



## Safety Data Sheet

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<b>Document group:</b>	16-2140-8	<b>Version number:</b>	6.00
<b>Issue Date:</b>	01/03/2020	<b>Supersedes date:</b>	27/11/2017

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 with Chlorhexidine Gluconate 4% w/w 9241P, 9241A, 9241D

#### 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/sparks/open flames/hot surfaces. - No smoking.  
P240 Ground/bond container and receiving equipment.  
P242 Use only non-sparking tools.  
P243 Take precautionary measures against static discharge.  
P233 Keep container tightly closed.  
P241 Use explosion-proof electrical/ventilating/lighting equipment.  
P280A Wear eye/face protection.

**Response:**

P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/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 + P378G 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**

## 3M™ Avagard™ 9241 Antiseptic Surgical Hand Scrub with Chlorhexidine Gluconate 4% w/w

This material is a mixture.

Ingredient	CAS Nbr	% by Weight
Water	7732-18-5	60 - 100
Chlorhexidine Digluconate	18472-51-0	3 - 7
D-Glucoopyranoside, Decyl	54549-25-6	3 - 7
Propan-1-ol	71-23-8	3 - 7
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

See Section 11.1. Information on toxicological effects.

### 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

Hydrocarbons.  
Carbon monoxide.  
Carbon dioxide.

#### Condition

During combustion.  
During combustion.  
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. 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 an appropriate solvent selected by a qualified and authorised person. Ventilate the area with fresh air. Read and follow safety precautions on the solvent label and Safety Data Sheet. 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	111-42-2	ACGIH	TWA(inhalable fraction and vapour):1 mg/m3	A3: Confirmed animal carcinogen. Danger of cutaneous absorption.
Diethanolamine	111-42-2	Australia OELs	TWA(8 hours): 13 mg/m3 (3	

**3M™ Avagard™ 9241 Antiseptic Surgical Hand Scrub with Chlorhexidine Gluconate 4% w/w**

			ppm)	
Glycerol	56-81-5	Australia OELs	TWA(Inspirable dust)(8 hours):10 mg/m <sup>3</sup>	
Propan-1-ol	71-23-8	ACGIH	TWA:100 ppm	A4: Not class. as human carcin
Propan-1-ol	71-23-8	Australia OELs	TWA(8 hours): 492 mg/m <sup>3</sup> (200 ppm); STEL(15 minutes): 614 mg/m <sup>3</sup> (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:

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 chemical protective gloves are required.

#### Respiratory protection

Under normal use conditions, airborne exposures are not expected to be significant enough to require respiratory protection.

## 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, Fruity Odour

**Odour threshold**

*No data available.*

**pH**

4 - 7

**Melting point/Freezing point**

*No data available.*

**Boiling point/Initial boiling point/Boiling range**

Approximately 100 °C [Details:By Distillation]

<b>Flash point</b>	53.9 °C [ <i>Test Method:</i> Pensky-Martens Closed Cup] [ <i>Details:</i> No sustained combustion]
<b>Evaporation rate</b>	<i>No data available.</i>
<b>Flammability (solid, gas)</b>	Not applicable.
<b>Flammable Limits(LEL)</b>	<i>No data available.</i>
<b>Flammable Limits(UEL)</b>	<i>No data available.</i>
<b>Vapour pressure</b>	<i>No data available.</i>
<b>Vapour density</b>	<i>No data available.</i>
<b>Density</b>	<i>No data available.</i>
<b>Relative density</b>	0.98 - 1.04 [ <i>Ref Std:</i> WATER=1]
<b>Water solubility</b>	<i>No data available.</i>
<b>Solubility- non-water</b>	<i>No data available.</i>
<b>Partition coefficient: n-octanol/water</b>	<i>No data available.</i>
<b>Autoignition temperature</b>	<i>No data available.</i>
<b>Decomposition temperature</b>	<i>No data available.</i>
<b>Viscosity</b>	500 - 1,500 mPa-s
<b>Volatile organic compounds (VOC)</b>	<i>No data available.</i>
<b>Percent volatile</b>	<i>No data available.</i>
<b>VOC less H2O &amp; exempt solvents</b>	<i>No data available.</i>

## 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

<u>Substance</u>	<u>Condition</u>
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
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 1,260 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

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Propan-1-ol	Rabbit	Minimal irritation
Chlorhexidine Digluconate	Rabbit	No significant irritation
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
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
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
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
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



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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
Diethanolamine	Ingestion	Not classified for male reproduction	Rat	NOAEL 97 mg/kg/day	13 weeks
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	
2-Phenoxyethanol	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	similar health hazards	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**

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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 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
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
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	18472-51-0	Green algae	Experimental	72 hours	EC50	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
D-Glucopyranoside, Decyl	54549-25-6		Data not available or insufficient for classification			
Propan-1-ol	71-23-8	Algae other	Experimental	96 hours	EC50	4,480 mg/l
Propan-1-ol	71-23-8	Fathead minnow	Experimental	96 hours	LC50	4,555 mg/l
Propan-1-ol	71-23-8	Fish	Experimental	96 hours	LC50	3,000 mg/l
Propan-1-ol	71-23-8	Water flea	Experimental	48 hours	EC50	3,642 mg/l
Propan-1-ol	71-23-8	Water flea	Experimental	21 days	NOEC	>100 mg/l
2-Phenoxyethanol	122-99-6	Fathead minnow	Experimental	96 hours	LC50	344 mg/l
2-Phenoxyethanol	122-99-6	Green algae	Experimental	72 hours	EC50	>500 mg/l
2-Phenoxyethanol	122-99-6	Scud	Experimental	96 hours	LC50	357 mg/l
2-Phenoxyethanol	122-99-6	Water flea	Experimental	48 hours	LC50	488 mg/l

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Coconut Oil Diethanolamide	8051-30-7	Green algae	Estimated	96 hours	EC50	2.2 mg/l
Coconut Oil Diethanolamide	8051-30-7	Water flea	Estimated	48 hours	EC50	2.39 mg/l
Coconut Oil Diethanolamide	8051-30-7	Zebra Fish	Estimated	96 hours	LC50	3.6 mg/l
Coconut Oil Diethanolamide	8051-30-7	Green algae	Estimated	72 hours	NOEC	0.32 mg/l
Coconut Oil Diethanolamide	8051-30-7	Water flea	Estimated	21 days	NOEC	0.07 mg/l
Glycerol	56-81-5	Rainbow trout	Experimental	96 hours	LC50	54,000 mg/l
Glycerol	56-81-5	Water flea	Experimental	48 hours	LC50	1,955 mg/l
Diethanolamine	111-42-2	Fathead minnow	Experimental	96 hours	LC50	100 mg/l
Diethanolamine	111-42-2	Green algae	Experimental	72 hours	EC50	9.5 mg/l
Diethanolamine	111-42-2	Water flea	Experimental	48 hours	LC50	2.15 mg/l
Diethanolamine	111-42-2	Green algae	Experimental	72 hours	NOEC	0.6 mg/l
Diethanolamine	111-42-2	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	18472-51-0	Experimental Biodegradation	28 days	Dissolv. Organic Carbon Deplet	71 % weight	OECD 301A - DOC Die Away Test
D-Glucopyranoside, Decyl	54549-25-6	Estimated Biodegradation	28 days	BOD	89 % weight	OECD 301C - MITI test (I)
Propan-1-ol	71-23-8	Experimental Biodegradation	20 days	BOD	73 % BOD/ThBOD	OECD 301D - Closed bottle test
2-Phenoxyethanol	122-99-6	Experimental Biodegradation	28 days	BOD	90 % weight	OECD 301F - Manometric respirometry
Coconut Oil Diethanolamide	8051-30-7	Estimated Biodegradation	28 days	BOD	71 % weight	OECD 301D - Closed bottle test
Glycerol	56-81-5	Experimental Biodegradation	14 days	BOD	63 % BOD/ThBOD	OECD 301C - MITI test (I)
Diethanolamine	111-42-2	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
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**3M™ Avagard™ 9241 Antiseptic Surgical Hand Scrub with Chlorhexidine Gluconate 4% w/w**

Chlorhexidine Digluconate	18472-51-0	Experimental Bioconcentration		Log Kow	-1.81	Other methods
D-Glucopyranoside, Decyl	54549-25-6	Estimated Bioconcentration		Bioaccumulation factor	2.5	Estimated: Bioconcentration factor
Propan-1-ol	71-23-8	Experimental Bioconcentration		Log Kow	0.2	Other methods
2-Phenoxyethanol	122-99-6	Experimental Bioconcentration		Log Kow	1.16	Other methods
Coconut Oil Diethanolamide	8051-30-7	Estimated Bioconcentration		Bioaccumulation factor	5.8	Estimated: Bioconcentration factor
Glycerol	56-81-5	Experimental Bioconcentration		Log Kow	-1.76	Other methods
Diethanolamine	111-42-2	Experimental Bioconcentration		Log Kow	-2.18	Other methods

**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

## 3M™ Avagard™ 9241 Antiseptic Surgical Hand Scrub with Chlorhexidine Gluconate 4% w/w

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](http://www.3m.com.au)**