire conditions. Remove containers not involved in the fire from the vicinity. Water spray/fog, dry chemical, CO₂ or foam are preferred media.
Fire-fighting: Evacuate area to upwind of fire. Summon Fire Service immediately. Emergency workers should wear full protective equipment and supplied-air breathing apparatus. Toxic or irritating particulates, vapours or gasses may be produced. Spray water on containers to cool to prevent over-pressure.

6. ACCIDENTAL RELEASE MEASURES

Accidental release: Evacuate immediate area. Wear Personal Protective Equipment detailed in Section 8. Seal leak if safe to do so. Place leaking containers in overbin, label for disposal. Contain spill with absorbent material such as dry sand. Do not allow to enter drains or sewer. Sweep up and place in labeled container. Damp down contaminated area with water, cover with absorbent and sweep up and place in labeled container. Negotiate disposal with Waste Authority for jurisdiction.

Occupational release: As for accidental release.

7. HANDLING AND STORAGE

Classified as Dangerous Goods (DG) Class 8 Corrosive Liquid. Store and transport as a Class 8 DG according to the DG regulations of the State or Territory. Store away from heat in sealed containers. Store and stow away from acidic materials. Ensure storage area is well ventilated. If more than 500L is kept on a site, a licensed DG depot would be needed under DG regulations. Do not store in direct sun. Do not smoke when handling or using.

8. EXPOSURE CONTROL AND PERSONAL PROTECTION

EXPOSURE LIMITS

NOHSC TWA: 2 mg/m³ for potassium hydroxide – also the peak limitation
NOHSC STEL:

TWA: The Time Weighted Average (TWA) is the concentration of the substance in the worker’s breathing zone, exposure to which over 8-hour days, 5-day weeks over a working lifetime, should not cause any undue discomfort or health impairment to nearly all workers.

STEL: The Short Term Exposure Limit (STEL), means a 15 minute TWA exposure which should not be exceeded and should not be repeated within 60 minutes or more than four times per day.

ENGINEERING CONTROLS
For normal use, natural ventilation is expected to be adequate. However, if mist of the concentrated liquid is formed, for example from a leaking pump gland or from heated product, contaminated air should be captured at source using local exhaust ventilation. Capture velocity of air at release point is recommended to be at least 0.5m/sec. Direction of air flow to be away from breathing zone of the operator.
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PERSONAL PROTECTION
Ventilation: Mechanical ventilation is not required in normal use where there is good natural ventilation. Avoid breathing vapours or aerosol mist. Use in well ventilated space. See note in Section 7 about storage conditions. If a spray or mist is being formed or if the product is hot or it is being used in a confined space and ventilation is inadequate, use a respirator complying with AS 1716 of type, half-face respirator with particulate cartridge.
Respirator: Not required for normal use in a well ventilated area.
Eye protection: Avoid contact with eyes. Wear eye protection complying with AS 1337 of type, safety glasses.
Skin protection: Required when decanting/handling the concentrate from original container. Avoid contact with skin. Wear impervious gloves complying with AS 2161 of type, PVC-coated cotton. Protect skin by wearing long sleeved garments.
Flammability: Not flammable or combustible.

9. PHYSICAL AND CHEMICAL PROPERTIES

State: Liquid
Colour: Colourless
Odour: No odour
Boiling Point: 100°C
Vapour pressure: hPa @ 20°C
Specific Gravity (SG): 1.19 @ 20°C
Water solubility: Miscible in all proportions
pH: > 11.5
Flash point: None
Autoignition temp.: None
Lower explosive limit: Not applicable
Upper explosive limit: Not applicable

10. STABILITY AND REACTIVITY

Reactivity: Stable.
Conditions to avoid: Contact with any acid or acidic material or oxidizing agent.
Incompatibilities: Incompatible with acids, oxidizing agents, reactive metals such as aluminium, tin and zinc. Absorbs CO₂ from the air.
Hazardous decomposition: No decomposition expected at normal temperatures.
Polymerisation: No hazardous polymerisation will occur.

11. TOXICOLOGICAL INFORMATION

Local effects of product: If in eyes, expected to cause irritation and possibly irreversible damage if not immediately washed out. Contact with skin may cause burns that take some time to become apparent. Prolonged or repeated contact of dilute solutions of the product with skin may cause de-fatting and tendency to dermatitis. Inhalation of concentrated mist expected to cause burns to respiratory tract. Ingestion will burn throat and oesophagus.
Target organs: Eyes, skin, respiratory systems and digestive tract. No data on the product mixture is available. Hazard estimated from consideration of hazardous ingredient concentration.
Hazardous ingredient: Potassium hydroxide (corrosive above 5%)
LD₅₀: oral rat 273 mg/kg
Dermal Draize standard: Severe
R-Phrases: CAUSES SEVERE BURNS - R35
RISK OF SERIOUS DAMAGE TO EYES (R41)
HARMFUL: MAY CAUSE LUNG DAMAGE IF SWALLOWED (R65)
Sensitising: Not a sensitizer.
Mutagenicity data: No data found.
Reproductive effects: No data found.
12. ECOLOGICAL INFORMATION

Does not contain heavy metals or halogenated compounds.

Toxicity to fish: For potassium hydroxide: TLM: 80 ppm/Mosquito fish/24 hr/Fresh water.
Toxicity to daphnia: No data on product.
Toxicity to algae: No data on product.
Toxicity to bacteria: No data on product.
Ready biodegradability: No data on product.

13. DISPOSAL CONSIDERATIONS

Preferred method of disposal: If the liquid cannot be salvaged and used, arrange disposal with Waste Authority to the hazardous liquid disposal facility. Landfill disposal of solids resulting from clean-up, may be possible, if approved by local authority. Triple rinse containers into the washing machine and recycle if recycling system is available.

14. TRANSPORT INFORMATION AND STORAGE CLASS

ADG Code requirements: Store and transport as Dangerous Goods of Class 8
UN No.: 3266
Proper shipping name: CORROSIVE LIQUID BASIC INORGANIC N.O.S. (Contains potassium hydroxide)
ADG Code Class: 8
ADG Code Sub-risk: None
Packing Group: II
Initial Response Guide: 37
Special provision: SP109, SP185, SP274 to be applied
Stowage: Do not stow with DG of Class 4.3, Class 5.1, Class 5.2, Class 7.

15. REGULATORY INFORMATION

AICS Status Of Ingredients: According to information available, all ingredients are present in the Australian Inventory of Chemical Substances and the product is legal to import or manufacture.

16. OTHER INFORMATION

As the product is intended for use at workplaces and is classified as a Workplace Hazardous Substance, the product is to be labeled as such, including:

R-Phrases: CAUSES BURNS (R34)
RISK OF SERIOUS DAMAGE TO EYES (R41)
HARMFUL: MAY CAUSE LUNG DAMAGE IF SWALLOWED (R65)

S-Phrases: KEEP OUT OF REACH OF CHILDREN (S2)
DO NOT BREATHE MIST OR SPRAY (S23)
AVOID CONTACT WITH SKIN AND EYES (S24/25)
IN CASE OF CONTACT WITH EYES, RINSE IMMEDIATELY WITH PLENTY OF WATER
AND CONTACT A DOCTOR OR POISON INFORMATION CENTRE (S26)
AFTER CONTACT WITH SKIN, WASH IMMEDIATELY WITH PLENTY OF COLD WATER
UNTIL ANY SLIPPERY FEEL IS REMOVED (S28)
DO NOT MIX WITH ACID OR OXIDISING AGENT (S50)

Poisons regulation requirements: SCHEDULE 6 POISON (if intended for sale to consumers, Poisons labeling also required according to SUSDP)
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ACRONYMS
ACGIH : American Conference of Government Industrial Hygienists
AICS : Australian Inventory of Chemical Substances
CAS No. : Chemical Abstracts number
IARC : International Agency for Research on Cancer
NOHSC : National Occupational Health and Safety Commission
NTP : National Toxicology Programme (USA)
OHSA : Occupational Health & Safety Administration (JSA)
R-Phrases : Risk phrases identifying main hazard of ingredient or product
S-Phrases : Safety phrases identifying main safety measures to be used
SUSDP : Standard for the Uniform Scheduling of Drugs and Poisons
UN No. : United Nations identifying number for DG

CONTACT
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Telephone : +61 2 9789 3366 Facsimile : +61 2 9787 3232

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Version Authorised By : Robert Lawecki (Director) – 19 May 2004

SUPPLIER STATEMENT
All information given in this data sheet and by the company's technical staff is compiled from the best information currently available to the company. The company accepts no responsibility whatsoever for its accuracy or for any results which may be obtained by customers. Any customer who relies upon any advice or information given in this data sheet by the company or by its technical staff does so entirely at its own risk and the company will not be liable for any loss or damage thereby suffered notwithstanding any want of care on the part of the company or its staff in compiling or giving the advice or information.