Safety Data Sheet
Quat 50%
Revision 4, 22/08/2024

1. IDENTIFICATION

Product Name	**Benzalkonium Chloride 50%**
Other Names	Dodecyl Dimethyl Benzyl Ammonium Chloride (DDBAC); Quaternary ammonium compounds, benzyl-C8-18-alkyldimethyl, chlorides [CAS#63449-41-2]
Uses	Water treatment; Detergents.
Chemical Family	No Data Available
Chemical Formula	Unspecified
Chemical Name	Quaternary ammonium compounds, alkylbenzyldimethyl, chlorides
Product Description	No Data Available

Contact Details of the Supplier of this Safety Data Sheet

Organisation	Location	Telephone
Aurora Cleaning Supplies	F1 / 5 Bungaleen Court Dandenong South VIC 3175	03 9768 2669

Emergency Contact Details

For emergencies only; DO NOT contact these companies for general product advice.

Organisation	Location	Telephone
Chemcall	Australia	1800-127406 +64-4-9179888
Chemcall	Malaysia	+64-4-9179888
Chemcall	New Zealand	0800-243622 +64-4-9179888
National Poisons Centre	New Zealand	0800-764766
CHEMTREC	USA & Canada	1-800-424-9300 CN723420 +1-703-527-3887

2. HAZARD IDENTIFICATION

Poisons Schedule (Aust) Schedule 6

Globally Harmonised System

Hazard Classification			Hazardous according to the criteria of the Globally Harmonised System of Classification and Labelling of Chemicals (GHS)
Hazard Categories			Acute Toxicity (Oral) - Category 4
			Acute Toxicity (Dermal) - Category 4
			Skin Corrosion/Irritation - Category 1B
			Serious Eye Damage/Irritation - Category 1
			Acute Hazard To The Aquatic Environment - Category 1
Pictograms			
Signal Word			Danger
Hazard Statements		**H302 + H312**	Harmful if swallowed or in contact with skin.
		H314	Causes severe skin burns and eye damage.
		H400	Very toxic to aquatic life.
Precautionary Statements	Prevention	**P260**	Do not breathe mist/vapour/spray.
		P280	Wear protective gloves/protective clothing/eye protection/face protection.
		P273	Avoid release to the environment.
		P270	Do not eat, drink or smoke when using this product.
	Response	**P303 + P361 + P353**	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.
		P310	Immediately call a POISON CENTER or doctor.
		P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
		P301 + P330 + P331	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
		P363	Wash contaminated clothing before reuse.
		P391	Collect spillage.
		P304 + P340	IF INHALED: Remove victim to fresh air and keep comfortable for breathing.
	Storage	**P405**	Store locked up.
	Disposal	**P501**	Dispose of contents/container in accordance with local / regional / national / international regulations.

National Transport Commission (Australia)

Australian Code for the Transport of Dangerous Goods by Road & Rail (ADG Code)

Dangerous Goods Classification	Dangerous Goods according to the criteria of the Australian Code for the Transport of Dangerous Goods by Road & Rail (ADG Code)

Environmental Protection Authority (New Zealand)

Hazardous Substances and New Organisms Amendment Act 2015

HSNO Classifications	Health Hazards	**6.1D**	Substances that are acutely toxic - Harmful
		8.2B	Substances that are corrosive to dermal tissue UN PGII
		8.3A	Substances that are corrosive to ocular tissue
	Environmental Hazards	**9.1A**	Substances that are very ecotoxic in the aquatic environment

3. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients

Chemical Entity	Formula	CAS Number	Proportion
Benzalkonium chloride	Unspecified	8001-54-5	>=50 %
Water	H2O	7732-18-5	<=50 %

4. FIRST AID MEASURES

Description of necessary measures according to routes of exposure

Swallowed IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. Immediately call a Poison Centre or doctor/physician for advice. Never give anything by mouth to an unconscious person.

Eye IF IN EYES: Immediately flush eyes with running water for several minutes, holding eyelids open and occasionally lifting the upper and lower lids. Remove contact lenses if present and easy to do. Continue flushing until advised to stop by a Poisons Information Centre or a doctor, or for at least 15 minutes. Immediately call a Poison Centre or doctor/physician for advice.

Skin IF ON SKIN (or hair): Remove and isolate contaminated clothing and shoes. Immediately flush skin and hair with running water for at least 15 minutes. Wash with plenty of soap and water. In case of gross contamination, drench contaminated clothing and skin with plenty of water before removing clothes. Immediately call a Poison Centre or doctor/physician for advice.
*For minor skin contact, avoid spreading material on unaffected skin.

Inhaled IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a Poison Centre or doctor/physician for advice. Give artificial respiration if victim is not breathing. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Administer oxygen if breathing is difficult.

Advice to Doctor Treat symptomatically. Keep victim calm and warm. Effects of exposure (inhalation, ingestion or skin contact) to substance may be delayed.
*Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves.

Medical Conditions Aggravated by Exposure No information available.

5. FIRE FIGHTING MEASURES

General Measures Move containers from fire area if you can do it without risk. Cool containers with water spray until well after fire is out. Dike fire-control water for later disposal; do not scatter the material.

Flammability Conditions Non-combustible; However, following evaporation of aqueous component under fire conditions, residual material can burn if ignited.

Extinguishing Media If material is involved in a fire, use dry chemical, Carbon dioxide (CO2), foam or water spray for extinction - Do not use a heavy water stream.

Fire and Explosion Hazard When heated, vapours may form explosive mixtures with air: indoors, outdoors and sewers explosion hazards. Containers may explode when heated.

Hazardous Products of Combustion Fire/thermal decomposition generates irritating, corrosive and/or toxic gases.

Special Fire Fighting Instructions Contain runoff from fire control or dilution water - Runoff may be corrosive and/or toxic and cause pollution.

Personal Protective Equipment Wear positive pressure self-contained breathing apparatus (SCBA). Wear chemical protective clothing - It may provide little or no thermal protection. Structural firefighters' protective clothing provides limited protection in fire situations ONLY; it is not effective in spill situations where direct contact with the substance is possible.

Flash Point 250 °C

Lower Explosion Limit No Data Available

Upper Explosion Limit No Data Available

Auto Ignition Temperature No Data Available

Hazchem Code 2X

6. ACCIDENTAL RELEASE MEASURES

General Response Procedure	Ensure adequate ventilation - Ventilate enclosed spaces before entering. ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Do not touch or walk through spilled material. Do not breathe vapours and prevent contact with eyes, skin and clothing.
Clean Up Procedures	Absorb or cover with dry earth, sand or other non-combustible material and transfer to containers for disposal (see SECTION 13).
Containment	Stop leak if you can do it without risk. Prevent entry into waterways, sewers, basements or confined areas.
Decontamination	Ventilate area.
Environmental Precautionary Measures	Spillages and decontamination runoff should be prevented from entering drains and watercourses.
Evacuation Criteria	Spill or leak area should be isolated immediately. Evacuate unnecessary personnel. Keep unauthorised personnel away. Keep upwind and to higher ground.
Personal Precautionary Measures	Do not touch damaged containers or spilled material unless wearing appropriate protective clothing (see SECTION 8).

7. HANDLING AND STORAGE

Handling	Safety showers and eyewash facilities should be provided within the immediate work area for emergency use. Ensure adequate ventilation. Handle in accordance with good industrial hygiene and safety practice. Do not breathe vapours and prevent contact with eyes, skin and clothing. Do not ingest. Wear protective gloves/protective clothing/eye protection/face protection (see SECTION 8). Thermal decomposition generates corrosive vapours - Avoid overheating! Avoid release to the environment - Collect spillage (see SECTION 6).
Storage	Store in a cool, dry and well-ventilated place, out of direct sunlight. Keep container tightly closed. Keep away from heat and sources of ignition - No smoking. Keep away from foodstuffs and incompatible materials (see SECTION 10). Store locked up.
Container	Keep in the original container.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

General	No specific exposure standards are available for this product.
Exposure Limits	No Data Available
Biological Limits	No information available.
Engineering Measures	A system of local and/or general exhaust is recommended to keep employee exposures as low as possible. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area.
Personal Protection Equipment	- Respiratory protection: In case of inadequate ventilation, wear respiratory protection. Recommended: Organic vapour respirator (refer to AS/NZS 1715 & 1716). - Eye/face protection: Wear appropriate eye protection to prevent eye contact. Recommended: Chemical goggles; Face-shield. - Hand protection: Wear protective gloves. Recommended: Impervious gloves, such as neoprene or butyl rubber. - Skin/body protection: Wear appropriate personal protective clothing to prevent skin contact. Recommended: Impervious apron, full suit, boots, as appropriate.
Special Hazards Precaustions	No information available.
Work Hygienic Practices	Do not eat, drink or smoke when using this product. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Take off immediately all contaminated clothing. Wash contaminated clothing before reuse.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Liquid

Appearance	Liquid
Odour	No information available.
Colour	Pale yellow
pH	6 - 8 (as is)
Vapour Pressure	No Data Available
Relative Vapour Density	No Data Available
Boiling Point	100 °C
Melting Point	No Data Available
Freezing Point	No Data Available
Solubility	Soluble in water
Specific Gravity	0.96
Flash Point	250 °C
Auto Ignition Temp	No Data Available
Evaporation Rate	No Data Available
Bulk Density	No Data Available
Corrosion Rate	No Data Available
Decomposition Temperature	No Data Available
Density	0.96 g/cm3
Specific Heat	No Data Available
Molecular Weight	No Data Available
Net Propellant Weight	No Data Available
Octanol Water Coefficient	No Data Available
Particle Size	No Data Available
Partition Coefficient	No Data Available
Saturated Vapour Concentration	No Data Available
Vapour Temperature	No Data Available
Viscosity	No Data Available
Volatile Percent	No Data Available
VOC Volume	No Data Available
Additional Characteristics	No information available.
Potential for Dust Explosion	Not applicable.
Fast or Intensely Burning Characteristics	No information available.
Flame Propagation or Burning Rate of Solid Materials	No information available.
Non-Flammables That Could Contribute Unusual Hazards to a Fire	No information available.
Properties That May Initiate or Contribute to Fire Intensity	Non-combustible; However, following evaporation of aqueous component under fire conditions, residual material can burn if ignited.
Reactions That Release Gases or Vapours	Fire/thermal decomposition generates irritating, corrosive and/or toxic gases.
Release of Invisible Flammable Vapours and Gases	No information available.

10. STABILITY AND REACTIVITY

General Information	No information available.
Chemical Stability	Stable under normal conditions.
Conditions to Avoid	Avoid overheating. Avoid direct sunlight.
Materials to Avoid	Incompatible/reactive with oxidising agents.

Hazardous Decomposition Products	Thermal decomposition generates irritating, corrosive and/or toxic gases.
Hazardous Polymerisation	Will not occur.

11. TOXICOLOGICAL INFORMATION

General Information

- Acute toxicity: Harmful if swallowed and in contact with skin. Swallowing a small quantity of this material will result in serious health hazard! Following ingestion: caustic burns on the lips, tongue, mouth, throat, pharynx, oesophagus, and stomach can occur; hypersalivation, vomiting, haematemesis, diarrhoea and confusion can also occur. In severe cases, there could be hypotension, shock, respiratory paralysis, convulsions, coma and cardiorespiratory arrest [NICNAS].
- Skin corrosion/irritation: Causes severe skin burns and eye damage.
- Eye damage/irritation: Causes serious eye damage.
- Respiratory/skin sensitisation: Not classified. There have been reports of irritant contact dermatitis and allergic conjunctivitis in humans following exposure to quaternary ammonium compounds, particularly benzalkonium chloride [NICNAS].
- Germ cell mutagenicity: Not classified. Not considered to have mutagenic or genotoxic potential.
- Carcinogenicity: Not classified. No evidence of carcinogenicity.
- Reproductive toxicity: Not classified. Not considered to have specific reproductive or developmental toxicity.
- STOT (single exposure): Not classified. Inhalation exposure may result in respiratory irritation/burning, irritation to the mouth/throat/nose, coughing/choking, chest pain, disorientation, dizziness, and shortness of breath.
- STOT (repeated exposure): Not classified. Not considered to cause serious damage to health from repeated exposure at doses below acutely toxic doses. Repeated exposure to this material can result in absorption through skin causing significant health hazard!
- Aspiration toxicity: Not classified.

Acute

Ingestion

Acute toxicity (Oral):
COMPONENT: Benzalkonium chloride (CAS No. 8001-54-5):
- LD50, Rats: 280 - 305 mg/kg bw. [NICNAS].

Other

Acute toxicity (Dermal):
COMPONENT: Benzalkonium chloride (CAS No. 8001-54-5):
- LD50, Rats: 930 mg/kg bw. [NICNAS].

Carcinogen Category None

12. ECOLOGICAL INFORMATION

Ecotoxicity	No information available.
Persistence/Degradability	No information available.
Mobility	No information available.
Environmental Fate	Very toxic to aquatic life - Avoid release to the environment.
Bioaccumulation Potential	No information available.
Environmental Impact	No Data Available

13. DISPOSAL CONSIDERATIONS

General Information	Dispose of contents/container in accordance with local/regional/national regulations.
Special Precautions for Land Fill	No information available.

14. TRANSPORT INFORMATION

Land Transport (Australia)
ADG Code

Proper Shipping Name	CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. (Contains Benzalkonium chloride)
Class	8 Corrosive Substances
Subsidiary Risk(s)	No Data Available
EPG	37 Toxic And/Or Corrosive Substances Non-Combustible
UN Number	3265
Hazchem	2X
Pack Group	II
Special Provision	No Data Available

Land Transport (Malaysia)
ADR Code

Proper Shipping Name	CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. (Contains Benzalkonium chloride)
Class	8 Corrosive Substances
Subsidiary Risk(s)	No Data Available
EPG	37 Toxic And/Or Corrosive Substances Non-Combustible
UN Number	3265
Hazchem	2X
Pack Group	II
Special Provision	No Data Available

Land Transport (New Zealand)
NZS5433

Proper Shipping Name	CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. (Contains Benzalkonium chloride)
Class	8 Corrosive Substances
Subsidiary Risk(s)	No Data Available
EPG	37 Toxic And/Or Corrosive Substances Non-Combustible
UN Number	3265
Hazchem	2X
Pack Group	II
Special Provision	No Data Available

Land Transport (United States of America)
US DOT

Proper Shipping Name	CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. (Contains Benzalkonium chloride)
Class	8 Corrosive Substances
Subsidiary Risk(s)	No Data Available
ERG	153 Substances - Toxic and/or Corrosive (Combustible)
UN Number	3265
Hazchem	2X
Pack Group	II
Special Provision	No Data Available

Sea Transport
IMDG Code

Proper Shipping Name	CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. (Contains Benzalkonium chloride)
Class	8 Corrosive Substances
Subsidiary Risk(s)	No Data Available

UN Number	3265
Hazchem	2X
Pack Group	II
Special Provision	No Data Available
EMS	F-A, S-B
Marine Pollutant	Yes

Air Transport
IATA DGR

Proper Shipping Name	CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. (Contains Benzalkonium chloride)
Class	8 Corrosive Substances
Subsidiary Risk(s)	No Data Available
UN Number	3265
Hazchem	2X
Pack Group	II
Special Provision	No Data Available

National Transport Commission (Australia)
Australian Code for the Transport of Dangerous Goods by Road & Rail (ADG Code)

Dangerous Goods Classification	Dangerous Goods according to the criteria of the Australian Code for the Transport of Dangerous Goods by Road & Rail (ADG Code)

15. REGULATORY INFORMATION

General Information	BENZALKONIUM CHLORIDE
Poisons Schedule (Aust)	Schedule 6

Environmental Protection Authority (New Zealand)
Hazardous Substances and New Organisms Amendment Act 2015

Approval Code	HSR002491 HSR006501 (Revoked)

National/Regional Inventories

Australia (AIIC)	Listed
Canada (DSL)	Not Determined
Canada (NDSL)	Not Determined
China (IECSC)	Not Determined
Europe (EINECS)	264-151-6
Europe (REACh)	Not Determined
Japan (ENCS/METI)	Not Determined
Korea (KECI)	Not Determined

Malaysia (EHS Register)	Not Determined
New Zealand (NZIoC)	Listed
Philippines (PICCS)	Not Determined
Switzerland (Giftliste 1)	Not Determined
Switzerland (Inventory of Notified Substances)	Not Determined
Taiwan (NCSR)	Not Determined
USA (TSCA)	Not Determined

16. OTHER INFORMATION

Related Product Codes	KUAMCO1350, KUAMCO1355, KUAMCO2900, KUAMCO2950, KUAMCO3000, KUAMCO3100, KUAMCO3500, KUAMCO5050
Revision	4
Revision Date	22/08/2024
Key/Legend	**<** Less Than **>** Greater Than **AICS** Australian Inventory of Chemical Substances **atm** Atmosphere **CAS** Chemical Abstracts Service (Registry Number) **cm²** Square Centimetres **CO2** Carbon Dioxide **COD** Chemical Oxygen Demand **deg C (°C)** Degrees Celcius **EPA (New Zealand)** Environmental Protection Authority of New Zealand **deg F (°F)** Degrees Farenheit **g** Grams **g/cm³** Grams per Cubic Centimetre **g/l** Grams per Litre **HSNO** Hazardous Substance and New Organism **IDLH** Immediately Dangerous to Life and Health **immiscible** Liquids are insoluable in each other. **inHg** Inch of Mercury **inH2O** Inch of Water **K** Kelvin **kg** Kilogram **kg/m³** Kilograms per Cubic Metre **lb** Pound **LC50** LC stands for lethal concentration. LC50 is the concentration of a material in air which causes the death of 50% (one half) of a group of test animals. The material is inhaled over a set period of time, usually 1 or 4 hours. **LD50** LD stands for Lethal Dose. LD50 is the amount of a material, given all at once, which causes the death of 50% (one half) of a group of test animals. **ltr** or **L** Litre **m³** Cubic Metre **mbar** Millibar **mg** Milligram **mg/24H** Milligrams per 24 Hours **mg/kg** Milligrams per Kilogram **mg/m³** Milligrams per Cubic Metre **Misc** or **Miscible** Liquids form one homogeneous liquid phase regardless of the amount of either component present. **mm** Millimetre **mmH2O** Millimetres of Water **mPa.s** Millipascals per Second **N/A** Not Applicable **NIOSH** National Institute for Occupational Safety and Health **NOHSC** National Occupational Heath and Safety Commission **OECD** Organisation for Economic Co-operation and Development **Oz** Ounce **PEL** Permissible Exposure Limit **Pa** Pascal

ppb Parts per Billion
ppm Parts per Million
ppm/2h Parts per Million per 2 Hours
ppm/6h Parts per Million per 6 Hours
psi Pounds per Square Inch
R Rankine
RCP Reciprocal Calculation Procedure
STEL Short Term Exposure Limit
TLV Threshold Limit Value
tne Tonne
TWA Time Weighted Average
ug/24H Micrograms per 24 Hours
UN United Nations
wt Weight