

1. Identification of Substance & Company

PRODUCT	
Product Name	Copper Free Algaecide
Other Names	Copper Free Algaecide
HSNO Approval	HSR002526
Approval Description	Cleaning Products (Corrosive) Group Standard 2020
UN Number	UN1903
DG Class	8
Proper Shipping Name	DISINFECTANT LIQUID, CORROSIVE, n.o.s. (contains benzalkonium chloride)
Packing Group	II
Hazchem Code	22
Uses	Pool Chemical

COMPANY DETAILS

Company	Poolquip (2018) Ltd	
Physical Address	20 Ascot Road Mangere Auckland 2022 New Zealand	PO Box 53090 Airport Oaks Auckland 2020 New Zealand
Telephone	64 9 634 9097	
Fax	64 9 634 1020	
Website	www.paramountpools.co.nz	

Emergency Telephone Number: 0800 764 766

2. Hazard Identification

APPROVAL

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.

CLASSIFICATIONS & Hazard Statements

Acute toxicity category 4 (oral) H302 - Harmful if swallowed.
Skin corrosive category 1B H314 - Causes severe skin burns and eye damage.
Eye damage category 1 H318 - Causes serious eye damage.
Chronic aquatic category 1 H410 - Very toxic to aquatic life with long lasting effects

SYMBOLS

DANGER



OTHER CLASSIFICATIONS

No other classification are known to apply.

PRECAUTIONARY STATEMENTS

Prevention	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.
Response	P101 - If medical advice is needed, have product container or label at hand P301+P312 - IF SWALLOWED: Call a POISON CENTRE or doctor/physician if you feel unwell. P330 - Rinse mouth.
Storage	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.
Disposal	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

Disposal of contents and container in accordance with local, regional, national and international regulations.

Component	CAS/Identification	Conc (%)
Benzyl-C12-16-alkyldimethylammonium chloride	68424-85-1	20%
Ingredients not contributing to HSNO classes	mixture	balance

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, burned or irritated by this product. The number is **0800 764 766 (0800 POISON)** (24hr emergency service).

Recommended First Aid Facilities Ready access to running water is required. Accessible eyewash is required.

EXPOSURE

Swallowed	IF SWALLOWED:	Call a POISON CENTRE or doctor/physician if you feel unwell. Rise mouth. DO NOT induce vomiting. 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. If eye irritation persists, get medical advice/attention.
Skin Contact	IF ON SKIN:	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.
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:	ZZ

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 and 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:	Wear protective equipment to prevent skin and eye contamination and the inhalation of vapours/dusts. Work up wind or increase ventilation.

8. Exposure Controls / Personal Protective Equipment

WORKPLACE EXPOSURE CONTROLS

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 Standards	Ingredient	WES_TWA*	WES-STEL
	No ingredients listed		

ENGINEERING CONTROLS

In industrial situations, it is expected that employee exposures 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 capours 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 dusts are possible. Select eye protection in accordance with AS/NZS 1337.

SKIN



Protective gloves are recommended. Neoprene or PVC Gloves are recommended. Protective gloves or suitably resistant material must comply with AS 2161. Replace frequently. Gloves should be checked for tears or holes before use. Protective clothing must comply with AS 2919, AS 3765.1 or AS 3765.2. PVC or rubber boots must comply with AS/NZ 2210.1.

Respiratory



A respirator when airborne concentrations approach the WES (Section 8). Respirators must have filters appropriate to the duty and comply with AS/NZS 1716 and selected, used and maintained in accordance with AS/NZS 1715. Use a respirator with a dust filter. If using a respirator, ensure that the cartridges are correct for the potential air contamination and are in good working order. Fit testing and clear guidelines and training for use and maintenance of PPE are necessary.

WES ADDITIONAL INFORMATION

Not Applicable

9. Physical and Chemical Properties

Appearance	pale yellow to colourless liquid
Odour	slight odour
pH	8
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	Non Flammable
Danger of explosion	Non Flammable
Auto-ignition temperature	No data
Upper & lower flammable limits	no LEL or UEL
Corrosiveness	No data

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

SUPPORTING DATA

Acute:

Oral

Using LD50's for ingredients, the calculated LD50 (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 LD50's for ingredients, the calculated LD50 (dermal, rat) for the mixture is >>5000mg/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 EC50's for ingredients, the calculated EC50 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 LD50's for ingredients, the calculated LD50 (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:	UN1903
Proper Shipping Name:	DISINFECTANT LIQUID, CORROSIVE, n.o.s. (contains benzalkonium chloride)
Classes:	8
Packing Group:	II
Precautions:	Corrosive / Marine Pollutant
Hazchem Code:	2Z

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 2020. All ingredients appear on the NZIoC.

SPECIFIC CONTROLS

Key workplace requirements are:

SDS	To be available within 10 minutes in workplaces storing any quantity.
Inventory	All inventory of all hazardous substances must be prepared and maintained.
Packaging	All hazardous substances should be appropriately packaged including substances 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
Bundling & 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 a 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 Authority (New Zealand)
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/UEL	Lower Explosive Limit / Uper Explosive Limit.
LD50	Lethal Dose 50% - dose which is fatal to 50% of a test population (usually rats).
LC50	Lethal Concentraction 50% - concentration in air which is fatal to 50% of a test population (usually rats).
NZIoC	New Zealand Inventory of Chemicals.
MSDS (SDS)	Material Safety Data Sheet (or Safety Data Sheet)
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).
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 ad available on their web site - www.worksafe.govt.nz
Other References:	Suppliers SDS, EU ECHA, ingredients SDS's, ChemIDplus

REVIEW

Date:	Reason for review
June 2018	Not applicable - new SDS
August 2023	5 yearly review, HSNO to GHS 7

DISCLAIMER

This SDS 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 GHS 7 classifications for this SDS have been estimated based on general information from the supplier (e.g. hazard, toxicological).