

## SAFETY DATA SHEET

according to Regulation (EC) No. 453/2010

### ALDACIDE® G ANTIMICROBIAL

Revision Date: 29-Oct-2015

Revision Number: 33

#### SECTION 1: Identification of the substance/mixture and of the company/undertaking

##### 1.1. Product Identifier

**Product Name** ALDACIDE® G ANTIMICROBIAL  
**Internal ID Code** HM003462  
 Contains Methanol

##### 1.2. Relevant identified uses of the substance or mixture and uses advised against

**Recommended Use** Biocide

##### 1.3. Details of the supplier of the safety data sheet

Halliburton Manufacturing Services, Ltd.  
 Halliburton House, Howemoss Crescent  
 Kirkhill Industrial Estate  
 Dyce  
 Aberdeen, AB21 0GN  
 United Kingdom

[www.halliburton.com](http://www.halliburton.com)

For further information, please contact

**E-Mail address:** [fdunexchem@halliburton.com](mailto:fdunexchem@halliburton.com)

##### 1.4. Emergency telephone number

+44 8 08 189 0979 / 1-760-476-3961

Emergency telephone - §45 - (EC)1272/2008	
Europe	112
Croatia	Centar za kontrolu otrovanja (CKO): (+385 1) 23-48-342 (Poison Control Center (PCC) - Institute for Medical Research and Occupational Health)
Cyprus	+210 7793777
Denmark	Poison Control Hotline (DK): +45 82 12 12 12
France	ORFILA (FR): + 01 45 42 59 59
Germany	Poison Center Berlin (DE): +49 030 30686 790
Italy	Poison Center, Milan (IT): +39 02 6610 1029
Netherlands	National Poisons Information Center (NL): +31 30 274 88 88 (NB: this service is only available to health professionals)
Norway	Poisons Information (NO): + 47 22 591300
Poland	Poison Control and Information Centre, Warsaw (PL): +48 22 619 66 54; +48 22 619 08 97
Romania	+40 21 318 36 06
Spain	Poison Information Service (ES): +34 91 562 04 20
United Kingdom	NHS Direct (UK): +44 0845 46 47

#### SECTION 2: Hazards Identification

##### 2.1. Classification of the substance or mixture

###### REGULATION (EC) No 1272/2008

Acute Oral Toxicity	Category 4 - H302
Acute Inhalation Toxicity - Dusts and Mists	Category 3 - H331
Skin Corrosion / irritation	Category 1 B - H314
Respiratory Sensitization	Category 1 - H334
Skin Sensitization	Category 1 - H317
Specific Target Organ Toxicity - (Single Exposure)	Category 3 - H335

Chronic Aquatic Toxicity

Chronic 3 - H412

**2.2. Label Elements****Hazard Pictograms****Signal Word****Danger****Hazard Statements**

H302 - Harmful if swallowed

H314 - Causes severe skin burns and eye damage

H317 - May cause an allergic skin reaction

H331 - Toxic if inhaled

H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled

H335 - May cause respiratory irritation

H412 - Harmful to aquatic life with long lasting effects

**Precautionary Statements - EU (§28, 1272/2008)**

P261 - Avoid breathing dust/fume/gas/mist/vapors/spray

P280 - Wear protective gloves/protective clothing/eye protection/face protection

P284 - In case of inadequate ventilation wear respiratory protection

P303 + P361 + P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower

P310 - Immediately call a POISON CENTER 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

P342 + P311 - If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician

P403 + P233 - Store in a well-ventilated place. Keep container tightly closed

P501 - Dispose of contents/container in accordance with local/regional/national/international regulations

**Contains****Substances**

Glutaraldehyde

**CAS Number**

111-30-8

**2.3. Other Hazards**

This mixture contains no substance considered to be persistent, bioaccumulating nor toxic (PBT).

This mixture contains no substance considered to be very persistent nor very bioaccumulating (vPvB).

**SECTION 3: Composition/information on Ingredients****3.2. Mixtures**

Mixture

Substances	EINECS	CAS Number	PERCENT (w/w)	EU - CLP Substance Classification	REACH No.
Glutaraldehyde	203-856-5	111-30-8	10 - 30%	Acute Tox. 3 (H301) Acute Tox. 3 (H331) Skin Corr. 1B (H314) Resp. Sens. 1 (H334) Skin Sens. 1 (H317) Aquatic Acute 1 (H400) Aquatic Chronic 2 (H411)	No data available

For the full text of the H-phrases mentioned in this Section, see Section 16**SECTION 4: First aid measures**

**4.1. Description of first aid measures**

<b>Inhalation</b>	If inhaled, remove from area to fresh air. Get medical attention if respiratory irritation develops or if breathing becomes difficult.
<b>Eyes</b>	Immediately flush eyes with large amounts of water for at least 30 minutes. Seek prompt medical attention.
<b>Skin</b>	In case of contact, immediately flush skin with plenty of soap and water for at least 30 minutes and remove contaminated clothing, shoes and leather goods immediately. Get medical attention immediately.
<b>Ingestion</b>	Do NOT induce vomiting. Give nothing by mouth. Obtain immediate medical attention.

**4.2. Most Important symptoms and effects, both acute and delayed**

Toxic if inhaled. Causes severe skin burns and eye damage. May cause allergic respiratory reaction. Harmful if swallowed. May cause allergic skin reaction. May cause respiratory irritation.

**4.3. Indication of any immediate medical attention and special treatment needed**

**Notes to Physician** Treat symptomatically

**SECTION 5: Firefighting Measures****5.1. Extinguishing media****Suitable Extinguishing Media**

Water fog, carbon dioxide, foam, dry chemical.

**Extinguishing media which must not be used for safety reasons**

None known.

**5.2. Special hazards arising from the substance or mixture****Special Exposure Hazards**

Decomposition in fire may produce harmful gases.

**5.3. Advice for firefighters****Special Protective Equipment for Fire-Fighters**

Full protective clothing and approved self-contained breathing apparatus required for fire fighting personnel.

**SECTION 6: Accidental release measures****6.1. Personal precautions, protective equipment and emergency procedures**

Use appropriate protective equipment. Ensure adequate ventilation. Avoid breathing vapors. Avoid contact with skin, eyes and clothing. Evacuate all persons from the area. Use only competent persons for cleanup. See Section 8 for additional information

**6.2. Environmental precautions**

Prevent from entering sewers, waterways, or low areas.

**6.3. Methods and material for containment and cleaning up**

Isolate spill and stop leak where safe. Contain spill with sand or other inert materials. Scoop up and remove.

**6.4. Reference to other sections**

See Section 8 and 13 for additional information.

**SECTION 7: Handling and Storage****7.1. Precautions for Safe Handling**

Use appropriate protective equipment. Ensure adequate ventilation. Avoid breathing vapors. Avoid breathing mist. Avoid contact with eyes, skin, or clothing. Wash hands after use. Launder contaminated clothing before reuse.

**Hygiene Measures**

Handle in accordance with good industrial hygiene and safety practice.

**7.2. Conditions for safe storage, including any incompatibilities**

Store away from acids. Store away from alkalis. Store in a well ventilated area. Keep container closed when not in use. Store locked up. Product has a shelf life of 36 months.

**7.3. Specific End Use(s)**

**Exposure Scenario** No information available

**Other Guidelines** No information available

## SECTION 8: Exposure Controls/Personal Protection

### 8.1. Control parameters

#### Exposure Limits

Substances	CAS Number	EU	UK	Netherlands	France
Glutaraldehyde	111-30-8	Not applicable	TWA: 0.05 ppm TWA: 0.2 mg/m <sup>3</sup> STEL: 0.05 ppm STEL: 0.2 mg/m <sup>3</sup>	0,08 mg/m <sup>3</sup>	0.1 ppm

Substances	CAS Number	Germany	Spain	Portugal	Finland
Glutaraldehyde	111-30-8	TWA: 0.05 ppm TWA: 0.2 mg/m <sup>3</sup>  TWA: 0.21 mg/m <sup>3</sup>	0.05 ppm STEL [VLA-EC]; 0.2 mg/m <sup>3</sup> STEL [VLA-EC]	Not applicable	STEL: 0.1 ppm STEL: 0.42 mg/m <sup>3</sup>

Substances	CAS Number	Austria	Ireland	Switzerland	Norway
Glutaraldehyde	111-30-8	TWA: 0.05 ppm TWA: 0.2 mg/m <sup>3</sup> STEL" 0.05 ppm STEL" 0.2 mg/m <sup>3</sup>	0.05 ppm STEL; 0.2 mg/m <sup>3</sup> STEL	TWA: 0.05 ppm TWA: 0.21 mg/m <sup>3</sup> STEL: 0.1 ppm STEL: 0.42 mg/m <sup>3</sup>	Not applicable

Substances	CAS Number	Italy	Poland	Hungary	Czech Republic
Glutaraldehyde	111-30-8	Not applicable	TWA: 0.4 mg/m <sup>3</sup> STEL: 0.6 mg/m <sup>3</sup>	Not applicable	TWA: 0.2 mg/m <sup>3</sup>

Substances	CAS Number	Denmark	Romania	Croatia	Cyprus
Glutaraldehyde	111-30-8	Not applicable	Not applicable	TWA: 0.05 ppm TWA: 0.2 mg/m <sup>3</sup> STEL: 0.05 ppm STEL: 0.2 mg/m <sup>3</sup>	Not applicable

**Derived No Effect Level (DNEL)**  
**Worker**

No information available.

#### General Population

**Predicted No Effect Concentration (PNEC)**

No information available.

### 8.2. Exposure controls

#### 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 may be required.

#### Personal protective equipment

If engineering controls and work practices cannot prevent excessive exposures, the selection and proper use of personal protective equipment should be determined by an industrial hygienist or other qualified professional based on the specific application of this product.

##### 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.

##### Hand Protection

Use gloves which are suitable for the chemicals present in this product as well as other environmental factors in the workplace.

##### Skin Protection

Wear impervious protective clothing, including boots, gloves, lab coat, apron, rain jacket, pants or coverall, as appropriate, to prevent skin contact.

##### Eye Protection

Chemical goggles; also wear a face shield if splashing hazard exists.

##### Other Precautions

Eyewash fountains and safety showers must be easily accessible.

**Environmental Exposure Controls** Do not allow material to contaminate ground water system

## SECTION 9: Physical and Chemical Properties

**9.1. Information on basic physical and chemical properties**

**Physical State:** Liquid  
**Odor:** Sharp  
**Color:** Clear light yellow  
**Odor Threshold:** No information available

<u>Property</u>	<u>Values</u>
<u>Remarks/ - Method</u>	
<b>pH:</b>	3.1-4.5
<b>Freezing Point/Range</b>	(-5) - (-10) °C
<b>Melting Point/Range</b>	No data available
<b>Boiling Point/Range</b>	100.5 °C / 213 °F
<b>Flash Point</b>	No data available
<b>Flammability (solid, gas)</b>	No data available
upper flammability limit	No data available
lower flammability limit	No data available
<b>Evaporation rate</b>	0.9
<b>Vapor Pressure</b>	0.2 mmHg
<b>Vapor Density</b>	0.8
<b>Specific Gravity</b>	1.064
<b>Water Solubility</b>	Soluble in water
<b>Solubility in other solvents</b>	No data available
<b>Partition coefficient: n-octanol/water</b>	-0.333
<b>Autoignition Temperature</b>	> 275 °C / > 527 °F
<b>Decomposition Temperature</b>	No data available
<b>Viscosity</b>	No data available
<b>Explosive Properties</b>	No information available
<b>Oxidizing Properties</b>	No information available

**9.2. Other information**

**VOC Content (%)** No data available

**SECTION 10: Stability and Reactivity****10.1. Reactivity**

Not expected to be reactive.

**10.2. Chemical Stability**

Stable

**10.3. Possibility of Hazardous Reactions**

Will Not Occur

**10.4. Conditions to Avoid**

Keep away from heat, sparks and flame.

**10.5. Incompatible Materials**

Strong acids. Strong alkalis.

**10.6. Hazardous Decomposition Products**

Carbon monoxide and carbon dioxide.

**SECTION 11: Toxicological Information****11.1. Information on Toxicological Effects****Acute Toxicity****Inhalation**

Toxic if inhaled. May cause allergic respiratory reaction. Causes severe respiratory irritation. Inhalation of vapors may result in skin sensitization.

**Eye Contact**

Causes serious eye damage.

**Skin Contact**

Causes severe burns. May cause an allergic skin reaction.

**Ingestion**

Causes burns of the mouth, throat and stomach. Harmful if swallowed.

**Toxicology data for the components**

Substances	CAS Number	LD50 Oral	LD50 Dermal	LC50 Inhalation
Glutaraldehyde	111-30-8	50 mg/kg (Guinea Pig)	560 µL/kg (Rabbit)	0.28-0.5 mg/L (Rat) 4h

Substances	CAS Number	Skin corrosion/irritation
Glutaraldehyde	111-30-8	Causes severe skin irritation with tissue destruction. (Rabbit)

Substances	CAS	Eye damage/irritation
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	<b>Number</b>	
Glutaraldehyde	111-30-8	Causes severe eye irritation which may damage tissue. (Rabbit)
<b>Substances</b>	<b>CAS Number</b>	<b>Skin Sensitization</b>
Glutaraldehyde	111-30-8	Skin sensitizer in guinea pig.
<b>Substances</b>	<b>CAS Number</b>	<b>Respiratory Sensitization</b>
Glutaraldehyde	111-30-8	May cause sensitization by inhalation
<b>Substances</b>	<b>CAS Number</b>	<b>Mutagenic Effects</b>
Glutaraldehyde	111-30-8	In vivo tests did not show mutagenic effects.
<b>Substances</b>	<b>CAS Number</b>	<b>Carcinogenic Effects</b>
Glutaraldehyde	111-30-8	Did not show carcinogenic effects in animal experiments
<b>Substances</b>	<b>CAS Number</b>	<b>Reproductive toxicity</b>
Glutaraldehyde	111-30-8	Not a confirmed teratogen or embryotoxin.
<b>Substances</b>	<b>CAS Number</b>	<b>STOT - single exposure</b>
Glutaraldehyde	111-30-8	No information available
<b>Substances</b>	<b>CAS Number</b>	<b>STOT - repeated exposure</b>
Glutaraldehyde	111-30-8	May cause disorder and damage to the (Kidney)
<b>Substances</b>	<b>CAS Number</b>	<b>Aspiration hazard</b>
Glutaraldehyde	111-30-8	Not applicable

## SECTION 12: Ecological Information

### 12.1. Toxicity Ecotoxicity Effects

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 (96h) 10 mg/L (Lepomis macrochirus) NOEC (97d) 1.6 mg/L (Oncorhynchus mykiss) LC50 (96h) 3.5 mg/L (Oncorhynchus mykiss)	EC50 (17h) 6.65 mg/L (Pseudomonas putida)	EC50 (48h) 0.35 mg/L (Daphnia magna) EC50 (48h) 0.7 mg/L (Acartia tonsa) NOEC (21d) 0.13 mg/L (Daphnia magna)

### 12.2. Persistence and degradability

Readily biodegradable

Substances	CAS Number	Persistence and Degradability
Glutaraldehyde	111-30-8	Readily biodegradable (75% @ 28d)

### 12.3. Bioaccumulative potential

Does not bioaccumulate.

Substances	CAS Number	Log Pow
Glutaraldehyde	111-30-8	-0.36

### 12.4. Mobility in soil

Substances	CAS Number	Mobility
Glutaraldehyde	111-30-8	Potential for mobility in soil is high (Koc between 50 and 150). Given its very low Henry's constant (3.3E-08 atm*m3/mole; 25 °C Measured), volatilization from natural bodies of water or moist soil is not expected to be an important fate process.

**12.5. Results of PBT and vPvB assessment**

No information available.

Substances	PBT and vPvB assessment
Glutaraldehyde	Not PBT/vPvB

**12.6. Other adverse effects****Endocrine Disruptor Information**

This product does not contain any known or suspected endocrine disruptors

**SECTION 13: Disposal Considerations****13.1. Waste treatment methods****Disposal Method**

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

**Contaminated Packaging**

Follow all applicable national or local regulations.

**SECTION 14: Transport Information****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

**RID**

**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:** Marine Pollutant

**ADR**

**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:** Marine Pollutant

**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  
**Environmental Hazards:** Not applicable

**14.1. UN Number:** UN3265**14.2. UN Proper Shipping Name:** Corrosive Liquid, Acidic, Organic, N.O.S. (Contains Glutaraldehyde)**14.3. Transport Hazard Class(es):** 8**14.4. Packing Group:** III**14.5. Environmental Hazards:** Marine Pollutant**14.6. Special Precautions for User:** None**14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code:** Not applicable**SECTION 15: Regulatory Information****15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture****International Inventories**

<b>EINECS Inventory</b>	This product, and all its components, complies with EINECS
<b>US TSCA Inventory</b>	All components listed on inventory or are exempt.
<b>Canadian DSL Inventory</b>	All components listed on inventory or are exempt.

**Legend**

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

EINECS/ELINCS - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances

DSL/NDL - Canadian Domestic Substances List/Non-Domestic Substances List

**Germany, Water Endangering**      WGK 2: Hazard to waters.  
**Classes (WGK)**

**15.2. Chemical Safety Assessment**

No information available

**SECTION 16: Other Information****Full text of H-Statements referred to under sections 2 and 3**

H301 - Toxic if swallowed

H302 - Harmful if swallowed

H314 - Causes severe skin burns and eye damage

H317 - May cause an allergic skin reaction

H331 - Toxic if inhaled

H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled

H335 - May cause respiratory irritation

H400 - Very toxic to aquatic life

H411 - Toxic to aquatic life with long lasting effects

H412 - Harmful to aquatic life with long lasting effects

**Key or legend to abbreviations and acronyms**

bw – body weight

CAS – Chemical Abstracts Service

CLP – REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL on Classification, Labelling and Packaging of substances and mixtures

EC – European Commission

EC10 – Effective Concentration 10%

EC50 – Effective Concentration 50%

EEC – European Economic Community

ErC50 – Effective Concentration growth rate 50%

IBC Code – International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk

LC50 – Lethal Concentration 50%

LD50 – Lethal Dose 50%

LL0 – Lethal Loading 0%

LL50 – Lethal Loading 50%

MARPOL – International Convention for the Prevention of Pollution from Ships

mg/kg – milligram/kilogram

mg/L – milligram/liter

NIOSH – National Institute for Occupational Safety and Health

NOEC – No Observed Effect Concentration

NTP – National Toxicology Program

OEL – Occupational Exposure Limit

PBT – Persistent Bioaccumulative and Toxic

PC – Chemical Product category

PEL – Permissible Exposure Limit

ppm – parts per million

PROC – Process category

REACH – REGULATION (EC) No 1907/2006 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals

STEL – Short Term Exposure Limit

SU – Sector of Use category

**Key literature references and sources for data**

www.ChemADVISOR.com/

NZ CCID

Revision Date: 29-Oct-2015

Revision Note



SDS sections updated: 1

**This safety data sheet complies with the requirements of Regulation (EC) No. 453/2010**

**Disclaimer Statement**

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**End of Safety Data Sheet**