HALLIBURTON

MATERIAL SAFETY DATA SHEET

Product Trade Name: **ALDACIDE® G ANTIMICROBIAL**

Revision Date: 11-Dec-2014

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Statement of Hazardous Nature Hazardous according to the criteria of NOHSC, Dangerous Goods according to the criteria of ADG.

Manufacturer/Supplier

Halliburton Australia Pty. Ltd.
15 Marriott Road
Jandakot
WA 6164
Australia

ACN Number: 009 000 775
Telephone Number: 61 (08) 9455 8300
Fax Number: 61 (08) 9455 5300

Product Emergency Telephone
Australia: 08-64244950
Papua New Guinea: 05 1 281 575 5000
NewZealand: 06-7559274

Fire, Police & Ambulance - Emergency Telephone
Australia: 000
Papua New Guinea: 000
New Zealand: 111

Identification of Substances or Preparation

Product Trade Name:	ALDACIDE® G ANTIMICROBIAL
Synonyms:	None
Chemical Family:	Aldehyde
UN Number:	UN3265
Dangerous Goods Class:	8
Subsidiary Risk:	None
Hazchem Code:	None Allocated
Poisons Schedule:	S6
Application:	Biocide

Prepared By

Chemical Compliance
Telephone: 1-580-251-4335
e-mail: fdunexchem@halliburton.com

2. HAZARDS IDENTIFICATION

Statement of Hazardous Nature Hazardous according to the criteria of NOHSC, Dangerous Goods according to the criteria of ADG.

Hazard Overview

Keep out of reach of children May cause eye burns. May cause irreversible eye damage. May cause severe skin irritation. May be harmful if swallowed. May be harmful if inhaled May cause allergic skin reaction.

Classification

C - Corrosive.
Xn - Harmful.
N - Dangerous For The Environment.

Risk Phrases

R34 Causes burns.
R20/22 Harmful by inhalation and if swallowed.
R42/43 May cause sensitization by inhalation and skin contact.
R50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Safety Phrases

S23 Do not breathe gas, fumes, vapour or spray.

S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

S45 In case of accident or if you feel unwell, seek medical advice immediately.
S1/2 Keep locked up and out of reach of children.

S36/37/39 Wear suitable protective clothing, gloves and eye/face protection.

HSNO Classification

6.1A (Inhalation) Acutely Toxic Substances
6.5A Respiratory sensitisers
6.5B Contact sensitisers
6.9B Harmful to human target organs or systems
8.2B Corrosive to dermal tissue if exposed for greater than 3 mins
8.3A Corrosive to ocular tissue
9.1D Slightly harmful in the aquatic environment
9.2B Ecotoxic in the soil environment
9.3B Ecotoxic to terrestrial invertebrates

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substances	CAS Number	PERCENT (w/w)	Australia NOHSC	New Zealand WES	ACGIH TLV-TWA
Glutaraldehyde	111-30-8	10 - 30%	0.1 ppm	STEL: 0.05 ppm	0.05 ppm
Methanol	67-56-1	0.1 - 1%	TWA: 200 ppm TWA: 262 mg/m^3 STEL: 250 ppm STEL: 328 mg/m^3	STEL: 250 ppm STEL: 328 mg/m^3 TWA: 200 ppm TWA: 262 mg/m^3	TWA: 200 ppm STEL: 250 ppm Skin

Non-Hazardous Substance to Total of 100%

4. FIRST AID MEASURES

Inhalation

If inhaled, remove from area to fresh air. Get medical attention if respiratory irritation develops or if breathing becomes difficult.

Skin

In case of contact, immediately flush skin with plenty of soap and water for at least 15 minutes. Get medical attention. Remove contaminated clothing and discard.

Eyes

Immediately flush eyes with large amounts of water for at least 30 minutes. Seek prompt medical attention.

Ingestion	Do NOT induce vomiting. Give nothing by mouth. Obtain immediate medical attention.
Notes to Physician	Probable mucosal damage may contraindicate the use of gastric lavage. No specific antidote. Treat symptomatically.

5. FIRE FIGHTING MEASURES

Suitable Extinguishing Media
Water fog, carbon dioxide, foam, dry chemical.

Extinguishing media which must not be used for safety reasons
None known.

Special Exposure Hazards	Decomposition in fire may produce toxic gases.
Special Protective Equipment for Fire-Fighters	Full protective clothing and approved self-contained breathing apparatus required for fire fighting personnel.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautionary Measures	Use appropriate protective equipment. Use only competent persons for cleanup.
Environmental Precautionary Measures	Prevent from entering sewers, waterways, or low areas.
Procedure for Cleaning / Absorption	Isolate spill and stop leak where safe. Contain spill with sand or other inert materials. Scoop up and remove.

7. HANDLING AND STORAGE

Handling Precautions	Avoid contact with eyes, skin, or clothing. Avoid breathing vapors. Avoid breathing mist. Do not swallow. Wash hands after use. Launder contaminated clothing before reuse.
Storage Information	Store away from acids. Store away from alkalis. Keep container closed when not in use. Product has a shelf life of 36 months.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Controls	Use in a well ventilated area. Local exhaust ventilation should be used in areas without good cross ventilation. If vapors are strong enough to be irritating to the nose or eyes, the TLV is probably being exceeded and special ventilation or respiratory protection maybe required.
Respiratory Protection	If engineering controls and work practices cannot keep exposure below occupational exposure limits or if exposure is unknown, wear a NIOSH certified, European Standard EN 149, AS/NZS 1715:2009, or equivalent respirator when using this product. Selection of and instruction on using all personal protective equipment, including respirators, should be performed by an Industrial Hygienist or other qualified professional. Full Facepiece Respirator with Organic vapor cartridge with particulate prefilter.

Hand Protection	Chemical-resistant protective gloves (EN 374) Suitable materials for longer, direct contact (recommended: protection index 6, corresponding to > 480 minutes permeation time as per EN 374): Butyl rubber gloves. (>= 0.7 mm thickness) This information is based on literature references and on information provided by glove manufacturers, or is derived by analogy with similar substances. Please note that in practice the working life of chemical-resistant protective gloves may be considerably shorter than the permeation time determined in accordance with EN 374 as a result of the many influencing factors (e.g. temperature). If signs of wear and tear are noticed then the gloves should be replaced. Manufacturer's directions for use should be observed because of great diversity of types.
Skin Protection	Butyl coated apron or clothing.
Eye Protection	Splashproof chemical monogoggles or safety glasses with side shields in conjunction with a face shield. Do NOT wear contact lenses.
Other Precautions	Eyewash fountains and safety showers must be easily accessible.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State:	Liquid
Color:	Clear light yellow
Odor:	Sharp
pH:	3.1-4.5
Specific Gravity @ 20 C (Water=1):	1.064
Density @ 20 C (kg/l):	1.064
Bulk Density @ 20 C (kg/M3):	Not Determined
Boiling Point/Range (C):	100.5
Freezing Point/Range (C):	-5 / -10
Pour Point/Range (C):	Not Determined
Flash Point/Range (C):	Not Determined
Flash Point Method:	Not Determined
Autoignition Temperature (C):	> 275
Flammability Limits in Air - Lower (g/m^3):	Not Determined
Flammability Limits in Air - Lower (%):	Not Determined
Flammability Limits in Air - Upper (g/m^3):	Not Determined
Flammability Limits in Air - Upper (%):	Not Determined
Vapor Pressure @ 20 C (mmHg):	0.2
Vapor Density (Air=1):	0.8
Percent Volatiles:	100
Evaporation Rate (Butyl Acetate=1):	0.9
Solubility in Water (g/100ml):	Soluble
Solubility in Solvents (g/100ml):	Not Determined
VOCs (g/l):	Not Determined
Viscosity, Dynamic @ 20 C (centipoise):	Not Determined
Viscosity, Kinematic @ 20 C (centistokes):	Not Determined
Partition Coefficient/n-Octanol/Water:	-0.333
Molecular Weight (g/mole):	Not Determined
Decomposition Temperature (C):	Not Determined

10. STABILITY AND REACTIVITY

Stability Data:	Stable
Hazardous Polymerization:	Will Not Occur
Conditions to Avoid	Keep away from heat, sparks and flame.

Incompatibility (Materials to Avoid) Strong acids. Strong alkalis.

Hazardous Decomposition Products Carbon monoxide and carbon dioxide.

Additional Guidelines Not Applicable

11. TOXICOLOGICAL INFORMATION

Principle Route of Exposure Eye or skin contact, inhalation.

Sympotoms related to exposure

Acute Toxicity

Inhalation Harmful if inhaled. Causes severe respiratory irritation. Vapors given off by heated product may be harmful. May cause allergic respiratory reaction. Inhalation of vapors may result in skin sensitization.

Eye Contact May cause eye burns. May cause permanent eye damage. High vapor concentration will cause irritation.

Skin Contact May cause skin burns. This product contains ingredients which may produce an allergic skin reaction. It should be treated as a skin sensitizer.

Ingestion Causes burns of the mouth, throat and stomach. Harmful if swallowed. Aspiration into the lungs may cause chemical pneumonitis including coughing, difficulty breathing, wheezing, coughing up blood and pneumonia, which can be fatal.

Chronic Effects/Carcinogenicity No data available to indicate product or components present at greater than 1% are chronic health hazards.

Toxicology data for the components

Substances	CAS Number	LD50 Oral	LD50 Dermal	LC50 Inhalation
Glutaraldehyde	111-30-8	252 mg/kg (Rat) 316 mg/kg (Rat)	> 2000 mg/kg (Rat) 560 µL/kg (Rabbit)	0.48 mg/L (Rat, 4h)
Methanol	67-56-1	> 1187 - 2769 mg/kg (Rat) 3000 mg/kg (Monkey) 300 mg/kg (Human)	15800 mg/kg (Rabbit) 393 mg/kg (Primate)	87.5 mg/L (Rat) 6h vapour 128.2 mg/L (Rat) 4h vapour 83.2 mg/L (Rat) 4 h 64000 ppm (Rat) 4 h 10 mg/L (Human)

12. ECOLOGICAL INFORMATION

Ecotoxicological Information

Ecotoxicity Product

Acute Fish Toxicity: May be highly toxic to aquatic life.
LC50: (96 hour) 13 mg/l (Lepomis macrochirus)

Acute Crustaceans Toxicity: TLM48: 0.11 mg/l (Acartia tonsa)
TLM48: 29.73 mg/l (Daphnia magna)

Acute Algae Toxicity: EC50: 8.1 mg/l (Skeletonema costatum)

Ecotoxicity Substance

Substances	CAS Number	Toxicity to Algae	Toxicity to Fish	Toxicity to Microorganisms	Toxicity to Invertebrates
Glutaraldehyde	111-30-8	EC50(72h): 0.61 mg/L (Desmodesmus subspicatus)	LC50: 7.8-22 mg/L (Lepomis macrochirus); LC50: 7.8-13 mg/L (Oncorhynchus mykiss); LC50: 5.4 mg/L (Pimephales promelas)	No information available	EC50(48h): 0.56 - 1.0 mg/L (Daphnia magna)

Methanol	67-56-1	EC50(96h): ca. 22000 mg/L (Pseudokirchnerella subcapitata, Growth rate)	LC50: 28200 mg/l (Pimephales promelas) LC50(96h): 12700 – 15400 mg/L (Lepomis macrochirus) 200 hr NOEC for % Embryo-cardiovascular for stage 2 = 15800 mg/L	IC50(3h): > 1000 mg/L (activated sludge)	EC50(96h): 18260 mg/L (Daphnia magna) NOEC(21d): 122 mg/L (Daphnia magna, Reproduction)

12.2. Persistence and degradability

Readily biodegradable

Substances	CAS Number	Persistence and Degradability
Glutaraldehyde	111-30-8	Readily biodegradable (90-100% @ 28d)
Methanol	67-56-1	Readily biodegradable (95-97% @ 20d)

12.3. Bioaccumulative potential

Does not bioaccumulate

Substances	CAS Number	Log Pow
Glutaraldehyde	111-30-8	0.22
Methanol	67-56-1	-0.77 BCF 1.0 – 4.5 (Cyprinus carpio) BCF < 10 (Leuciscus idus melanotus)

12.4. Mobility in soil

No information available

12.5. Results of PBT and vPvB assessment

No information available.

Substances	PBT and vPvB assessment
Methanol	Not PBT/vPvB

12.6. Other adverse effects

No information available

13. DISPOSAL CONSIDERATIONS

Disposal Method Disposal should be made in accordance with federal, state, and local regulations.

Contaminated Packaging Follow all applicable national or local regulations.

14. TRANSPORT INFORMATION

Australia Dangerous Goods

UN Number: UN3265
UN Proper Shipping Name: Corrosive Liquid, Acidic, Organic, N.O.S. (Contains Glutaraldehyde)
Transport Hazard Class(es): 8
Packing Group: III

IMDG/IMO

UN Number: UN3265
UN Proper Shipping Name: Corrosive Liquid, Acidic, Organic, N.O.S. (Contains Glutaraldehyde)
Transport Hazard Class(es): 8
Packing Group: III
Environmental Hazards: Not applicable
EMS: EmS F-A, S-B

IATA/ICAO

UN Number: UN3265
UN Proper Shipping Name: Corrosive Liquid, Acidic, Organic, N.O.S. (Contains Glutaraldehyde)
Transport Hazard Class(es): 8

Packing Group: III

Special Precautions for User: None
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code: Not applicable

15. REGULATORY INFORMATION

Chemical Inventories

Australian AICS Inventory	All components listed on inventory or are exempt.
New Zealand Inventory of Chemicals	All components listed on inventory or are exempt.
US TSCA Inventory	All components listed on inventory or are exempt.
EINECS Inventory	This product, and all its components, complies with EINECS
Classification	C - Corrosive. Xn - Harmful. N - Dangerous For The Environment.
Risk Phrases	R34 Causes burns. R20/22 Harmful by inhalation and if swallowed. R42/43 May cause sensitization by inhalation and skin contact. R50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
Safety Phrases	S23 Do not breathe gas, fumes, vapour or spray. S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. S45 In case of accident or if you feel unwell, seek medical advice immediately. S1/2 Keep locked up and out of reach of children. S36/37/39 Wear suitable protective clothing, gloves and eye/face protection.

16. OTHER INFORMATION

The following sections have been revised since the last issue of this SDS
Not applicable

Contact

Australian Poisons Information Centre
24 Hour Service: - 13 11 26
Police or Fire Brigade: - 000 (exchange): - 1100

New Zealand National Poisons Centre
0800 764 766

Additional information For additional information on the use of this product, contact your local Halliburton representative.

For questions about the Safety Data Sheet for this or other Halliburton products, contact Chemical Compliance at 1-580-251-4335.

Disclaimer Statement

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*****END OF MSDS*****