

# Surrender

## Section 1: Identification

Product name:	Surrender
Other names:	Benzalkonium Chloride 500g/L
Recommended use:	Biocide for the control of moss, lichen, liverwort and algae.
Manufacturer/Importer details:	Agritrade 411 Blenheim Road Christchurch New Zealand  Phone: 03 341 4587
24-hour emergency contact:	0800 CHEMCALL (0800 243622)
National Poison Centre:	0800 POISON (0800 764766)

## Section 2: Hazard identification

Product is classified as hazardous according to the Hazardous Substances (Classification) Notice 2017 of the HSNO Act, 1996.

HSNO Approval: HSR000822

Hazardous classification: 6.1C, 6.5A, 6.5B, 6.9B, 8.2C, 8.3A, 9.1A, 9.3B

Pictograms:



Signal word: **DANGER**

Hazard statements:  
H301 Toxic if swallowed.  
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.  
H317 May cause an allergic skin reaction.  
H373 May cause damage to organs through prolonged or repeated exposure.  
H314 Causes severe skin burns and eye damage.  
H318 Causes serious eye damage.  
H400 Very toxic to aquatic life.  
H432 Toxic to terrestrial vertebrates.

Prevention statements:  
P102 Keep out of reach of children.  
P103 Read label before use.  
P264 Wash exposed skin thoroughly after handling.  
P270 Do not eat, drink or smoke when using this product.  
P260 Do not breathe vapours or spray mist.  
P285 In case of inadequate ventilation wear respiratory protection  
P272 Contaminated work clothing should not be allowed out of the work place.

Response statements:	<p>P280 Wear protective gloves, protective clothing and eye/face protection.</p> <p>P301 + P310 <b>IF SWALLOWED:</b> Immediately call a POISON CENTRE or doctor</p> <p>P330 + P331 Rinse mouth. Do NOT induce vomiting</p> <p>P304 + P340 <b>IF INHALED:</b> Remove to fresh air and keep at rest in a position comfortable for breathing</p> <p>P310 Immediately call a Poison Centre or doctor.</p> <p>P303 + P361 + P353 <b>IF ON SKIN (or hair):</b> Take off immediately all contaminated clothing. Rinse skin with water.</p> <p>P363 Wash contaminated clothing before reuse.</p> <p>P333 + P313 If skin irritation or rash occurs: Get medical attention.</p> <p>P305 + P351 + P338 <b>IF IN EYES:</b> Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do so. Continue rinsing.</p> <p>P391 Collect spillage.</p>
Storage statement:	P405 Store locked up.
Disposal statement:	P501 Dispose of product and containers in accordance with local regulations.

### Section 3: Composition/information on ingredients

Chemical identity of ingredients with health or environmental hazards:

<i>Ingredient</i>	<i>CAS No.</i>	<i>Proportion %w/v</i>
Benzalkonium Chloride	8001-54-5	50
Other ingredients	Proprietary	<1
Water	7732-18-5	Balance

### Section 4: First-aid measures

First aid measures:	For advice contact National Poisons Centre (phone New Zealand 0800 764 766) or a doctor. Have product label or Safety Data Sheet at hand.
Ingestion:	Immediately call a Poison Centre or doctor. Rinse mouth with water. Do NOT induce vomiting. Get medical advice.
Skin contact:	Immediately take off contaminated clothing and flush skin and hair with running water. Continue for at least 15 minutes. Get medical attention if irritation or rash occurs.
Eye contact:	Hold eyelids apart and rinse the eye cautiously for at least 15 minutes. Remove contact lenses, if present and easy to do, continue rinsing. Contact a Poisons Centre or doctor for advice.
Inhalation:	Remove patient to fresh air and keep at rest in a position comfortable for breathing. If experiencing respiratory symptoms contact a Poisons Centre or doctor immediately.
First aid facilities:	Provide eye baths and safety showers close to areas where splashing may occur.

# Surrender



Advice to doctor:	Treat symptomatically.
<b>Section 5: Fire-fighting measures</b>	
Flammability:	Non-flammable.
Appropriate extinguishing media:	Dry chemical, water spray (fog), foam or carbon dioxide
Combustion products:	Oxides of carbon and nitrogen
Special protective equipment and precautions for fire-fighters:	Self-contained breathing apparatus required. Addition of water may cause excessive foaming. Vapours may be toxic. Do not allow contaminated runoff to enter drains.
HAZCHEM code:	2X
<b>Section 6: Accidental release measures</b>	
Personal precautions:	Use appropriate protective equipment as listed in section 8. Spills may be slippery and should be cleared up immediately.
Environmental precautions:	This substance is very toxic to aquatic life. Avoid contamination of any water supply with the substance or empty container.
Procedure for clean up:	Clear area of unnecessary personnel. Large spill: Contain and then pump as much as possible to an appropriate, labelled salvage container. Absorb the remaining liquid with clay granules, sand, or other absorbent material and sweep to a waste container. Cover the spill area with water and absorb. Prevent runoff into water ways or drains. Collect spilt product and contaminated materials for disposal to an approved hazardous landfill or waste collection facility.
<b>Section 7: Handling and storage</b>	
Safe handling:	Read label before use. When mixing or applying wear protective clothing; waterproof gloves, overalls, rubber boots, and eye protection. Do not eat, drink or smoke while using. Wash splashes off exposed skin or out of eyes immediately. Wash hands and face thoroughly after handling and before rest or meal breaks.
Safe storage:	Keep out of reach of children. Store in original container, tightly closed and in a locked, dry, cool, well-ventilated area away from foodstuffs, feeds, seeds, fertilisers, insecticides, or fungicides used for the protection of crops.
<b>Section 8: Exposure controls/personal protection</b>	
Occupational exposure limits:	Not set.
Engineering controls:	Not normally required for product being used outdoors and in well-ventilated areas. General (mechanical) room ventilation is considered satisfactory.

# Surrender

Respiratory protection:	Air respirator with organic vapour canister or self-contained breathing apparatus when exposed to vapours from heated material.
Hand protection:	Impervious gloves, e.g. nitrile, PVC.
Eye protection:	Chemical goggles or face shield where splashes may occur.
Skin protection:	Waterproof hat, coat and trousers (worn outside rubber boots). The use of a skin barrier cream is useful to give additional skin protection.
<b>Section 9: Physical and chemical properties</b>	
(a) Appearance:	Clear to light straw-coloured liquid.
(b) Odour:	Amine.
(c) Odour threshold:	No data available.
(d) pH:	6.8-7.8
(e) Melting point/freezing point:	No data available.
(f) Initial boiling point and boiling range:	>100°C
(g) Flash point:	>100°C
(h) Flammability (solid, gas):	Not applicable.
(i) Upper/lower flammability or explosive limits:	Not applicable.
(j) Vapour pressure:	No data available.
(k) Vapour density:	No data available.
(l) Relative density:	0.984
(m) Solubility:	Soluble in water.
(n) Partition coefficient: n-octanol/water:	No data available.
(o) Auto-ignition temperature:	No data available.
(p) Decomposition temperature:	No data available.
(q) Kinematic viscosity:	No data available.
<b>Section 10: Stability and reactivity</b>	
Stability of the substance:	Stable under normal storage and handling conditions.
Conditions to avoid:	None determined.
Incompatible materials:	None determined.
Hazardous decomposition products:	None determined.
<b>Section 11: Toxicological information</b>	

	<p>Toxicity classifications determined by assessment of the components in the formulated mixture.</p> <p>a) Acute toxicity: Toxic if swallowed.</p> <p>b) Aspiration hazard: Not classified as aspirant hazard.</p> <p>c) Respiratory irritation: Not classified as respiratory irritant. Vapours if inhaled may be irritating.</p> <p>d) Skin corrosion / irritation: Corrosive and irritating to skin.</p> <p>e) Serious eye damage / irritation: Corrosive and irritating to eyes.</p> <p>f) Respiratory or skin sensitisation: Classified as both respiratory and contact sensitiser.</p> <p>g) Germ cell mutagenicity: Not classified as mutagenic.</p> <p>h) Carcinogenicity: Not classified as carcinogenic.</p> <p>i) Reproductive toxicity: Not classified as a reproductive toxicant.</p> <p>j) Specific organ toxicity: May cause damage to target organs or systems.</p> <p>k) Narcotic effects: Not classified.</p> <p>l) Other adverse effects: No information.</p> <p>Toxicological information for benzalkonium chloride (active):</p> <p>Acutely toxic - oral LD<sub>50</sub> (mouse): 150mg/kg Acutely toxic – dermal LD<sub>50</sub> (rat): 1420mg/kg Respiratory sensitiser: In acute cases pulmonary oedema resulting from aspiration, dyspnea and cyanosis due to paralysis of the respiratory muscles, bronchoconstriction, cough can occur.</p> <p>Specific organ toxicity - Blood and the Hematopoietic system. Repeated dermal applications of benzalkonium chloride or C14-C16 benzalkonium at doses of 10 mg/kg bw or more 5 times/weeks for 3 months to rats caused changes in blood cellular parameters, liver and kidney, increased body temperature and increased weight of adrenals, kidney and testes.</p> <p>Corrosive to skin: Concentrated solutions can produce corrosive skin lesions with deep necrosis &amp; scarring...caution is advisable when irrigating body cavities...as systemic absorption may cause muscle weakness.</p> <p>Corrosive to eyes: Eye exposure may result in mild discomfort (0.1% solution) to very serious corneal damage (10% solution) depending on the agent and the concentration. High concentrations of benzalkonium chloride can cause ocular toxicity in human eyes.</p>
<p><b>Section 12: Ecological information</b></p>	
	<p>Ecotoxicological classifications determined by assessment of the components in the formulated mixture.</p> <p>a) Aquatic toxicity: Very toxic to aquatic life with long lasting effects</p> <p>b) Soil environment: Not classified for soil ecotoxicity.</p>

# Surrender

c) Terrestrial vertebrate toxicity:	Harmful to terrestrial vertebrates.
d) Terrestrial invertebrate toxicity:	Not classified.
e) Persistence and degradability:	No data available.
f) Potential to be bioaccumulative:	No data available.
g) Mobility in soil:	No data available.
h) Other adverse effects:	No information available.
Ecotoxicological information for benzalkonium chloride (active):	Fathead minnow LC <sub>50</sub> (96 hour): 0.28 mg/l <i>Daphnia magna</i> EC <sub>50</sub> (48 hour): 0.0059 mg/l Green algae EC <sub>50</sub> (72 hour): 0.08 mg/l
<b>Section 13: Disposal considerations</b>	
Product disposal:	Dispose of this product only by using according to the label or through Agrecovery chemical disposal or similar approved service or at an approved landfill.
Container disposal:	Triple rinse empty container adding rinsate to the spray tank. Recycle through Agrecovery if possible or appropriate recycling facility. Otherwise crush and bury in an approved landfill. Do not use container for any other purpose. Avoid contamination of any water supply or stream with product or empty container.
<b>Section 14: Transport information</b>	
UN number:	2922
UN proper shipping name:	CORROSIVE LIQUID, TOXIC, N.O.S (contains Benzalkonium chloride 50%)
UN class:	8
Sub-class:	6.1
Packing group:	III
HAZCHEM:	2X
Marine Pollutant:	Yes
Special precautions:	-
This product is classified as a Dangerous Good. Consult the Land Transport Rule: Dangerous Goods 2005 and NZS 5433:2012 Transport of Dangerous Goods on Land for more information.	
<b>Section 15: Regulatory information</b>	
HSNO:	Approved substance under the HSNO Act 1996.
Substance approval number:	HSR000822; Soluble concentrate containing 500 g/litre benzalkonium chloride.
Tolerable exposure limit:	Not set.
HSNO controls:	See <a href="http://www.epa.govt.nz">www.epa.govt.nz</a>

# Surrender



Additional controls:	This substance must not be applied onto or into water.
Competent person:	The supply and use of this product is restricted to workplaces only where a COMPETENT or AUTHORISED PERSON will accept responsibility for the product. Application or use of this product must be by a QUALIFIED PERSON. However, a person other than a qualified person (person A), may apply the substance if a qualified person: (a) has provided guidance to person A in respect of the application of the substance at the place; and, (b) is available at all times to provide assistance, if necessary, to person A while Person A is applying the substance.
Record keeping:	A written record of each application must be kept where: (a) members of the public may lawfully be present; or (b) the substance is likely to enter the air or water supply and leave the area where it is under control. The information must be kept for a minimum of 3 years.
ACVM:	Registered under the Agricultural Compounds Veterinary Medicines Act 1997.
Registration number:	P4649
Conditions of registration:	See <a href="http://www.foodsafety.govt.nz">www.foodsafety.govt.nz</a>
<b>Section 16: Other information</b>	
Date of issue:	14/03/2019.
Reason for reissue:	Review of SDS and product information.
Replaces:	SDS issued 25 September 2018.
Information references:	Supplier Safety Data Sheet NZ EPA Approved hazardous substances databases. NZ EPA Chemical Classification and Information Databases.
Abbreviations:	ACVM: Agricultural Chemicals and Veterinary Medicines Group HSNO: Hazardous substances and New Organisms Act 1996 (HSNO Act) EPA: Environmental Protection Authority of New Zealand CAS Number: Chemical Abstracts Service Number LD50: Lethal Dose 50% (Population) LC50: Lethal Concentration 50% (Population) WES-TWA: Workplace exposure standards – Time-weighted average WES-STEL: Workplace exposure standards – Short-term exposure limit

The data provided in this safety data sheet is based on current knowledge and experience. The purpose of this document is to describe the product in terms of its safety requirements. The above details do not imply any guarantee concerning composition, properties or performance of the product.