

# SAFETY DATA SHEET



## CHLORMATIC

APPLIED PRODUCTS AUSTRALIA PTY LTD

Catalogue number: AP212

Version No: 2.6

Issue date: 06/12/2016

Safety Data Sheet according to WHS and ADG requirements

### SECTION 1 IDENTIFICATION OF THE SUBSTANCE / MIXTURE AND OF THE COMPANY / UNDERTAKING

#### Product Identifier

Product name	CHLORMATIC
Synonyms	AP212
Proper shipping name	POTASSIUM HYDROXIDE SOLUTION
Other means of identification	Not Available

#### Relevant identified uses of the substance or mixture and uses advised against

Relevant identified uses	Chlorinated machine dishwashing liquid
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#### Details of the supplier of the safety data sheet

Registered company name	APPLIED PRODUCTS AUSTRALIA PTY LTD
Address	11 Gamma Close, Beresfield 2322 NSW Australia
Telephone	(02) 4966 5516
Fax	(02) 4966 5510
Website	www.actichem.com.au
Email	info@actichem.com.au

#### Emergency telephone number

Association / Organisation	Poisons Information Centre
Emergency telephone numbers	13 1126
Other emergency telephone numbers	Not Available

### SECTION 2 HAZARDS IDENTIFICATION

#### Classification of the substance or mixture

HAZARDOUS CHEMICAL. DANGEROUS GOODS. According to the WHS Regulations and the ADG Code.

Poisons Schedule	6
GHS Classification [1]	Skin Corrosion/Irritation Category 1B, Serious Eye Damage Category 1, Metal Corrosion Category 1
Legend:	1. Classified by Chemwatch; 2. Classification drawn from HSIS 3. Classification drawn from EC Directive 1272/2008 - Annex VI

#### Label elements

GHS label elements	
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SIGNAL WORD	<b>DANGER</b>
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#### Hazard statement(s)

H314	Causes severe skin burns and eye damage
H318	Causes serious eye damage
AUH031	Contact with acid liberates toxic gas
H290	May be corrosive to metals

#### Precautionary statement(s) Prevention

P260	Do not breathe vapours.
P280	Wear protective gloves / protective clothing / eye protection / face protection.
P234	Keep only in original container.

**Precautionary statement(s) Response**

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

**Precautionary statement(s) Storage**

<b>P405</b>	Store locked up
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**Precautionary statement(s) Disposal**

<b>P501</b>	Dispose of contents/container in accordance with local regulations
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**SECTION 3 COMPOSITION / INFORMATION ON INGREDIENTS****Substances**

See section below for composition of Mixtures

**Mixtures**

CAS No	%[weight]	Name
1310-73-2	10-<30	<u>sodium hydroxide</u>
1310-58-3	<10	<u>potassium hydroxide</u>
10213-79-3	<10	<u>sodium metasilicate pentahydrate</u>
7681-52-9	<10	<u>sodium hypochlorite</u>
37971-36-1	<10	<u>2-phosphonobutane-1,2,4-tricarboxylic acid</u>

**SECTION 4 FIRST AID MEASURES****Description of first aid measures**

<b>Eye Contact</b>	<p>If this product comes in contact with the eyes:          Obtain medical advice / attention without delay.          Immediately hold eyelids apart and flush the eye continuously with running water.          Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids.          Continue flushing until advised to stop by the Poisons Information Centre or a doctor, or for at least 15 minutes.          If required, transport to hospital or doctor without delay.          Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.</p>
<b>Skin Contact</b>	<p>If skin or hair contact occurs:          Obtain medical advice / attention without delay.          Immediately flush body and clothes with large amounts of water, using safety shower if available.          Quickly remove all contaminated clothing, including footwear.          Wash skin and hair with running water. Continue flushing with water until advised to stop by the Poisons Information Centre.          Transport to hospital, or doctor.</p>
<b>Inhalation</b>	<p>If fumes or combustion products are inhaled remove from contaminated area.          Obtain medical advice / attention without delay.          Lay patient down. Keep warm and rested.          Prostheses such as false teeth, which may block airway, should be removed, where possible, prior to initiating first aid procedures.          Apply artificial respiration if not breathing, preferably with a demand valve resuscitator, bag-valve mask device, or pocket mask as trained.          Perform CPR if necessary.          Transport to hospital, or doctor.          Inhalation of vapours or aerosols (mists, fumes) may cause lung oedema.          Corrosive substances may cause lung damage (e.g. lung oedema, fluid in the lungs).          As this reaction may be delayed up to 24 hours after exposure, affected individuals need complete rest (preferably in semi-recumbent posture) and must be kept under medical observation even if no symptoms are (yet) manifested.          Before any such manifestation, the administration of a spray containing a dexamethasone derivative or beclomethasone derivative may be considered.  <b>This must definitely be left to a doctor or person authorised by him/her.</b></p>
<b>Ingestion</b>	<p>For advice, contact a Poisons Information Centre or a doctor at once.          Urgent hospital treatment is likely to be needed.  <b>If swallowed do NOT induce vomiting.</b>          If vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain open airway and prevent aspiration.          Observe the patient carefully.          Never give liquid to a person showing signs of being sleepy or with reduced awareness; i.e. becoming unconscious.          Give water to rinse out mouth, then provide liquid slowly and as much as casualty can comfortably drink.          Transport to hospital or doctor without delay.</p>

**Indication of any immediate medical attention and special treatment needed**

Treat symptomatically.

Alkalis continue to cause damage after exposure.

**INGESTION:**

Milk and water are the preferred diluents

No more than 2 glasses of water should be given to an adult.

Neutralising agents should never be given since exothermic heat reaction may compound injury.

Catharsis and emesis are absolutely contra-indicated.

Activated charcoal does not absorb alkali.

Patients should be instructed to seek medical attention whenever they develop difficulty in swallowing (dysphagia).

**SKIN AND EYE:**

Injury should be irrigated for 20-30 minutes.

Eye injuries require saline. [Ellenhorn & Barceloux: Medical Toxicology]

## SECTION 5 FIREFIGHTING MEASURES

### Extinguishing media

Extinguishing media	Water spray or fog. Foam. Dry chemical powder. BCF (where regulations permit). Carbon dioxide.
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### Special hazards arising from the substrate or mixture

Fire incompatibility	None known
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### Advice for firefighters

Fire Fighting	Alert Fire Brigade and tell them location and nature of hazard. Wear full body protective clothing with breathing apparatus. Prevent, by any means available, spillage from entering drains or water course. Use firefighting procedures suitable for surrounding area. <b>Do not approach containers suspected to be hot.</b> Cool fire exposed containers with water spray from a protected location. If safe to do so, remove containers from path of fire. Equipment should be thoroughly decontaminated after use.
Fire/Explosion Hazard	May emit toxic chlorine fumes. Non-combustible. Not considered a significant fire risk, however containers may burn.

## SECTION 6 ACCIDENTAL RELEASE MEASURES

### Personal precautions, protective equipment and emergency procedures

Minor Spills	Environmental hazard - contain spillage. Check regularly for spills and leaks. Clean up all spills immediately. Avoid breathing vapours and contact with skin and eyes. Control personal contact with the substance, by using protective equipment. Contain and absorb spill with sand, earth, inert material or vermiculite. Wipe up. Place in a suitable, labelled container for waste disposal.
Major Spills	Environmental hazard - contain spillage. Wear full body protective clothing with breathing apparatus. Prevent, by any means available, spillage from entering drains or water course. Stop leak if safe to do so. Absorb on sand, dirt, vermiculite or similar absorbent material. Place into labelled drums and dispose of according to local government regulations. Immediately notify emergency services (Police or Fire Brigade) if the spill is too large for you to safely and effectively handle.

Personal Protective Equipment advice is contained in Section 8 of the SDS.

## SECTION 7 HANDLING AND STORAGE

### Precautions for safe handling

Safe handling	Avoid all personal contact, including inhalation. Wear protective clothing when risk of exposure occurs. Use in a well-ventilated area. Avoid contact with incompatible materials. When handling, <b>DO NOT eat, drink or smoke.</b> Keep containers securely sealed when not in use. Avoid physical damage to containers. Always wash hands with soap and water after handling.
Other information	Store in original containers. Keep containers securely sealed. Store in a cool, dry, well-ventilated area. Store away from incompatible materials and foodstuff containers. Protect containers against physical damage and check regularly for leaks. Observe manufacturer's storage and handling recommendations contained within this SDS. <b>DO NOT store near acids, or oxidising agents</b> No smoking, naked lights, heat or ignition sources.

### Conditions for safe storage, including any incompatibilities

Suitable container	Store only in original containers.
Storage incompatibility	Contact with acids produces toxic fumes Reacts with mild steel, galvanised steel / zinc producing hydrogen gas which may form an explosive mixture with air. Avoid contact with copper, aluminium and their alloys.

**SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION****Control parameters****OCCUPATIONAL EXPOSURE LIMITS (OEL)****INGREDIENT DATA**

Source	Ingredient	Material name	TWA	STEL	Peak	Notes
Australia Exposure Standards	sodium hydroxide	Sodium hydroxide	Not Available	Not Available	2 mg/m3	Not Available
Australia Exposure Standards	potassium hydroxide	Potassium hydroxide	Not Available	Not Available	2 mg/m3	Not Available

**EMERGENCY LIMITS**

Ingredient	Material name	TEEL-1	TEEL-2	TEEL-3
sodium hydroxide	Sodium hydroxide	Not Available	Not Available	Not Available
potassium hydroxide	Potassium hydroxide	0.18 mg/m3	2 mg/m3	54 mg/m3
sodium metasilicate, pentahydrate	Sodium metasilicate pentahydrate	45 mg/m3	45 mg/m3	170 mg/m3
sodium hypochlorite	Sodium hypochlorite	2 mg/m3	20 mg/m3	630 mg/m3

Ingredient	Original IDLH	Revised IDLH
sodium hydroxide	250 mg/m3	10 mg/m3
potassium hydroxide	Not Available	Not Available
sodium metasilicate, pentahydrate	Not Available	Not Available
sodium hypochlorite	Not Available	Not Available
2-phosphonobutane-1,2,4-tricarboxylic acid	Not Available	Not Available

**Exposure controls**

<b>Appropriate engineering controls</b>	Maintain adequate ventilation at all times. In most circumstances natural ventilation systems are adequate. If ventilation is poor, then the use of a local exhaust ventilation system is recommended.
<b>Personal protection</b>	
<b>Eye and face protection</b>	Safety glasses with unperforated side shields OR chemical goggles, whenever there is a danger of the material coming in contact with the eyes. Full face shield (20 cm, 8 in minimum) may be required for supplementary but never for primary protection of eyes; these afford face protection. Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants. Lens should be removed at the first signs of eye redness or irritation. Lens should be removed in a clean environment only after workers have washed hands thoroughly.
<b>Skin protection</b>	See Hand protection below
<b>Hands/feet protection</b>	Elbow length Neoprene gloves When handling corrosive liquids, wear trousers or overalls outside of boots, to avoid spills entering boots.
<b>Body protection</b>	See Other protection below
<b>Other protection</b>	Overalls. PVC Apron. Eyewash unit. Ensure there is ready access to a safety shower.
<b>Thermal hazards</b>	Not Available

**SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES****Information on basic physical and chemical properties**

<b>Appearance</b>	Clear yellow liquid		
<b>Physical state</b>	Liquid	<b>Relative density (Water = 1)</b>	1.345
<b>Odour</b>	Not Available	<b>Viscosity (cSt)</b>	Not Available
<b>Odour threshold</b>	Not Available	<b>Auto-ignition temperature(°C)</b>	Not Applicable
<b>pH (as supplied)</b>	14	<b>Decomposition temperature</b>	Not Available
<b>Melting point / freezing point (°C)</b>	Not Available	<b>Partition coefficient n-octanol / water</b>	Not Available
<b>Initial boiling point and boiling range (°C)</b>	Not Available	<b>Surface Tension (dyn/cm or mN/m)</b>	Not Available
<b>Flash point (°C)</b>	Not Applicable	<b>Taste</b>	Not Available
<b>Evaporation rate</b>	Not Available	<b>Explosive properties</b>	Not Available
<b>Flammability</b>	Not Applicable	<b>Oxidising properties</b>	Not Available
<b>Upper Explosive Limit (%)</b>	Not Applicable	<b>Molecular weight (g/mol)</b>	Not Available
<b>Lower Explosive Limit (%)</b>	Not Applicable	<b>Volatile Component (%vol)</b>	Not Available
<b>Vapour pressure (kPa)</b>	Not Available	<b>Gas group</b>	Not Available
<b>Solubility in water (g/L)</b>	Miscible	<b>pH as a solution (1%)</b>	Not Available
<b>Vapour density (Air = 1)</b>	Not Available	<b>VOC g/L</b>	Not Available

## SECTION 10 STABILITY AND REACTIVITY

<b>Reactivity</b>	See section 7
<b>Chemical stability</b>	Contact with acids liberates toxic gas
<b>Possibility of hazardous reactions</b>	See section 7
<b>Conditions to avoid</b>	See section 7
<b>Incompatible materials</b>	See section 7
<b>Hazardous decomposition products</b>	See section 5

## SECTION 11 TOXICOLOGICAL INFORMATION

### Information on toxicological effects

<b>Inhaled</b>	Inhaling corrosive bases may irritate the respiratory tract. Symptoms include cough, choking, pain and damage to the mucous membrane. The material has <b>NOT</b> been classified by EC Directives or other classification systems as 'harmful by inhalation'. This is because of the lack of corroborating animal or human evidence.
<b>Ingestion</b>	Ingestion of alkaline corrosives may produce burns around the mouth, ulcerations and swellings of the mucous membranes, profuse saliva production, with an inability to speak or swallow. Both the oesophagus and stomach may experience burning pain; vomiting and diarrhoea may follow. Ingestion of hypochlorites may cause burning in the mouth and throat, abdominal cramps, nausea, vomiting, diarrhoea, pain and inflammation of the mouth and stomach, fall of blood pressure, shock, confusion, and delirium. Severe poisonings may lead to convulsion, coma and death. Ingestion irritates the mouth, throat, and stomach. The hypochlorous acid liberated in the stomach can cause wall perforation, toxemia, haemorrhage and death.
<b>Skin Contact</b>	The material can produce severe chemical burns following direct contact with the skin. Contact may cause severe itchiness, skin lesions and mild eczema. Open cuts, abraded or irritated skin should not be exposed to this material. Entry into the blood-stream, through, for example, cuts, abrasions or lesions, may produce systemic injury with harmful effects. Examine the skin prior to the use of the material and ensure that any external damage is suitably protected.
<b>Eye</b>	If applied to the eyes, this material causes severe eye damage. Direct eye contact with corrosive bases can cause pain and burns. There may be swelling, epithelium destruction, clouding of the cornea and inflammation of the iris. Mild cases often resolve; severe cases can be prolonged with complications such as persistent swelling, scarring, permanent cloudiness, bulging of the eye, cataracts, eyelids glued to the eyeball and blindness.
<b>Chronic</b>	Repeated or prolonged exposure to corrosives may result in the erosion of teeth, inflammatory and ulcerative changes in the mouth and necrosis (rarely) of the jaw. Bronchial irritation, with cough, and frequent attacks of bronchial pneumonia may ensue.

## SECTION 12 ECOLOGICAL INFORMATION

### Toxicity

On the basis of available evidence concerning either toxicity, persistence, potential to accumulate and or observed environmental fate and behaviour, the material may present a danger, immediate or long-term and /or delayed, to the structure and/ or functioning of natural ecosystems. Prevent, by any means available, spillage from entering drains or water courses.

**DO NOT discharge into sewer or waterways.**

### Persistence and degradability

Ingredient	Persistence: Water/Soil	Persistence: Air
sodium hydroxide	LOW	LOW
2-phosphonobutane-1,2,4-tricarboxylic acid	LOW	LOW

### Bio accumulative potential

Ingredient	Bioaccumulation
sodium hydroxide	LOW (LogKOW = -3.8796)
2-phosphonobutane-1,2,4-tricarboxylic acid	LOW (LogKOW = -1.359)

### Mobility in soil

Ingredient	Mobility
sodium hydroxide	LOW (KOC = 14.3)
2-phosphonobutane-1,2,4-tricarboxylic acid	LOW (KOC = 846)

## SECTION 13 DISPOSAL CONSIDERATIONS

### Waste treatment methods

<b>Product / packaging disposal</b>	Recycle containers whenever possible. Product residues and containers should be disposed of in accordance with local government regulation.
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## SECTION 14 TRANSPORT INFORMATION

### Labels Required

	
Marine Pollutant	NO
HAZCHEM	2R

### Land transport (ADG)

UN number	1814				
Packing group	II				
UN proper shipping name	POTASSIUM HYDROXIDE SOLUTION				
Environmental hazard	No relevant data				
Transport hazard class(es)	<table border="1"><tr><td>Class</td><td>8</td></tr><tr><td>Sub risk</td><td>Not Applicable</td></tr></table>	Class	8	Sub risk	Not Applicable
Class	8				
Sub risk	Not Applicable				
Special precautions for user	<table border="1"><tr><td>Special provisions</td><td>Not Applicable</td></tr><tr><td>Limited quantity</td><td>1 L</td></tr></table>	Special provisions	Not Applicable	Limited quantity	1 L
Special provisions	Not Applicable				
Limited quantity	1 L				

## SECTION 15 REGULATORY INFORMATION

### Safety, health and environmental regulations / legislation specific for the substance or mixture

#### SODIUM HYDROXIDE (1310-73-2) IS FOUND ON THE FOLLOWING REGULATORY LISTS

Australia Exposure Standards  
Australia Hazardous Substances Information System - Consolidated Lists  
Australia Inventory of Chemical Substances (AICS)

#### POTASSIUM HYDROXIDE (1310-58-3) IS FOUND ON THE FOLLOWING REGULATORY LISTS

Australia Exposure Standards  
Australia Hazardous Substances Information System - Consolidated Lists  
Australia Inventory of Chemical Substances (AICS)

#### SODIUM METASILICATE, PENTAHYDRATE (10213-79-3) IS FOUND ON THE FOLLOWING REGULATORY LISTS

Australia Hazardous Substances Information System - Consolidated Lists  
Australia Inventory of Chemical Substances (AICS)

#### SODIUM HYPOCHLORITE (7681-52-9) IS FOUND ON THE FOLLOWING REGULATORY LISTS

Australia Hazardous Substances Information System - Consolidated Lists  
Australia Inventory of Chemical Substances (AICS)  
International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs

#### 2-PHOSPHONOBUTANE-1, 2, 4-TRICARBOXYLIC ACID (37971-36-1) IS FOUND ON THE FOLLOWING REGULATORY LISTS

Australia Inventory of Chemical Substances (AICS)

## SECTION 16 OTHER INFORMATION

### Other information

Classification of the preparation and its individual components has drawn on official and authoritative sources as well as independent review by the Chemwatch Classification committee using available literature references. A list of reference resources used to assist the committee may be found at: [www.chemwatch.net](http://www.chemwatch.net)

The SDS is a Hazard Communication tool and should be used to assist in the Risk Assessment. Many factors determine whether the reported Hazards are Risks in the workplace or other settings. Risks may be determined by reference to Exposures Scenarios. Scale of use, frequency of use and current or available engineering controls must be considered.

### Definitions and abbreviations

PC-TWA:	Permissible Concentration-Time Weighted Average
PC-STEL:	Permissible Concentration-Short Term Exposure Limit
IARC:	International Agency for Research on Cancer
ACGIH:	American Conference of Government Industrial Hygienists
STEL:	Short Term Exposure Limit
TEEL:	Temporary Emergency Exposure Limit
IDLH:	Immediate Danger to Life or Health Concentrations
OSF:	Odour Safety Factor
NOAEL:	No Observed Effects Level
TLV:	Threshold Limit Value
LOD:	Limit Of Detection
OTV:	Odour Threshold Value
BCF:	Bio Concentration Factors
BEI:	Biological Exposure Index

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End of SDS