

SAFETY DATA SHEET



KLENZMATIC

APPLIED PRODUCTS AUSTRALIA PTY LTD

Catalogue number: AP210

Version No: 2.1

Date issued: 09/11/2020

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	KLENZMATIC
Product code	AP210
Pack size	5L & 15L
Proper shipping name	POTASSIUM HYDROXIDE SOLUTION

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

Relevant identified uses	Auto dish washing liquid
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Details of the manufacturer/importer

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

Emergency telephone number

Association / Organisation	Poisons Information Centre
Emergency telephone numbers	13 11 26
Other emergency telephone numbers	1800 108 800

SECTION 2 HAZARDS IDENTIFICATION

Classification of the substance or mixture

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

Poisons Schedule	6
GHS Classification	Serious Eye Damage Category 1, Skin Corrosion/Irritation Category 1A, Metal Corrosion Category 1 <i>Classification drawn from HCIS and ECHA C&L Inventory.</i>

Label elements

Hazard pictograms	
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Signal word	DANGER
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Hazard statement(s)

H302	Harmful if swallowed
H314	Causes severe skin burns and eye damage
H290	May be corrosive to metals

Precautionary statement(s) Prevention

P260	Do not breathe mist or spray.
P280	Wear protective gloves and eye protection.
P264	Wash contaminated skin thoroughly after handling
P234	Keep only in original container.

Precautionary statement(s) Response

P301+P330+P331	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303+P310+P361+P353	IF ON SKIN (or hair): Immediately call a POISON CENTER or doctor. Take off immediately all contaminated clothing. Rinse skin with water/shower.
P305+P310+P351+P338	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.
P304+P340	IF INHALED: Remove person to fresh air and keep in a position comfortable for breathing.
P363	Wash contaminated clothing before reuse.
P390	Absorb spillage to prevent material damage.

Precautionary statement(s) Storage

P405	Store locked up
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Precautionary statement(s) Disposal

P501	Dispose of contents / container to in accordance with local government regulations
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SECTION 3 COMPOSITION / INFORMATION ON INGREDIENTS**Substances**

See section below for composition of Mixtures

Mixtures

CAS No	%[weight]	Name
1310-58-3	10 - <30	<u>potassium hydroxide</u>
10213-79-3	<10	<u>sodium metasilicate, pentahydrate</u>

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

Eye Contact	<p>If this product comes in contact with the eyes:</p> <p>Immediately hold eyelids apart and flush the eye continuously with running water.</p> <p>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.</p> <p>Continue flushing until advised to stop by the Poisons Information Centre or a doctor, or for at least 15 minutes.</p> <p>Transport to hospital or doctor without delay.</p> <p>Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.</p>
Skin Contact	<p>If skin or hair contact occurs:</p> <p>Immediately flush body and clothes with large amounts of water, using safety shower if available.</p> <p>Quickly remove all contaminated clothing, including footwear.</p> <p>Wash skin and hair with running water. Continue flushing with water until advised to stop by the Poisons Information Centre.</p> <p>If burns are present or irritation persists get medical advice / attention.</p>
Inhalation	<p>If fumes or combustion products are inhaled remove from contaminated area.</p> <p>Lay patient down. Keep warm and rested.</p> <p>Inhalation of vapours or aerosols (mists, fumes) may cause lung oedema.</p>
Ingestion	<p>For advice, contact a Poisons Information Centre or a doctor at once.</p> <p>Urgent hospital treatment is likely to be needed.</p> <p>If swallowed do NOT induce vomiting.</p> <p>If vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain open airway and prevent aspiration.</p> <p>Observe the patient carefully.</p> <p>Never give liquid to a person showing signs of being sleepy or with reduced awareness; i.e. becoming unconscious.</p> <p>Give water to rinse out mouth, then provide up to 2 glasses of liquid slowly.</p> <p>Transport to hospital or doctor without delay.</p>

Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5 FIREFIGHTING MEASURES**Extinguishing media**

	<p>Water spray or fog</p> <p>Foam.</p> <p>Dry chemical powder.</p> <p>BCF (where regulations permit).</p> <p>Carbon dioxide.</p>
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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. Do not approach containers suspected to be hot. 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	Noncombustible Not considered a significant fire risk, however containers may burn. Decomposition may produce toxic fumes of phosphorus oxides (POx).
HAZCHEM	2R

SECTION 6 ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Minor Spills	Rinse away with copious amounts of water.
Major Spills	Absorb on sand, dirt, vermiculite or similar absorbent material. Place into labeled 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	DO NOT allow clothing wet with material to stay in contact with skin Avoid all personal contact, including inhalation. Wear protective clothing when risk of exposure occurs. Use in a well-ventilated area. WARNING: To avoid violent reaction, ALWAYS add material to water and NEVER water to material. Avoid contact with incompatible materials. When handling, DO NOT eat, drink or smoke. 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. DO NOT store near acids, or oxidising agents.

Conditions for safe storage, including any incompatibilities

Suitable container	Plastic pail. Polyliner drum. Packing as recommended by manufacturer. Check all containers are clearly labelled and free from leaks.
Storage incompatibility	Avoid storage with acids . Is corrosive to aluminium, tin and zinc.

PACKAGE MATERIAL INCOMPATIBILITIES

Not Available

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	potassium hydroxide	Potassium hydroxide	Not Available	Not Available	2 mg/m3	Not Available

EMERGENCY LIMITS

Ingredient	Material name	TEEL-1	TEEL-2	TEEL-3
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 metasilicate, pentahydrate	Sodium silicate; (Sodium metasilicate)	18 mg/m3	230 mg/m3	230 mg/m3

Ingredient	Original IDLH	Revised IDLH
potassium hydroxide	Not Available	Not Available
sodium metasilicate, pentahydrate	Not Available	Not Available

Exposure controls

Appropriate engineering controls	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.
Personal protection	
Eye and face protection	Chemical goggles whenever there is a danger of the material coming in contact with the eyes. Goggles must be properly fitted. 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
Skin protection	See Hand protection below
Hands/feet protection	Elbow length gloves. Butyl or neoprene are recommended for this application. When handling corrosive liquids, wear trousers or overalls outside of boots, to avoid spills entering boots.
Body protection	See Other protection below
Other protection	Overalls. PVC Apron. PVC protective suit may be required if exposure severe. Eyewash unit.
Thermal hazards	Not Available

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Appearance	Clear liquid		
Physical state	Liquid	Relative density (Water = 1)	1.21
Odour	Not Available	Partition coefficient n-octanol / water	Not Available
Odour threshold	Not Available	Auto-ignition temperature (°C)	Not Available
pH (as supplied)	14	Decomposition temperature	Not Available
Melting point / freezing point (°C)	Not Available	Viscosity (cSt)	Not Available
Initial boiling point and boiling range (°C)	Not Available	Molecular weight (g/mol)	Not Available
Flash point (°C)	Not Applicable	Taste	Not Available
Evaporation rate	Not Available	Explosive properties	Not Available
Flammability	Not Applicable	Oxidising properties	Not Available
Upper Explosive Limit (%)	Not Available	Surface Tension (dyn/cm or mN/m)	Not Available
Lower Explosive Limit (%)	Not Available	Volatile Component (%vol)	Not Available
Vapour pressure (kPa)	Not Available	Gas group	Not Available
Solubility in water (g/L)	Miscible	pH as a solution (1%)	Not Available
Vapour density (Air = 1)	Not Available	VOC g/L	Not Available

SECTION 10 STABILITY AND REACTIVITY

Reactivity	See section 7
Chemical stability	Contact with acidic material liberates heat.
Possibility of hazardous reactions	See section 7
Conditions to avoid	See section 7
Incompatible materials	See section 7
Hazardous decomposition products	See section 5

SECTION 11 TOXICOLOGICAL INFORMATION

Information on toxicological effects

Inhaled	The material can cause respiratory irritation in some persons. The body's response to such irritation can cause further lung damage. Inhaling corrosive bases may irritate the respiratory tract. Symptoms include cough, choking, pain and damage to the mucous membrane. Not normally a hazard due to non-volatile nature of product The material has NOT 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.
Ingestion	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.
Skin Contact	The material can produce severe chemical burns following direct contact with the skin. Skin contact is not thought to have harmful health effects (as classified under EC Directives); the material may still produce health damage following entry through wounds, lesions or abrasions. Potassium hydroxide burns are not immediately painful; onset of pain may be delayed minutes or hours; thus care should be taken to avoid contamination of gloves and boots.
Eye	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.
Chronic	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.

Toxicological effects of ingredients

Ingredient	Endpoint	Value
Potassium hydroxide	Acute toxicity	Oral LD50 (rat) 273 mg/kg
	Skin corrosion/irritation	Severe irritant (rabbit).
	Eye damage/irritation	A severe eye irritant. Corrosive to eyes; contact can cause corneal burns
	Respiratory/skin sensitization	No data available
	Germ cell mutagenicity	No data available
	Carcinogenicity	No data available
	Reproductive toxicity	No data available
	STOT (single exposure)	No data available
	STOT (repeated exposure)	No data available
	Aspiration toxicity	No data available
Sodium metasilicate, pentahydrate	Acute toxicity	Oral LD50 (rat) 847 mg/kg
	Skin corrosion/irritation	Corrosive. Causes skin burns
	Eye damage/irritation	Corrosive. Causes eye burns
	Respiratory/skin sensitization	No data available
	Germ cell mutagenicity	Sodium silicate was not mutagenic to the bacterium E. Coli when tested in a mutagenicity bioassay
	Carcinogenicity	There are no known reports of carcinogenicity of sodium silicates.
	Reproductive toxicity	Decreased numbers of births and survival to weaning was reported for rats fed sodium silicate in their drinking water at 600 and 1200 ppm.
	STOT (single exposure)	No data available
	STOT (repeated exposure)	No data available
	Aspiration toxicity	No data available

SECTION 12 ECOLOGICAL INFORMATION

Toxicity

Ingredient	Endpoint	Duration (Hr.)	Species	Value
Potassium hydroxide	LC50	96	Fish	80mg/L
	EC0	48	Crustacea	<1mg/L
	NOEC	24	Fish	28mg/L
Sodium metasilicate pentahydrate	LC50	96	Fish	2-320mg/L
	EC50	48	Crustacea	1-700mg/L
	EC50	72	Algae or other aquatic plants	207mg/L
	EC100	48	Crustacea	10-mg/L

Extracted from Europe ECHA Registered Substances - Ecotoxicological Information - Aquatic Toxicity

Based on 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.

Persistence and degradability

Ingredient	Persistence: Water/Soil	Persistence: Air
	No Data available for all ingredients	No Data available for all ingredients

Bio accumulative potential

Ingredient	Bioaccumulation
	No Data available for all ingredients

Mobility in soil

Ingredient	Mobility
	No Data available for all ingredients

SECTION 13 DISPOSAL CONSIDERATIONS**Waste treatment methods**

Product / Packaging disposal	Recycle containers whenever possible. Product residues and containers should be disposed of in accordance with local government regulations
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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****POTASSIUM HYDROXIDE IS FOUND ON THE FOLLOWING REGULATORY LISTS**

Australia Hazardous Chemical Information System (HCIS) - Hazardous Chemicals
Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Schedule 5
Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Schedule 6
Australian Inventory of Industrial Chemicals (AIIC)

SODIUM METASILICATE, PENTAHYDRATE IS FOUND ON THE FOLLOWING REGULATORY LISTS

Australian Inventory of Industrial Chemicals (AIIC)
Australia Hazardous Chemical Information System (HCIS) - Hazardous Chemicals

SECTION 16 OTHER INFORMATION**Revision Schedule**

Revision Date	09/11/2020
Initial Date	02/11/2016

SDS Version Summary

Version	Issue Date	Sections Updated
2.1	09/11/2020	Sections 2,3,5,11,12,15,16 have been updated or corrected

Other information

Classification of the preparation and its individual components has drawn on official and authoritative sources such as the ECHA C&L Chemical Inventory, HSNO (CCID) New Zealand, AICIS and HCIS Australia

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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