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
Avagard™ Antiseptic CHG Surgical Hand Rub, Chlorhexidine Gluconate 1% w/w in Ethanol 61% w/w, 9200

Product Identification Numbers
70-2007-1856-0 AH-0107-8446-2

1.2. Recommended use and restrictions on use

Recommended use
Hand Cleanser

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 2.
Serious Eye Damage/Irritation: Category 2.
Specific Target Organ Toxicity (single exposure): Category 3

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 |Exclamation mark |

Pictograms

Hazard statements

H225	Highly flammable liquid and vapour.
H319	Causes serious eye irritation.
H336	May cause drowsiness or dizziness.

Precautionary statements

General:

P101	If medical advice is needed, have product container or label at hand.
P102	Keep out of reach of children.

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.
P261	Avoid breathing dust/fume/gas/mist/vapours/spray.
P264	Wash thoroughly after handling.
P271	Use only outdoors or in a well-ventilated area.

Response:

P303 + P361 + P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.
P304 + P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P312	Call a POISON CENTRE or doctor/physician if you feel unwell.
P337 + P313	IF eye irritation persists: Get medical advice/attention.
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 + P233	Store in a well-ventilated place. Keep container tightly closed.
P403 + P235	Store in a well-ventilated place. Keep cool.
P405	Store locked up.

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
Toxic to aquatic life.
Harmful to aquatic life with long lasting effects.

SECTION 3: Composition/information on ingredients

This material is a mixture.

Ingredient	CAS Nbr	% by Weight
Ethanol	64-17-5	55 - 65
Water	7732-18-5	20 - 35
Docosyl alcohol	661-19-8	< 2
C18-unsatd. fatty acids	103213-20-3	< 2
Glycols, polyethylene, monodocosyl ether	26636-40-8	< 2
Ethylene glycol polymer	25322-68-3	< 2
Squalane	111-01-3	< 2
Chlorhexidine Digluconate	18472-51-0	1

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation
Remove person to fresh air. If you feel unwell, get medical attention.

Skin contact
If exposed, wash with soap and water. If signs/symptoms develop, get medical attention.

Eye contact
Immediately flush with large amounts of water. Remove contact lenses if easy to do. Continue rinsing. Get medical attention.

If swallowed
Rinse mouth. If you feel unwell, get medical attention.

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

Central nervous system depression (headache, dizziness, drowsiness, incoordination, nausea, slurred speech, giddiness, and unconsciousness).

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
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.

Hazchem Code: •2YE

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. Cover spill area with a fire extinguishing foam that is resistant to polar solvents. 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. Clean up residue with detergent and water. 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
Keep out of reach of children. 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 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.) Do not get in eyes. 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
Ethylene glycol polymer	25322-68-3	AIHA	TWA:10 mg/m³	
Ethanol	64-17-5	ACGIH	STEL:1000 ppm	A3: Confirmed animal carcinogen.
Ethanol	64-17-5	Australia OELs	TWA(8 hours):1880 mg/m3(1000 ppm)	

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: Under normal use conditions, eye exposure is not expected to be significant enough to require eye protection.
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
No protective gloves required.

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.

Colour	White
Odour	Slight Alcohol
Odour threshold	*No data available.*
pH	6
Melting point/Freezing point	*Not applicable.*
Boiling point/Initial boiling point/Boiling range	77.8 ºC
Flash point	21 ºC [*Test Method:*Closed Cup] [*Details:*]
Evaporation rate	1.4 [*Ref Std:*BUOAC=1]
Flammability (solid, gas)	Not applicable.
Flammable Limits(LEL)	3.28 % volume
Flammable Limits(UEL)	19 % volume
Vapour pressure	186158.4 Pa [@ 55 ºC]
Vapor Density and/or Relative Vapor Density	1.6 [*Ref Std:*AIR=1]
Density	0.83 g/ml
Relative density	0.83 [*Ref Std:*WATER=1]
Water solubility	Moderate
Solubility- non-water	*No data available.*
Partition coefficient: n-octanol/water	*No data available.*
Autoignition temperature	799 ºC
Decomposition temperature	*No data available.*
Viscosity/Kinematic Viscosity	50,000 - 250,000 mPa-s [@ 23 ºC]
Volatile organic compounds (VOC)	496 g/l
Percent volatile	90 % weight
VOC less H2O & exempt solvents	630 g/l
Molecular weight	*No data available.*

SECTION 10: Stability and reactivity

10.1 Reactivity
This material may be reactive with certain agents under certain conditions - see the remaining headings in this section

10.2 Chemical stability
Stable.

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

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

10.5 Incompatible materials
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. May cause additional health effects (see below).

Skin contact
Contact with the skin during product use is not expected to result in significant irritation.

Eye contact
Severe eye irritation: Signs/symptoms may include significant redness, swelling, pain, tearing, cloudy appearance of the cornea, and impaired vision.

Ingestion
Gastrointestinal irritation: Signs/symptoms may include abdominal pain, stomach upset, nausea, vomiting and diarrhoea. May cause additional health effects (see below).

Additional Health Effects:

Single exposure may cause target organ effects:
Central nervous system (CNS) depression: Signs/symptoms may include headache, dizziness, drowsiness, incoordination, nausea, slowed reaction time, slurred speech, giddiness, and unconsciousness.

Additional information:

This product contains ethanol. Alcoholic beverages and ethanol in alcoholic beverages have been classified by the International Agency for Research on Cancer as carcinogenic to humans. There are also data associating human consumption of alcoholic beverages with developmental toxicity and liver toxicity. Exposure to ethanol during the foreseeable use of this product is not expected to cause cancer, developmental toxicity, or liver toxicity.

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	Ingestion		No data available; calculated ATE >5,000 mg/kg
Ethanol	Dermal	Rabbit	LD50 > 15,800 mg/kg
Ethanol	Inhalation-Vapour (4 hours)	Rat	LC50 124.7 mg/l
Ethanol	Ingestion	Rat	LD50 17,800 mg/kg
Glycols, polyethylene, monodocosyl ether	Dermal	Professional judgement	LD50 estimated to be 2,000 - 5,000 mg/kg
Glycols, polyethylene, monodocosyl ether	Ingestion	similar compounds	LD50 estimated to be 2,000 - 5,000 mg/kg
Ethylene glycol polymer	Dermal	Rabbit	LD50 > 20,000 mg/kg
Ethylene glycol polymer	Ingestion	Rat	LD50 32,770 mg/kg

Docosyl alcohol	Dermal	Professional judgement	LD50 estimated to be > 5,000 mg/kg
Docosyl alcohol	Ingestion	Rat	LD50 > 2,000 mg/kg
C18-unsatd. fatty acids	Dermal	Professional judgement	LD50 estimated to be > 5,000 mg/kg
Squalane	Dermal	Professional judgement	LD50 estimated to be > 5,000 mg/kg
Chlorhexidine Digluconate	Dermal	Rabbit	LD50 > 5,000 mg/kg
Chlorhexidine Digluconate	Ingestion	Rat	LD50 2,000 mg/kg
C18-unsatd. fatty acids	Ingestion	Rat	LD50 > 5,000 mg/kg
Squalane	Ingestion	Rat	LD50 > 2,000 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
Overall product	Rabbit	No significant irritation
Ethanol	Rabbit	No significant irritation
Ethylene glycol polymer	Rabbit	Minimal irritation
Chlorhexidine Digluconate	Rabbit	No significant irritation
C18-unsatd. fatty acids	Rabbit	No significant irritation

Serious Eye Damage/Irritation

Name	Species	Value
Ethanol	Rabbit	Severe irritant
Ethylene glycol polymer	Rabbit	Mild irritant
Chlorhexidine Digluconate	Rabbit	Corrosive
C18-unsatd. fatty acids	Rabbit	No significant irritation

Skin Sensitisation

Name	Species	Value
Overall product	Guinea pig	Not classified
Ethanol	Human	Not classified
Ethylene glycol polymer	Guinea pig	Not classified
Chlorhexidine Digluconate	Human and animal	Some positive data exist, but the data are not sufficient for classification

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
Ethanol	In Vitro	Some positive data exist, but the data are not sufficient for classification
Ethanol	In vivo	Some positive data exist, but the data are not sufficient for classification
Ethylene glycol polymer	In Vitro	Not mutagenic
Ethylene glycol polymer	In vivo	Not mutagenic
Chlorhexidine Digluconate	In Vitro	Not mutagenic
Chlorhexidine Digluconate	In vivo	Not mutagenic

Carcinogenicity

Name	Route	Species	Value
Ethanol	Ingestion	Multiple animal	Some positive data exist, but the data

		species	are not sufficient for classification
Ethylene glycol polymer	Ingestion	Rat	Not carcinogenic
Chlorhexidine Digluconate	Ingestion	Multiple animal species	Not carcinogenic

Reproductive Toxicity

Reproductive and/or Developmental Effects

Name	Route	Value	Species	Test result	Exposure Duration
Ethanol	Inhalation	Not classified for development	Rat	NOAEL 38 mg/l	during gestation
Ethanol	Ingestion	Not classified for development	Rat	NOAEL 5,200 mg/kg/day	premating & during gestation
Ethylene glycol polymer	Ingestion	Not classified for female reproduction	Rat	NOAEL 1,125 mg/kg/day	during gestation
Ethylene glycol polymer	Ingestion	Not classified for male reproduction	Rat	NOAEL 5699 +/-1341 mg/kg/day	5 days
Ethylene glycol polymer	Not specified.	Not classified for reproduction and/or development		NOEL N/A	
Ethylene glycol polymer	Ingestion	Not classified for development	Mouse	NOAEL 562 mg/animal/day	during gestation
Chlorhexidine Digluconate	Ingestion	Not classified for development	Rat	NOAEL 30 mg/kg/day	during gestation

Target Organ(s)

Specific Target Organ Toxicity - single exposure

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
Ethanol	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	Human	LOAEL 9.4 mg/l	not available
Ethanol	Inhalation	central nervous system depression	Not classified	Human and animal	NOAEL not available	
Ethanol	Ingestion	central nervous system depression	Not classified	Multiple animal species	NOAEL not available	
Ethanol	Ingestion	kidney and/or bladder	Not classified	Dog	NOAEL 3,000 mg/kg	
Ethylene glycol polymer	Inhalation	respiratory irritation	Not classified	Rat	NOAEL 1.008 mg/l	2 weeks
Chlorhexidine Digluconate	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	similar health hazards	NOAEL Not available	

Specific Target Organ Toxicity - repeated exposure

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration

Ethanol	Inhalation	liver	Some positive data exist, but the data are not sufficient for classification	Rabbit	LOAEL 124 mg/l	365 days
Ethanol	Inhalation	hematopoietic system | immune system	Not classified	Rat	NOAEL 25 mg/l	14 days
Ethanol	Ingestion	liver	Some positive data exist, but the data are not sufficient for classification	Rat	LOAEL 8,000 mg/kg/day	4 months
Ethanol	Ingestion	kidney and/or bladder	Not classified	Dog	NOAEL 3,000 mg/kg/day	7 days
Ethylene glycol polymer	Inhalation	respiratory system	Not classified	Rat	NOAEL 1.008 mg/l	2 weeks
Ethylene glycol polymer	Ingestion	kidney and/or bladder | heart | endocrine system | hematopoietic system | liver | nervous system	Not classified	Rat	NOAEL 5,640 mg/kg/day	13 weeks
Chlorhexidine Digluconate	Ingestion	liver	Some positive data exist, but the data are not sufficient for classification	Dog	NOAEL 0.89 mg/kg/day	1 years
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

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 2: Toxic to aquatic life.

Chronic aquatic hazard:
GHS Chronic 3: Harmful to aquatic life with long lasting effects.

No product test data available.

Material	CAS Number	Organism	Type	Exposure	Test endpoint	Test result
Ethanol	64-17-5	Fathead minnow	Experimental	96 hours	LC50	14,200 mg/l
Ethanol	64-17-5	Fish	Experimental	96 hours	LC50	11,000 mg/l
Ethanol	64-17-5	Green algae	Experimental	72 hours	EC50	275 mg/l
Ethanol	64-17-5	Water flea	Experimental	48 hours	LC50	5,012 mg/l
Ethanol	64-17-5	Green algae	Experimental	72 hours	ErC10	11.5 mg/l
Ethanol	64-17-5	Water flea	Experimental	10 days	NOEC	9.6 mg/l
Docosyl alcohol	661-19-8	Green algae	Analogous Compound	96 hours	No tox obs at lmt of water sol	>100 mg/l
Docosyl alcohol	661-19-8	Sediment organism	Analogous Compound	6 days	EC50	>1,000 mg/kg (Dry Weight)
Docosyl alcohol	661-19-8	Water flea	Analogous Compound	48 hours	No tox obs at lmt of water sol	>100 mg/l
Docosyl alcohol	661-19-8	Rainbow trout	Experimental	96 hours	No tox obs at lmt of water sol	>100 mg/l
Docosyl alcohol	661-19-8	Green algae	Analogous Compound	96 hours	No tox obs at lmt of water sol	>100 mg/l
Docosyl alcohol	661-19-8	Water flea	Analogous Compound	21 days	No tox obs at lmt of water sol	>100 mg/l
Docosyl alcohol	661-19-8	Bacteria	Analogous Compound	30 minutes	EC50	>10,000 mg/l
C18-unsatd. fatty acids	103213-20-3	Bacteria	Experimental	16 hours	EL50	>10,000 mg/l
C18-unsatd. fatty acids	103213-20-3	Common Carp	Experimental	96 hours	LC50	>100 mg/l
Glycols, polyethylene, monodocosyl ether	26636-40-8	N/A	Data not available or insufficient for classification	N/A	N/A	N/A
Ethylene glycol polymer	25322-68-3	Activated sludge	Experimental	N/A	EC50	>1,000 mg/l
Ethylene glycol polymer	25322-68-3	Atlantic Salmon	Experimental	96 hours	LC50	>1,000 mg/l
Squalane	111-01-3	Green algae	Experimental	72 hours	EC50	>100 mg/l
Squalane	111-01-3	Water flea	Experimental	48 hours	LC50	>100 mg/l
Squalane	111-01-3	Zebra Fish	Experimental	96 hours	LC50	>100 mg/l
Squalane	111-01-3	Green algae	Experimental	72 hours	NOEC	100 mg/l
Chlorhexidine Digluconate	18472-51-0	Activated sludge	Experimental	3 hours	EC50	25 mg/l
Chlorhexidine Digluconate	18472-51-0	Green algae	Experimental	72 hours	ErC50	0.081 mg/l
Chlorhexidine Digluconate	18472-51-0	Water flea	Experimental	48 hours	EC50	0.087 mg/l
Chlorhexidine Digluconate	18472-51-0	Zebra Fish	Experimental	96 hours	LC50	2.08 mg/l
Chlorhexidine Digluconate	18472-51-0	Green algae	Experimental	72 hours	NOEC	0.007 mg/l
Chlorhexidine Digluconate	18472-51-0	Water flea	Experimental	21 days	NOEC	0.021 mg/l

12.2. Persistence and degradability

Material	CAS Number	Test type	Duration	Study Type	Test result	Protocol
Ethanol	64-17-5	Experimental Biodegradation	14 days	BOD	89 %BOD/ThOD	OECD 301C - MITI test (I)
Docosyl alcohol	661-19-8	Experimental Biodegradation	28 days	CO2 evolution	87.5 %CO2 evolution/THCO2	OECD 301B - Modified sturm or CO2

					evolution	
C18-unsatd. fatty acids	103213-20-3	Experimental Biodegradation	28 days	CO2 evolution	5.5 %CO2 evolution/THCO2 evolution	OECD 301B - Modified sturm or CO2
Glycols, polyethylene, monodocosyl ether	26636-40-8	Data not available-insufficient	N/A	N/A	N/A	N/A
Ethylene glycol polymer	25322-68-3	Experimental Biodegradation	28 days	BOD	53 %BOD/ThOD	OECD 301C - MITI test (I)
Squalane	111-01-3	Experimental Biodegradation	28 days	CO2 evolution	77 %CO2 evolution/THCO2 evolution	OECD 301B - Modified sturm or CO2
Chlorhexidine Digluconate	18472-51-0	Experimental Biodegradation	28 days	Dissolv. Organic Carbon Deplet	71 %removal of DOC	OECD 301A - DOC Die Away Test

12.3 : Bioaccumulative potential

Material	CAS Number	Test type	Duration	Study Type	Test result	Protocol
Ethanol	64-17-5	Experimental Bioconcentration		Log Kow	-0.35	
Docosyl alcohol	661-19-8	Modeled Bioconcentration		Bioaccumulation factor	10	Catalogic™
Docosyl alcohol	661-19-8	Experimental Bioconcentration		Log Kow	8.3	
C18-unsatd. fatty acids	103213-20-3	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Glycols, polyethylene, monodocosyl ether	26636-40-8	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Ethylene glycol polymer	25322-68-3	Estimated Bioconcentration		Bioaccumulation factor	2.3	
Squalane	111-01-3	Modeled Bioconcentration		Bioaccumulation factor	7.4	Catalogic™
Squalane	111-01-3	Experimental Bioconcentration		Log Kow	5.49	similar to OECD 107
Chlorhexidine Digluconate	18472-51-0	Experimental Bioconcentration		Log Kow	-1.81	OECD 107 log Kow shke flsk mtd

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.

Incinerate in a permitted waste incineration facility.

SECTION 14: Transport Information

Australian Dangerous Goods Code (ADG) - Road/Rail Transport
UN No.: UN1170
Proper shipping name: ETHANOL SOLUTION
Class/Division: 3
Sub Risk: Not applicable.
Packing Group: II
Special Instructions: Limited quantity may apply

Hazchem Code: •2YE
IERG: 14

International Air Transport Association (IATA) - Air Transport
UN No.: UN1170
Proper shipping name: ETHANOL SOLUTION
Class/Division: 3
Sub Risk: Not applicable.
Packing Group: II
Special Instructions: Forbidden packaging does not meet requirements for this mode of transport

International Maritime Dangerous Goods Code (IMDG)- Marine Transport
UN No.: UN1170
Proper shipping name: ETHANOL SOLUTION
Class/Division: 3
Sub Risk: Not applicable.
Packing Group: II
Marine Pollutant: Not applicable.
Special Instructions: Limited quantity may apply

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.

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