Safety Data Sheet

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This Safety Data Sheet has been prepared in accordance with the Preparation of Safety Data Sheets for Hazardous Chemicals Code of Practice (Safe Work Australia, December 2011)

SECTION 1: Identification

1.1. Product identifier

3M™ Avagard™ Antiseptic Surgical Hand Scrub (Chlorhexidine Gluconate 4% w/w)

Product Identification Numbers

AH-0106-1541-9 AH-1000-1319-4 AH-1000-1320-2

1.2. Recommended use and restrictions on use

Recommended use

For antiseptic hand scrubbing - Topical Antiseptic Solution with Moisturiser and Emollient

For Professional use only.

1.3. Supplier's details

Address: 3M Australia - Building A, 1 Rivett Road, North Ryde NSW 2113
Telephone: 136 136
E Mail: productinfo.au@mmm.com
Website: www.3m.com.au

1.4. Emergency telephone number

EMERGENCY: 1800 097 146 (Australia only)

SECTION 2: Hazard identification

This product is classified as a hazardous chemical according to the Model Work Health and Safety Regulations, 2011, in accordance with applicable State and Territory legislation.

Refer to Section 14 of this Safety Data Sheets for product Dangerous Goods Classification.

2.1. Classification of the substance or mixture

Flammable liquid: Category 3.
Serious Eye Damage/Irritation: Category 1.

2.2. Label elements

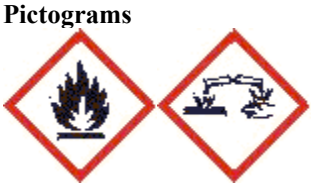
The label elements below were prepared in accordance with the Code of Practice on Preparation of Safety Data Sheets for Hazardous Chemicals (Safe Work Australia, December 2011). This information may be different from the actual product

label.

Signal word
Danger

Symbols
Flame |Corrosion |

Pictograms



Hazard statements

H226	Flammable liquid and vapour.
H318	Causes serious eye damage.

Precautionary statements

Prevention:

P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P233	Keep container tightly closed.
P240	Ground and bond container and receiving equipment.
P241	Use explosion-proof electrical, ventilating and lighting equipment.
P242	Use non-sparking tools.
P243	Take action to prevent static discharges.
P280E	Wear protective gloves.

Response:

P303 + P361 + P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.
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.
P370 + P378	In case of fire: Use a fire fighting agent suitable for flammable liquids such as dry chemical or carbon dioxide to extinguish.

Storage:

P403 + P235	Store in a well-ventilated place. Keep cool.

Disposal:

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

2.3. Other assigned/identified product hazards
None known.

2.4. Other hazards which do not result in classification
Very toxic to aquatic life.
Toxic to aquatic life with long lasting effects.

SECTION 3: Composition/information on ingredients

This material is a mixture.

Ingredient	CAS Nbr	% by Weight
Water	7732-18-5	60 - 100
Chlorhexidine Digluconate	18472-51-0	3 - 7
Propan-1-ol	71-23-8	3 - 7
D-Glucopyranose, Oligomeric, C10-16-Alkyl Glycosides	110615-47-9	1 - 5
2-Phenoxyethanol	122-99-6	0.1 - 3
Coconut Oil Diethanolamide	8051-30-7	1 - 3
Glycerol	56-81-5	0.1 - 3
Diethanolamine	111-42-2	0.05 - 0.15

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation
Remove person to fresh air. If signs/symptoms develop, get medical attention.

Skin contact
No need for first aid is anticipated. If signs/symptoms persist, get medical attention.

Eye contact
Immediately flush with large amounts of water for at least 15 minutes. Remove contact lenses if easy to do. Continue rinsing. Immediately get medical attention.

If swallowed
Rinse mouth. Do not induce vomiting. Get immediate medical attention.

4.2. Most important symptoms and effects, both acute and delayed

Serious damage to the eyes (corneal cloudiness, severe pain, tearing, ulcerations, and significantly impaired or loss of vision).

4.3. Indication of any immediate medical attention and special treatment required
Not applicable

SECTION 5: Fire-fighting measures

5.1. Suitable extinguishing media
In case of fire: Use a fire fighting agent suitable for flammable liquids such as dry chemical or carbon dioxide to extinguish.

5.2. Special hazards arising from the substance or mixture
Closed containers exposed to heat from fire may build pressure and explode.

Hazardous Decomposition or By-Products

Substance	Condition
Hydrocarbons.	During combustion.
Carbon monoxide.	During combustion.
Carbon dioxide.	During combustion.

5.3. Special protective actions for fire-fighters
Water may not effectively extinguish fire; however, it should be used to keep fire-exposed containers and surfaces cool and prevent explosive rupture. Wear full protective clothing, including helmet, self-contained, positive pressure or pressure

demand breathing apparatus, bunker coat and pants, bands around arms, waist and legs, face mask, and protective covering for exposed areas of the head.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures
Evacuate area. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Use only non-sparking tools. Ventilate the area with fresh air. For large spill, or spills in confined spaces, provide mechanical ventilation to disperse or exhaust vapors, in accordance with good industrial hygiene practice. WARNING ! A motor could be an ignition source and could cause flammable gases or vapours in the spill area to burn or explode. Refer to other sections of this SDS for information regarding physical and health hazards, respiratory protection, ventilation, and personal protective equipment.

6.2. Environmental precautions
Avoid release to the environment. For larger spills, cover drains and build dykes to prevent entry into sewer systems or bodies of water.

6.3. Methods and material for containment and cleaning up
Contain spill. Working from around the edges of the spill inward, cover with bentonite, vermiculite, or commercially available inorganic absorbent material. Mix in sufficient absorbent until it appears dry. Remember, adding an absorbent material does not remove a physical, health, or environmental hazard. Collect as much of the spilled material as possible using non-sparking tools. Place in a metal container approved for transportation by appropriate authorities. Seal the container. Dispose of collected material as soon as possible in accordance with applicable local/regional/national/international regulations.

SECTION 7: Handling and storage

7.1. Precautions for safe handling
Avoid eye contact. For industrial/occupational use only. Not for consumer sale or use. Do not handle until all safety precautions have been read and understood. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Use only non-sparking tools. Take precautionary measures against static discharge. Avoid breathing dust/fume/gas/mist/vapours/spray. Do not get in eyes, on skin, or on clothing. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Avoid release to the environment. Avoid contact with oxidising agents (eg. chlorine, chromic acid etc.) Wear low static or properly grounded shoes. To minimize the risk of ignition, determine applicable electrical classifications for the process using this product and select specific local exhaust ventilation equipment to avoid flammable vapour accumulation. Ground/bond container and receiving equipment if there is potential for static electricity accumulation during transfer.

7.2. Conditions for safe storage including any incompatibilities
Store in a well-ventilated place. Keep cool. Keep container tightly closed. Store away from heat. Store away from acids. Store away from oxidising agents.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limits
If a component is disclosed in section 3 but does not appear in the table below, an occupational exposure limit is not available for the component.

Ingredient	CAS Nbr	Agency	Limit type	Additional comments
Diethanolamine		ACGIH	TWA(inhalable fraction and vapour):1 mg/m3	A3: Confirmed animal carcinogen. Danger of cutaneous absorption.
Diethanolamine		Australia OELs	TWA(8 hours): 13 mg/m3 (3 ppm)	

Glycerol		Australia OELs	TWA(Inspirable dust)(8 hours):10 mg/m3	
Propan-1-ol		ACGIH	TWA:100 ppm	A4: Not class. as human carcin
Propan-1-ol		Australia OELs	TWA(8 hours): 492 mg/m3 (200 ppm); STEL(15 minutes): 614 mg/m3 (250 ppm)	SKIN

ACGIH : American Conference of Governmental Industrial Hygienists
AIHA : American Industrial Hygiene Association
Australia OELs : Australia. Adopted National Exposure Standards for Atmospheric Contaminants in the Occupational Environment
CMRG : Chemical Manufacturer's Recommended Guidelines
TWA: Time-Weighted-Average
STEL: Short Term Exposure Limit
CEIL: Ceiling
Sen: Sensitiser
Sk: Absorption through the skin may be a significant source of exposure.

8.2. Exposure controls

8.2.1. Engineering controls
Use general dilution ventilation and/or local exhaust ventilation to control airborne exposures to below relevant Exposure Limits and/or control dust/fume/gas/mist/vapours/spray. If ventilation is not adequate, use respiratory protection equipment. Use explosion-proof ventilation equipment.

8.2.2. Personal protective equipment (PPE)

Eye/face protection

Select and use eye/face protection to prevent contact based on the results of an exposure assessment. The following eye/face protection(s) are recommended:
Full face shield.
Indirect vented goggles.

Select and use eye protection in accordance with AS/NZS 1336. Eye protection should comply with the performance specifications of AS/NZS 1337.

Skin/hand protection
Select and use gloves and/or protective clothing approved to relevant local standards to prevent skin contact based on the results of an exposure assessment. Selection should be based on use factors such as exposure levels, concentration of the substance or mixture, frequency and duration, physical challenges such as temperature extremes, and other use conditions. Consult with your glove and/or protective clothing manufacturer for selection of appropriate compatible gloves/protective clothing. No chemical protective gloves are required.
Gloves made from the following material(s) are recommended: Butyl rubber.
Nitrile rubber.

Select and use gloves according to AS/NZ 2161.

Respiratory protection

Under normal use conditions, airborne exposures are not expected to be significant enough to require respiratory protection. An exposure assessment may be needed to decide if a respirator is required. If a respirator is needed, use respirators as part of a full respiratory protection program. Based on the results of the exposure assessment, select from the following respirator type(s) to reduce inhalation exposure:
Half facepiece or full facepiece air-purifying respirator suitable for organic vapours and particulates

For questions about suitability for a specific application, consult with your respirator manufacturer.
Select and use respirators according to AS/NZS 1715. Respirators should comply with AS/NZS 1716 performance

specifications. For information about respirators, call 3M on 1800 024 464.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	Liquid.
Specific Physical Form:	Viscous.
Colour	Pink
Odour	Fresh Odour
Odour threshold	*No data available.*
pH	4 - 7 Units not available or not applicable.
Melting point/Freezing point	*No data available.*
Boiling point/Initial boiling point/Boiling range	Approximately 212 ºC [*Details:*By Distillation]
Flash point	53.9 ºC [*Test Method:*Pensky-Martens Closed Cup] [*Details:*No sustained combustion]
Evaporation rate	*No data available.*
Flammability (solid, gas)	Not applicable.
Flammable Limits(LEL)	*No data available.*
Flammable Limits(UEL)	*No data available.*
Vapour pressure	*No data available.*
Vapor Density and/or Relative Vapor Density	*No data available.*
Density	*No data available.*
Relative density	0.98 - 1.04 [*Ref Std:*WATER=1]
Water solubility	*No data available.*
Solubility- non-water	*No data available.*
Partition coefficient: n-octanol/water	*No data available.*
Autoignition temperature	*No data available.*
Decomposition temperature	*No data available.*
Viscosity/Kinematic Viscosity	500 - 1,500 mPa-s
Volatile organic compounds (VOC)	*No data available.*
Percent volatile	*No data available.*
VOC less H2O & exempt solvents	*No data available.*
Kinematic Viscosity	*No data available.*

Nanoparticles
This material does not contain nanoparticles.

SECTION 10: Stability and reactivity

10.1 Reactivity
This material is considered to be non reactive under normal use conditions

10.2 Chemical stability
Stable.

10.3. Conditions to avoid
Heat.
Light.
Sparks and/or flames.

10.4. Possibility of hazardous reactions
Hazardous polymerisation will not occur.

10.5 Incompatible materials
Strong acids.
Strong oxidising agents.

10.6 Hazardous decomposition products

Substance	Condition
None known.	

SECTION 11: Toxicological information

The information below may not be consistent with the material classification in Section 2 if specific ingredient classifications are mandated by a competent authority. In addition, toxicological data on ingredients may not be reflected in the material classification and/or the signs and symptoms of exposure, because an ingredient may be present below the threshold for labelling, an ingredient may not be available for exposure, or the data may not be relevant to the material as a whole.

11.1 Information on Toxicological effects

Signs and Symptoms of Exposure

Based on test data and/or information on the components, this material may produce the following health effects:

Inhalation
Respiratory tract irritation: Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain.

Skin contact
Contact with the skin during product use is not expected to result in significant irritation. Allergic Skin Reaction (non-photo induced) in sensitive people: Signs/symptoms may include redness, swelling, blistering, and itching.

May cause additional health effects (see below).

Eye contact
Corrosive (eye burns): Signs/symptoms may include cloudy appearance of the cornea, chemical burns, severe pain, tearing, ulcerations, significantly impaired vision or complete loss of vision.

Ingestion
Gastrointestinal irritation: Signs/symptoms may include abdominal pain, stomach upset, nausea, vomiting and diarrhoea.

Additional Health Effects:

Carcinogenicity:
Contains a chemical or chemicals which can cause cancer.

Toxicological Data
If a component is disclosed in section 3 but does not appear in a table below, either no data are available for that endpoint or the data are not sufficient for classification.

Acute Toxicity

Name	Route	Species	Value
Overall product	Dermal		No data available; calculated ATE >5,000 mg/kg
Overall product	Inhalation-Vapour(4 hr)		No data available; calculated ATE >50 mg/l

Overall product	Ingestion		No data available; calculated ATE >5,000 mg/kg
Propan-1-ol	Dermal	Rabbit	LD50 4,000 mg/kg
Propan-1-ol	Inhalation-Vapour (4 hours)	Rat	LC50 > 34 mg/l
Propan-1-ol	Ingestion	Rat	LD50 estimated to be 2,000 - 5,000 mg/kg
Chlorhexidine Digluconate	Dermal	Rabbit	LD50 > 5,000 mg/kg
Chlorhexidine Digluconate	Ingestion	Rat	LD50 2,000 mg/kg
D-Glucopyranose, Oligomeric, C10-16-Alkyl Glycosides	Dermal	Rabbit	LD50 > 1,000 mg/kg
D-Glucopyranose, Oligomeric, C10-16-Alkyl Glycosides	Ingestion	Rat	LD50 > 2,500 mg/kg
Glycerol	Dermal	Rabbit	LD50 estimated to be > 5,000 mg/kg
Glycerol	Ingestion	Rat	LD50 > 5,000 mg/kg
2-Phenoxyethanol	Dermal	Rabbit	LD50 > 2,000 mg/kg
2-Phenoxyethanol	Inhalation-Dust/Mist	Rat	LC50 > 1.5 mg/l
2-Phenoxyethanol	Ingestion	Rat	LD50 1,394 mg/kg
Diethanolamine	Dermal	Rabbit	LD50 8,180 mg/kg
Diethanolamine	Ingestion	Rat	LD50 1,410 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
Propan-1-ol	Rabbit	Minimal irritation
Chlorhexidine Digluconate	Rabbit	No significant irritation
D-Glucopyranose, Oligomeric, C10-16-Alkyl Glycosides	Rabbit	Irritant
Glycerol	Rabbit	No significant irritation
2-Phenoxyethanol	Rabbit	No significant irritation
Diethanolamine	Rabbit	Mild irritant

Serious Eye Damage/Irritation

Name	Species	Value
Propan-1-ol	Rabbit	Severe irritant
Chlorhexidine Digluconate	Rabbit	Corrosive
D-Glucopyranose, Oligomeric, C10-16-Alkyl Glycosides	Rabbit	Corrosive
Glycerol	Rabbit	No significant irritation
2-Phenoxyethanol	Rabbit	Corrosive
Diethanolamine	Rabbit	Severe irritant

Skin Sensitisation

Name	Species	Value
Propan-1-ol	Guinea pig	Not classified
Chlorhexidine Digluconate	Human and animal	Some positive data exist, but the data are not sufficient for classification
D-Glucopyranose, Oligomeric, C10-16-Alkyl Glycosides	Guinea pig	Not classified
Glycerol	Guinea pig	Not classified
2-Phenoxyethanol	Guinea pig	Not classified
Diethanolamine	Human and animal	Not classified

Respiratory Sensitisation

For the component/components, either no data are currently available or the data are not sufficient for classification.

Germ Cell Mutagenicity

Name	Route	Value
Propan-1-ol	In Vitro	Some positive data exist, but the data are not sufficient for classification
Chlorhexidine Digluconate	In Vitro	Not mutagenic
Chlorhexidine Digluconate	In vivo	Not mutagenic
D-Glucopyranose, Oligomeric, C10-16-Alkyl Glycosides	In Vitro	Not mutagenic
D-Glucopyranose, Oligomeric, C10-16-Alkyl Glycosides	In vivo	Not mutagenic
2-Phenoxyethanol	In Vitro	Not mutagenic
2-Phenoxyethanol	In vivo	Not mutagenic
Diethanolamine	In Vitro	Not mutagenic

Carcinogenicity

Name	Route	Species	Value
Propan-1-ol	Ingestion	Rat	Some positive data exist, but the data are not sufficient for classification
Chlorhexidine Digluconate	Ingestion	Multiple animal species	Not carcinogenic
Glycerol	Ingestion	Mouse	Some positive data exist, but the data are not sufficient for classification
2-Phenoxyethanol	Ingestion	Multiple animal species	Not carcinogenic
Diethanolamine	Dermal	Mouse	Carcinogenic.

Reproductive Toxicity

Reproductive and/or Developmental Effects

Name	Route	Value	Species	Test result	Exposure Duration
Propan-1-ol	Inhalation	Not classified for male reproduction	Rat	NOAEL 8.6 mg/l	6 weeks
Propan-1-ol	Inhalation	Not classified for development	Rat	NOAEL 8.6 mg/l	during gestation
Chlorhexidine Digluconate	Ingestion	Not classified for development	Rat	NOAEL 30 mg/kg/day	during gestation
Glycerol	Ingestion	Not classified for female reproduction	Rat	NOAEL 2,000 mg/kg/day	2 generation
Glycerol	Ingestion	Not classified for male reproduction	Rat	NOAEL 2,000 mg/kg/day	2 generation
Glycerol	Ingestion	Not classified for development	Rat	NOAEL 2,000 mg/kg/day	2 generation
2-Phenoxyethanol	Ingestion	Not classified for female reproduction	Mouse	NOAEL 3,700 mg/kg/day	2 generation
2-Phenoxyethanol	Ingestion	Not classified for male reproduction	Mouse	NOAEL 3,700 mg/kg/day	2 generation
2-Phenoxyethanol	Dermal	Not classified for development	Rabbit	NOAEL 600 mg/kg/day	during organogenesis
2-Phenoxyethanol	Ingestion	Not classified for development	Rat	NOAEL 1,000 mg/kg/day	during gestation
Diethanolamine	Ingestion	Not classified for	Rat	NOAEL 97	13 weeks

		male reproduction		mg/kg/day	
Diethanolamine	Dermal	Not classified for development	Rabbit	NOAEL 100 mg/kg/day	during organogenesis
Diethanolamine	Ingestion	Not classified for development	Rat	NOAEL 50 mg/kg/day	during organogenesis

Target Organ(s)

Specific Target Organ Toxicity - single exposure

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
Propan-1-ol	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Mouse	NOAEL 5 mg/l	4 hours
Propan-1-ol	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	Mouse	NOAEL Not available	
Propan-1-ol	Ingestion	central nervous system depression	May cause drowsiness or dizziness	Professional judgement	NOAEL Not available	
Chlorhexidine Digluconate	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	similar health hazards	NOAEL Not available	
D-Glucopyranose, Oligomeric, C10-16-Alkyl Glycosides	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	similar health hazards	NOAEL not available	
2-Phenoxyethanol	Inhalation	respiratory irritation	May cause respiratory irritation	official classification	NOAEL Not available	
Diethanolamine	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification		NOAEL not available	
Diethanolamine	Ingestion	kidney and/or bladder	May cause damage to organs	Rat	NOAEL 200 mg/kg	not applicable
Diethanolamine	Ingestion	central nervous system depression	Some positive data exist, but the data are not sufficient for classification	Rat	LOAEL 200 mg/kg	not applicable
Diethanolamine	Ingestion	liver	Not classified	Rat	NOAEL 1,600 mg/kg	not applicable

Specific Target Organ Toxicity - repeated exposure

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
Propan-1-ol	Ingestion	hematopoietic system	Not classified	Rat	NOAEL 70 mg/kg/day	83 weeks
Propan-1-ol	Ingestion	liver	Not classified	Rat	LOAEL 70 mg/kg/day	83 weeks
Chlorhexidine Digluconate	Ingestion	liver	Some positive data exist, but the data are not	Dog	NOAEL 0.89 mg/kg/day	1 years

			sufficient for classification			
Chlorhexidine Digluconate	Ingestion	immune system	Not classified	Rabbit	NOAEL 71 mg/kg/day	2 years
Chlorhexidine Digluconate	Ingestion	hematopoietic system | kidney and/or bladder	Not classified	Rat	NOAEL 71 mg/kg/day	2 years
D-Glucopyranose, Oligomeric, C10-16-Alkyl Glycosides	Ingestion	gastrointestinal tract	Not classified	Rat	NOAEL 250 mg/kg/day	90 days
D-Glucopyranose, Oligomeric, C10-16-Alkyl Glycosides	Ingestion	endocrine system | liver | immune system | nervous system | hematopoietic system | eyes	Not classified	Rat	NOAEL 1,000 mg/kg/day	90 days
Glycerol	Inhalation	respiratory system | heart | liver | kidney and/or bladder	Not classified	Rat	NOAEL 3.91 mg/l	14 days
Glycerol	Ingestion	endocrine system | hematopoietic system | liver | kidney and/or bladder	Not classified	Rat	NOAEL 10,000 mg/kg/day	2 years
2-Phenoxyethanol	Dermal	skin | hematopoietic system | liver | eyes	Not classified	Rabbit	NOAEL 500 mg/kg/day	13 weeks
2-Phenoxyethanol	Ingestion	heart | endocrine system | hematopoietic system | liver | immune system | nervous system | kidney and/or bladder | respiratory system	Not classified	Rat	NOAEL 1,514 mg/kg/day	13 weeks
Diethanolamine	Dermal	hematopoietic system	May cause damage to organs though prolonged or repeated exposure	Rat	LOAEL 32 mg/kg/day	13 weeks
Diethanolamine	Dermal	kidney and/or bladder	Some positive data exist, but the data are not sufficient for classification	Rat	LOAEL 8 mg/kg/day	2 years
Diethanolamine	Dermal	liver	Not classified	Rat	NOAEL 500 mg/kg/day	13 weeks
Diethanolamine	Inhalation	liver | kidney and/or bladder	Not classified	Rat	NOAEL 0.03 mg/l	13 weeks
Diethanolamine	Ingestion	hematopoietic system	May cause damage to organs though prolonged or repeated exposure	Rat	NOAEL 14 mg/kg/day	13 weeks

Diethanolamine	Ingestion	nervous system	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 57 mg/kg/day	13 weeks
Diethanolamine	Ingestion	kidney and/or bladder	Not classified	Rat	NOAEL not available	13 weeks
Diethanolamine	Ingestion	liver	Not classified	Rat	NOAEL 436 mg/kg/day	13 weeks

Aspiration Hazard
For the component/components, either no data are currently available or the data are not sufficient for classification.

Exposure Levels
Refer Section **8.1 Control Parameters** of this Safety Data Sheet.

Interactive Effects
Not determined.

SECTION 12: Ecological information

The information below may not be consistent with the material classification in Section 2 if specific ingredient classifications are mandated by a competent authority. Additional information leading to material classification in Section 2 is available upon request. In addition, environmental fate and effects data on ingredients may not be reflected in this section because an ingredient is present below the threshold for labelling, an ingredient is not expected to be available for exposure, or the data is considered not relevant to the material as a whole.

12.1. Toxicity

Acute aquatic hazard:
GHS Acute 1: Very toxic to aquatic life.

Chronic aquatic hazard:
GHS Chronic 2: Toxic to aquatic life with long lasting effects.

No product test data available.

Material	CAS Number	Organism	Type	Exposure	Test endpoint	Test result
Chlorhexidine Digluconate		Activated sludge	Experimental	3 hours	EC50	25 mg/l
Chlorhexidine Digluconate		Green algae	Experimental	72 hours	EC50	0.081 mg/l
Chlorhexidine Digluconate		Water flea	Experimental	48 hours	EC50	0.087 mg/l
Chlorhexidine Digluconate		Zebra Fish	Experimental	96 hours	LC50	2.08 mg/l
Chlorhexidine Digluconate		Green algae	Experimental	72 hours	NOEC	0.007 mg/l
Chlorhexidine Digluconate		Water flea	Experimental	21 days	NOEC	0.021 mg/l
Propan-1-ol		Activated sludge	Experimental	3 hours	IC50	>1,000 mg/l
Propan-1-ol		Algae other	Experimental	96 hours	EC50	4,480 mg/l
Propan-1-ol		Fathead minnow	Experimental	96 hours	LC50	4,555 mg/l

Propan-1-ol		Fish	Experimental	96 hours	LC50	3,000 mg/l
Propan-1-ol		Water flea	Experimental	48 hours	EC50	3,642 mg/l
Propan-1-ol		Water flea	Experimental	21 days	NOEC	100 mg/l
D-Glucopyranose, Oligomeric, C10-16-Alkyl Glycosides	110615-47-9	Bacteria	Experimental	16 hours	NOEC	5,000 mg/l
D-Glucopyranose, Oligomeric, C10-16-Alkyl Glycosides	110615-47-9	Green algae	Experimental	72 hours	EC50	12.5 mg/l
D-Glucopyranose, Oligomeric, C10-16-Alkyl Glycosides	110615-47-9	Water flea	Experimental	48 hours	EC50	7 mg/l
D-Glucopyranose, Oligomeric, C10-16-Alkyl Glycosides	110615-47-9	Zebra Fish	Experimental	96 hours	LC50	2.95 mg/l
D-Glucopyranose, Oligomeric, C10-16-Alkyl Glycosides	110615-47-9	Green algae	Experimental	72 hours	EC10	4.15 mg/l
D-Glucopyranose, Oligomeric, C10-16-Alkyl Glycosides	110615-47-9	Water flea	Experimental	21 days	NOEC	2 mg/l
D-Glucopyranose, Oligomeric, C10-16-Alkyl Glycosides	110615-47-9	Zebra Fish	Experimental	28 days	NOEC	1.8 mg/l
2-Phenoxyethanol		Activated sludge	Experimental	30 minutes	EC50	>1,000 mg/l
2-Phenoxyethanol		Fathead minnow	Experimental	96 hours	LC50	344 mg/l
2-Phenoxyethanol		Green algae	Experimental	72 hours	EC50	>100 mg/l
2-Phenoxyethanol		Scud	Experimental	96 hours	LC50	357 mg/l
2-Phenoxyethanol		Water flea	Experimental	48 hours	EC50	>500 mg/l
2-Phenoxyethanol		Fathead minnow	Experimental	34 days	NOEC	24 mg/l
2-Phenoxyethano		Green algae	Experimental	72 hours	NOEC	46 mg/l

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2-Phenoxyethanol		Water flea	Experimental	21 days	NOEC	9.43 mg/l
Coconut Oil Diethanolamide		Bacteria	Estimated	30 minutes	NOEC	1,000 mg/l
Coconut Oil Diethanolamide		Green algae	Estimated	96 hours	EC50	2.2 mg/l
Coconut Oil Diethanolamide		Water flea	Estimated	48 hours	EC50	2.39 mg/l
Coconut Oil Diethanolamide		Zebra Fish	Estimated	96 hours	LC50	3.6 mg/l
Coconut Oil Diethanolamide		Green algae	Estimated	72 hours	NOEC	0.32 mg/l
Coconut Oil Diethanolamide		Water flea	Estimated	21 days	NOEC	0.07 mg/l
Glycerol		Bacteria	Experimental	16 hours	NOEC	10,000 mg/l
Glycerol		Rainbow trout	Experimental	96 hours	LC50	54,000 mg/l
Glycerol		Water flea	Experimental	48 hours	LC50	1,955 mg/l
Diethanolamine		Fathead minnow	Experimental	96 hours	LC50	100 mg/l
Diethanolamine		Green algae	Experimental	72 hours	EC50	9.5 mg/l
Diethanolamine		Water flea	Experimental	48 hours	LC50	2.15 mg/l
Diethanolamine		Green algae	Experimental	72 hours	NOEC	0.6 mg/l
Diethanolamine		Water flea	Experimental	21 days	NOEC	0.78 mg/l

12.2. Persistence and degradability

Material	CAS Number	Test type	Duration	Study Type	Test result	Protocol
Chlorhexidine Digluconate		Experimental Biodegradation	28 days	Dissolv. Organic Carbon Deplet	71 % weight	OECD 301A - DOC Die Away Test
Propan-1-ol		Experimental Biodegradation	20 days	BOD	73 % BOD/ThOD	OECD 301D - Closed bottle test
D-Glucopyranose, Oligomeric, C10-16-Alkyl Glycosides	110615-47-9	Experimental Biodegradation	28 days	BOD	88 % weight	OECD 301D - Closed bottle test
2-Phenoxyethanol		Experimental Biodegradation	28 days	BOD	90 % BOD/ThOD	OECD 301F - Manometric respirometry
Coconut Oil Diethanolamide		Estimated Biodegradation	28 days	BOD	71 % weight	OECD 301D - Closed bottle test

Glycerol		Experimental Biodegradation	14 days	BOD	63 % BOD/ThOD	OECD 301C - MITI test (I)
Diethanolamine		Experimental Biodegradation	10 days	BOD	72 % weight	OECD 301D - Closed bottle test

12.3 : Bioaccumulative potential

Material	CAS Number	Test type	Duration	Study Type	Test result	Protocol
Chlorhexidine Digluconate		Experimental Bioconcentration		Log Kow	-1.81	Non-standard method
Propan-1-ol		Experimental Bioconcentration		Log Kow	0.2	Non-standard method
D-Glucopyranose, Oligomeric, C10-16-Alkyl Glycosides	110615-47-9	Estimated Bioconcentration		Log Kow	≤0.07	Estimated: Octanol-water partition coefficient
2-Phenoxyethanol		Experimental Bioconcentration		Log Kow	1.2	EC A.8 Partition Coefficient
Coconut Oil Diethanolamide		Estimated Bioconcentration		Bioaccumulation factor	5.8	Estimated: Bioconcentration factor
Glycerol		Experimental Bioconcentration		Log Kow	-1.76	Non-standard method
Diethanolamine		Experimental Bioconcentration		Log Kow	-2.18	Non-standard method

12.4. Mobility in soil
Please contact manufacturer for more details

12.5 Other adverse effects
No information available.

SECTION 13: Disposal considerations

13.1. Disposal methods
Dispose of contents/ container in accordance with the local/regional/national/international regulations.

SECTION 14: Transport Information

Australian Dangerous Goods Code (ADG) - Road/Rail Transport
UN No.: Not applicable.
Proper shipping name: Not applicable.
Class/Division: Not applicable.
Sub Risk: Not applicable.
Packing Group: Not applicable.
Special Instructions: Not restricted as per ADG Code 2.3.1.3 (a). This product is not classified as a flammable liquid as the product has a flash point of more than 35°C and does not sustain combustion when tested according to the UN Manual of Tests and Criteria, Part III, subsection 35.5.2 Sustained Combustibility Test.

Hazchem Code: Not applicable
IERG: Not applicable.

International Air Transport Association (IATA) - Air Transport
UN No.: Not applicable.
Proper shipping name: Not applicable.
Class/Division: Not applicable.
Sub Risk: Not applicable.
Packing Group: Not applicable.
Special Instructions: Not restricted as per IATA 3.3.1.3 (a). This product is not classified as a flammable liquid as the product has a flash point of more than 35°C and does not sustain combustion when tested according to the UN Manual of Tests and Criteria, Part III, subsection 35.5.2 Sustained Combustibility Test.

International Maritime Dangerous Goods Code (IMDG)- Marine Transport
UN No.: Not applicable.
Proper shipping name: Not applicable.
Class/Division: Not applicable.
Sub Risk: Not applicable.
Packing Group: Not applicable.
Marine Pollutant: Not applicable.
Special Instructions: Not restricted per IMDG Code 2.3.1.3.1. This product is not classified as a flammable liquid as the product has a flash point of more than 35°C and does not sustain combustion when tested according to the UN Manual of Tests and Criteria, Part III, subsection 35.5.2 Sustained Combustibility Test.

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

Australian Inventory Status:
This product is regulated by the Therapeutics Goods Administration and is exempt from compliance with the Industrial Chemicals (Notification and Assessment) Act 1989 as amended.

Poison Schedule: This product is intended for Industrial or Professional Use only and therefore is not packaged and labelled in accordance with the requirements of the Standard for the Uniform Scheduling of Medicines and Poisons.

SECTION 16: Other information

Revision information:
Complete document review.

DISCLAIMER: The information on this Safety Data Sheet is based on our experience and is correct to the best of our knowledge at the date of publication, but we do not accept any liability for any loss, damage or injury resulting from its use (except as required by law). The information may not be valid for any use not referred to in this Safety Data Sheet or use of the product in combination with other materials. For these reasons, it is important that customers carry out their own test to satisfy themselves as to the suitability of the product for their own intended applications.
Greenguard ® is a United States based program. The 'Low VOC' reference related to United States Federal and State regulations exemptions for some solvents.

3M Australia SDSs are available at www.3m.com.au