

1. Identification of Substance & Company

Product

Product name	Copper Free Algacide
HSNO approval	HSR002526
Approval description	Cleaning Products (Corrosive) Group Standard 2017
UN number	1903
Proper Shipping Name	DISINFECTANT LIQUID, CORROSIVE, n.o.s. (contains benzalkonium chloride)
DG class	8
Packaging group	II
Hazchem code	2Z
Uses	Algacide

Company Details

Company	Poolwise Ltd
Address	93 Ireland Road, Mt Wellington, 1060, Auckland New Zealand
Telephone	09 527 0753
Fax number	09 527 4189
Website	www.poolwise.co.nz

Emergency Telephone Number: 0800 764 766

2. Hazard Identification

Approval and

This product is an approved substance under the Hazardous Substances and New Organisms Act (HSNO, Approval HSR002526, Cleaning Products (Corrosive) Group Standard 2017). The substance has been classified as hazardous according to the criteria in the Hazardous substances (Minimum Degrees of Hazard) Notice 2017.

Classes

6.1D (oral)
8.2B
8.3A
9.1A
9.3B

Hazard Statements

H302 - Harmful if swallowed.
H314 - Causes severe skin burns and eye damage.
H318 - Causes serious eye damage.
H410 - Very toxic to aquatic life with long lasting effects.
H432 - Toxic to terrestrial vertebrates.

SYMBOLS

DANGER



Other Classifications

This mixture contains benzalkonium chlorides. While this CAS number is not classed by EPA or EU ECHA as a sensitizer, there is evidence that similar benzalkonium chlorides respiratory and skin sensitizers and are classed 6.5A and 6.5B.

Precautionary Statements

P101 - If medical advice is needed, have product container or label at hand.
P102 - Keep out of reach of children.
P103 - Read label before use.
P260 - Do not breathe dust/fume/gas/mist/vapours/spray.
P264 - Wash hands thoroughly after handling.
P270 - Do not eat, drink or smoke when using this product.
P280 - Wear protective gloves/eye protection/face protection*.
P273 - Avoid release to the environment.



P301+P312 - IF SWALLOWED: Call a POISON CENTRE or doctor/physician if you feel unwell.
P330 - Rinse mouth.
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 reuse.
P304+340 - IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing.
P310 - Immediately call a POISON CENTRE or doctor/physician.
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310 - Immediately call a POISON CENTRE or doctor/physician.
P391 - Collect spillage.

3. Composition / Information on Ingredients

Component	CAS/ Identification	Concentration
Benzyl-C12-16-alkyldimethylammonium chloride	68424-85-1	50%
Ingredients not contributing to HSNO classes	mixture	balance

This is a commercial product whose exact ratio of components may vary. Trace quantities of impurities are also likely.

4. First Aid

General Information

If medical advice is needed, have product container or label at hand. You should call the National Poisons Centre if you feel that you may have been harmed or irritated by this product. The number is 0800 764 766 (0800 POISON) (24 hr emergency service).

Recommended first aid facilities Ready access to running water is required. Accessible eyewash is required.

Exposure

Swallowed	IF SWALLOWED: Do NOT induce vomiting. Rinse mouth. If vomiting occurs, place victim face downwards, with the head turned to the side and lower than the hips to prevent vomit entering the lungs.
Eye contact	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Apply continuous irrigation with water for at least 15 minutes holding eyelids apart. Immediately call a POISON CENTRE or doctor/physician.
Skin contact	IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. Wash contaminated clothing before reuse.
Inhaled	IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.

Advice to Doctor

Treat symptomatically

5. Firefighting Measures

Fire and explosion hazards:	There are no specific risks for fire/explosion for this chemical. It is not classed as flammable.
Suitable extinguishing substances:	Do not use dry chemical, carbon dioxide or halogenated extinguishing agents.
Unsuitable extinguishing substances:	Unknown.
Products of combustion:	Chlorine, Hydrogen chloride, oxides of carbon (carbon dioxide, carbon monoxide). May form toxic mixtures in air and may accumulate in sumps, pits and other low-lying spaces, forming potentially explosive mixtures.
Protective equipment:	Self contained breathing apparatus, protective clothing.
Hazchem code:	2Z

6. Accidental Release Measures

Containment	If greater than 100L is stored, secondary containment and emergency plans to manage any potential spills must be in place. In all cases design storage to prevent discharge to storm water.
Emergency procedures	In the event of spillage alert the fire brigade to location and give brief description of hazard. Stop the source of the leak, if safe to do so. Shut off all possible sources of ignition. Wear protective equipment to prevent skin, eye and respiratory exposure. Clear area of any unprotected personnel. Contain using sand, earth or vermiculite. Prevent by whatever means possible any spillage from entering drains, sewers, or water courses. (If this occurs contact your regional council immediately).
Clean-up method	Use absorbent (soil, sand or other inert material). Collect (sweep or vacuum) and seal in properly labelled containers or drums for disposal. Avoid the creation of dust. If contamination of crops, sewers or waterways has occurred advise local emergency services.
Disposal	Mop up and collect recoverable material into labelled containers for recycling or salvage. Recycle containers wherever possible. This material may be suitable for approved landfill. Dispose of only in accord with all regulations.
Precautions	Wear protective equipment to prevent skin and eye contamination and the inhalation of vapours/dusts. Work up wind or increase ventilation.

7. Storage & Handling

Storage	Avoid storage of harmful substances with food. Store out of reach of children. Containers should be kept closed in order to minimise contamination. Keep from extreme heat and open.
Handling	Keep exposure to a minimum, and minimise the quantities kept in work areas. See section 8 with regard to personal protective equipment requirements.

8. Exposure Controls / Personal Protective Equipment

Workplace Exposure Standards

A workplace exposure standard (WES) has not been established by WorkSafe NZ for this product. There is a general limit of 3mg/m³ for respirable particulates and 10mg/m³ for inhalable particulates when limits have not otherwise been established.

NZ Workplace Exposure Stds	Ingredient	WES-TWA	WES-STEL
	No ingredient listed		

Engineering Controls

In industrial situations, it is expected that employee exposure to hazardous substances will be controlled to a level as far below the WES as practicable by applying the hierarchy of control required by the Health and Safety at Work Act (2015) and the Health and Safety at Work (General Risk and Workplace Management) Regulations 2016. Exposure can be reduced by process modification, use of local exhaust ventilation, capturing substances at the source, or other methods. If you believe air borne concentrations of mists, dusts or vapours are high, you are advised to modify processes or increase ventilation.

Personal Protective Equipment

Eyes Avoid contact with eyes. Use safety glasses and or chemical splash goggles if splashes are possible.



Skin Protective gloves and clothing are not normally necessary. However, it is prudent to wear gloves when handling chemicals in bulk or for an extended period of time. Nitrile, NBR or PVC gloves are recommended. Replace frequently. Gloves should be checked for tears or holes before use.

Respiratory A respirator when airborne concentrations approach the WES (section 8). Use a full face respirator with a particulate filter. If using a respirator, ensure that the cartridges are correct for the potential air contamination and are in good working order.

WES Additional Information

Not applicable

9. Physical & Chemical Properties

Appearance	pale yellow to colourless liquid
Odour	slight odour
pH	8.0
Vapour pressure	no data
Viscosity	no data
Boiling point	~100°C
Volatile materials	no data
Freezing / melting point	no data
Solubility	soluble in water
Specific gravity / density	0.98g/cm ³ (20°C)
Flash point	no data
Danger of explosion	no data
Auto-ignition temperature	no data
Upper & lower flammable limits	no data
Corrosiveness	corrosive to skin and eyes

10. Stability & Reactivity

Stability	Stable
Conditions to be avoided	Containers should be kept closed in order to avoid contamination. Keep from extreme heat and open flames.
Incompatible groups	Mild steel, copper, copper alloys, strong acids
Substance Specific Incompatibility	Heat will cause decomposition.
Hazardous decomposition products	Oxides of carbon, amines, carbon monoxide, carbon dioxide, oxides of nitrogen, hydrogen chloride.
Hazardous reactions	None known

11. Toxicological Information

Summary

IF SWALLOWED: may cause corrosive of the mucous membranes. May result in nausea, stomach pain and vomiting.

IF IN EYES: may cause eye damage.

IF ON SKIN: may cause skin corrosion. Some individuals may experience allergic skin reactions.

IF INHALED: vapours may cause respiratory irritation. Some individuals may experience an allergic reaction, e.g. symptoms of asthma.

Supporting Data

Acute	Oral	Using LD ₅₀ 's for ingredients, the calculated LD ₅₀ (oral, rat) for the mixture is between 300 and 2000 mg/kg. Data considered includes: Benzyl-C12-16-alkyldimethylammonium chloride 344mg/kg (rat).
	Dermal	Using LD ₅₀ 's for ingredients, the calculated LD ₅₀ (dermal, rat) for the mixture is >5000 mg/kg. Data considered includes: Benzyl-C12-16-alkyldimethylammonium chloride 3340mg/kg (rat).
	Inhaled	No evidence of inhalation toxicity.
	Eye	The mixture is considered to be corrosive to the eye. Benzalkonium chlorides are corrosive to the eyes.
	Skin	The mixture is considered to be corrosive to the skin. Benzalkonium chlorides are skin corrosives.
Chronic	Sensitisation	There is no evidence in the literature that this CAS number 68424-85-1 is sensitising, however structurally similar benzalkonium chlorides are classed 6.5A and 6.5B by EPA.
	Mutagenicity	No ingredient present at concentrations > 0.1% is considered a mutagen.
	Carcinogenicity	No ingredient present at concentrations > 0.1% is considered a carcinogen.
	Reproductive / Developmental	No ingredient present at concentrations > 0.1% is considered a reproductive or developmental toxicant or have any effects on or via lactation.
	Systemic	No ingredient present at concentrations > 1% is considered a target organ toxicant.
	Aggravation of existing conditions	None known.

12. Ecological Data

Summary

This mixture is very toxic towards aquatic organisms and toxic towards terrestrial vertebrates. Avoid contaminated waterways. Do not allow material to enter drains or waterways.

Supporting Data

Aquatic	Using EC ₅₀ 's for ingredients, the calculated EC ₅₀ for the mixture is < 1 mg/L. Data considered includes: Benzyl-C12-16-alkyldimethylammonium chloride 0.93mg/L (rainbow trout, 96h), 0.28mg/L (fathead minnow 96h), 0.016mg/ (Daphnia magna, 96h), 0.0049mg/L (green algae, 72h).
Bioaccumulation	No data
Degradability	Biodegradable.
Soil	No evidence of soil toxicity
Terrestrial vertebrate	The mixture has been classified by EPA as harmful to terrestrial vertebrates. Using LD ₅₀ 's for ingredients, the calculated LD ₅₀ (oral, rat) for the mixture is between 50 and 500mg/kg. Data considered includes: Benzyl-C12-16-alkyldimethylammonium chloride 344mg/kg (rat).
Terrestrial invertebrate	No evidence of toxicity towards terrestrial invertebrates.
Biocidal	no data
Environmental effect levels	No EELs are available for this mixture or ingredients

13. Disposal Considerations

Restrictions	There are no product-specific restrictions, however, local council and resource consent conditions may apply, including requirements of trade waste consents.
Disposal method	Disposal of this product must comply with the Hazardous Substances (Disposal) Notice 2017 and the requirements of the Resource Management Act for which approval should be sought from the Regional Authority. The substance must be treated and therefore rendered non-hazardous before discharge to the environment.
Contaminated packaging	Disposal of contaminated packaging must comply with the Hazardous Substances (Disposal) Notice 2017 clause 12. Ensure that the package is rendered incapable of containing any substance and is disposed in a manner that is consistent with the requirements of the substance it contained and the material of the package. If possible reuse or recycle packaging.

14. Transport Information

Land Transport Rule: Dangerous Goods 2005 - NZS 5433:2007

Transport according to NZS 5433 (Transport of Hazardous Substances on Land). Considered a hazardous substance for transport.

UN number:	1903	Proper shipping name:	DISINFECTANT LIQUID, CORROSIVE, n.o.s. (contains benzalkonium chloride)
Class(es)	8	Packing group:	II
Precautions:	Corrosive, Ecotoxic.	Hazchem code:	2Z
IMDG			
UN number:	1903	Proper shipping name:	DISINFECTANT LIQUID, CORROSIVE, n.o.s. (contains benzalkonium chloride)
Class(es)	8	Packing group:	II
Precautions:	Corrosive Marine pollutant	EmS	F-A, S-B
IATA			
UN number:	1903	Proper shipping name:	DISINFECTANT LIQUID, CORROSIVE, n.o.s. (contains benzalkonium chloride)
Class(es)	8	Packing group:	II
Precautions:	Corrosive, Ecotoxic.		



15. Regulatory Information

This product is an approved substance under the Hazardous Substances and New Organisms Act (HSNO). Approval code: HSR002526, Cleaning Products (Corrosive) Group Standard 2017. All ingredients appear on the NZIoC.

Specific Workplace Controls (as per HSNO approval referenced to Controls Matrix)

Key workplace requirements are:

SDS	To be available within 10 minutes in workplaces storing any quantity.
Inventory	An inventory of all hazardous substances must be prepared and maintained.
Packaging	All hazardous substances should be appropriately packaged including substances that have been decanted, transferred or manufactured for own use or have been supplied
Labelling	Must comply with the Hazardous Substances (Labelling) Notice 2017.
Emergency plan	Required if > 100L is stored.
Certified handler	Not required.
Tracking	Not required.
Bunding & secondary containment	Required if > 100L is stored.
Signage	Required if > 100L is stored.
Location compliance certificate	Not required.
Flammable zone	Not required.
Fire extinguisher	Not required.

Note: The above workplace requirements apply if only this particular substance is present. The complete set of controls for a location will depend on the classification and total quantities of other substances present in that location.

Other Legislation

In New Zealand, the use of this product may come under the Resource Management Act and Regulations, the Health and Safety at Work Act 2015 and the Health and Safety at Work (General Risk and Workplace Management) Regulations 2016, local Council Rules and Regional Council Plans.

16. Other Information

Abbreviations

Approval Code	Approval HSR002526, Cleaning Products (Corrosive) Group Standard 2017 Controls, EPA. www.epa.govt.nz
CAS Number	Unique Chemical Abstracts Service Registry Number
Ceiling	Ceiling Exposure Value: The maximum airborne concentration of a biological or chemical agent to which a worker may be exposed at any time.
Controls Matrix	List of default controls linking regulation numbers to Matrix code (e.g. T1, I16).
EC₅₀	Ecotoxic Concentration 50% – concentration in water which is fatal to 50% of a test population (e.g. daphnia, fish species)
EPA	Environmental Protection Agency
HAZCHEM Code	Emergency action code of numbers and letters that provide information to emergency services, especially fire fighters
HSNO	Hazardous Substances and New Organisms (Act and Regulations)
IARC	International Agency for Research on Cancer
LEL	Lower Explosive Limit
LD₅₀	Lethal Dose 50% – dose which is fatal to 50% of a test population (usually rats).
LC₅₀	Lethal Concentration 50% – concentration in air which is fatal to 50% of a test population (usually rats)
MSDS (SDS)	Material Safety Data Sheet (or Safety Data Sheet)
NZIoC	New Zealand Inventory of Chemicals
PES	Prescribed Exposure Standard means a WES or a biological exposure standard that is prescribed in a regulation, a safe work instrument or an approval under HSNO (including group standards).
STEL	Short Term Exposure Limit - The maximum airborne concentration of a chemical or biological agent to which a worker may be exposed in any 15 minute period, provided the TWA is not exceeded
TWA	Time Weighted Average – generally referred to WES averaged over typical work day (usually 8 hours)
UEL	Upper Explosive Limit



Copper Free Algicide

Safety Data Sheet

UN Number United Nations Number
WES Workplace Exposure Standard - The airborne concentration of a biological or chemical agent to which a worker may be exposed during work hours (usually 8 hours, 5 days a week). The WES relates to exposure that has been measured by personal monitoring using procedures that gather air samples in the worker's breathing zone.

References

Data Unless otherwise stated comes from the EPA HSNO chemical classification information database (CCID).
Controls EPA notices, www.epa.govt.nz, Health and Safety at Work (Hazardous Substances) Regulations 2017, www.legislation.govt.nz
WES The latest NZ Workplace Exposure Standards, published by WorkSafe NZ and available on their web site – www.worksafe.govt.nz.
Other References: EU ECHA, ingredients SDS's, ChemIDplus

Review

Date	Reason for review
August 2018	Not applicable – new SDS

Disclaimer

This SDS was prepared by Datachem LTD and is based on our current state of knowledge, including information obtained from suppliers. The SDS is given in good faith and constitutes a guideline (not a guarantee of safety). The level of risk each substance poses is relevant to its properties (as summarised in the SDS) AND HOW THE SUBSTANCE IS USED. While guidelines are given for personal protective equipment, such precautions must be relevant to the use. The likely HSNO classifications for this SDS have been estimated based on general information from the supplier (e.g., hazard, toxicological). Full formulation details were not available. This SDS is copyright Datachem and must not be copied, edited or used for other than intended purpose. To contact the SDS author, email info@datachem.co.nz or phone: +64 9 940 30 80.

