



## 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 CHG Hand Rub , Chlorhexidine Gluconate 0.5% w/v in Ethanol 70% v/v, 9250H, 9250P

#### Product Identification Numbers

AH-1000-1000-0      AH-1000-1001-8

#### 1.2. Recommended use and restrictions on use

##### Recommended use

For rapid hand antisepsis - 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 2.

#### 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**

Warning

**Symbols**

Flame | Exclamation mark |

**Pictograms**



**Hazard statements**

H226 Flammable liquid and vapour.

H319 Causes serious eye irritation.

**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.  
P264 Wash thoroughly after handling.  
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.  
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 + 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**

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	40 - 70
Water	7732-18-5	20 - 40
Chlorohexidine Digluconate	18472-51-0	< 1

**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**

Flush eyes with large amounts of water. If signs/symptoms persist, 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**

No critical symptoms or effects. 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**

Carbon monoxide.  
Carbon dioxide.  
Irritant vapours or gases.

**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.

**Hazchem Code:** •2Y

**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.

## 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. 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

Avoid eye contact. 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.) Wear low static or properly grounded shoes. Vapours may travel long distances along the ground or floor to an ignition source and flash back.

## 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
Ethanol		ACGIH	STEL:1000 ppm	A3: Confirmed animal carcinogen.
Ethanol		Australia OELs	TWA(8 hours):1880 mg/m <sup>3</sup> (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

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

<b>Physical state</b>	Liquid.
<b>Specific Physical Form:</b>	Liquid
<b>Colour</b>	Pink
<b>Odour</b>	Fresh Odour, Fruity Alcohol
<b>Odour threshold</b>	<i>No data available.</i>
<b>pH</b>	6.5 - 8 Units not available or not applicable.
<b>Melting point/Freezing point</b>	<i>No data available.</i>
<b>Boiling point/Initial boiling point/Boiling range</b>	78 - 100 °C [ <i>Details:by distillation</i> ]
<b>Flash point</b>	24 °C [ <i>Test Method:Pensky-Martens Closed Cup</i> ]
<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>Vapor Density and/or Relative Vapor Density</b>	<i>No data available.</i>
<b>Density</b>	0.85 g/ml - 0.9 g/ml
<b>Relative density</b>	0.86 - 0.89 [ <i>Ref Std:WATER=1</i> ]
<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/Kinematic Viscosity</b>	<i>No data available.</i>
<b>Volatile organic compounds (VOC)</b>	Approximately 59 % [Test Method: Estimated]
<b>Percent volatile</b>	Approximately 98 % [Test Method: Estimated]
<b>VOC less H2O &amp; exempt solvents</b>	<i>No data available.</i>
<b>Kinematic Viscosity</b>	<i>No data available.</i>

**Nanoparticles**

This material does not contain nanoparticles.

**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.

Light.

Sparks and/or flames.

**10.4. Possibility of hazardous reactions**

Hazardous polymerisation will not occur.

**10.5 Incompatible materials**

Combustibles.

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.

**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.

**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	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
Chlorohexidine Digluconate	Dermal	Rabbit	LD50 > 5,000 mg/kg
Chlorohexidine Digluconate	Ingestion	Rat	LD50 2,000 mg/kg

ATE = acute toxicity estimate

**Skin Corrosion/Irritation**

Name	Species	Value
Ethanol	Rabbit	No significant irritation
Chlorohexidine Digluconate	Rabbit	No significant irritation

**Serious Eye Damage/Irritation**

Name	Species	Value
Ethanol	Rabbit	Severe irritant
Chlorohexidine Digluconate	Rabbit	Corrosive

**Skin Sensitisation**

Name	Species	Value
Ethanol	Human	Not classified
Chlorohexidine 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
Chlorohexidine Digluconate	In Vitro	Not mutagenic
Chlorohexidine Digluconate	In vivo	Not mutagenic

**Carcinogenicity**

Name	Route	Species	Value
Ethanol	Ingestion	Multiple animal species	Some positive data exist, but the data are not sufficient for classification
Chlorohexidine 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	prematuring & during gestation
Chlorohexidine 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	
Chlorohexidine 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	Rabbit	LOAEL 124 mg/l	365 days



			sufficient for classification			
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
Chlorohexidine Digluconate	Ingestion	liver	Some positive data exist, but the data are not sufficient for classification	Dog	NOAEL 0.89 mg/kg/day	1 years
Chlorohexidine Digluconate	Ingestion	immune system	Not classified	Rabbit	NOAEL 71 mg/kg/day	2 years
Chlorohexidine 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		Fathead minnow	Experimental	96 hours	LC50	14,200 mg/l
Ethanol		Fish other	Experimental	96 hours	LC50	11,000 mg/l
Ethanol		Green algae	Experimental	72 hours	EC50	275 mg/l
Ethanol		Water flea	Experimental	48 hours	LC50	5,012 mg/l
Ethanol		Green algae	Experimental	72 hours	ErC10	11.5 mg/l

Ethanol		Water flea	Experimental	10 days	NOEC	9.6 mg/l
Chlorohexidine Digluconate		Activated sludge	Experimental	3 hours	EC50	25 mg/l
Chlorohexidine Digluconate		Green algae	Experimental	72 hours	EC50	0.081 mg/l
Chlorohexidine Digluconate		Water flea	Experimental	48 hours	EC50	0.087 mg/l
Chlorohexidine Digluconate		Zebra Fish	Experimental	96 hours	LC50	2.08 mg/l
Chlorohexidine Digluconate		Green algae	Experimental	72 hours	NOEC	0.007 mg/l
Chlorohexidine Digluconate		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		Experimental Biodegradation	14 days	BOD	89 % BOD/ThBOD	OECD 301C - MITI test (I)
Chlorohexidine Digluconate		Experimental Biodegradation	28 days	Dissolv. Organic Carbon Deplet	71 % weight	OECD 301A - DOC Die Away Test

## 12.3 : Bioaccumulative potential

Material	CAS Number	Test type	Duration	Study Type	Test result	Protocol
Ethanol		Experimental Bioconcentration		Log Kow	-0.35	Non-standard method
Chlorohexidine Digluconate		Experimental Bioconcentration		Log Kow	-1.81	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.

Incinerate in a permitted waste incineration facility. Combustion products will include halogen acid (HCl/HF/HBr). Facility must be capable of handling halogenated materials.

# 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:** III

**Special Instructions:** Limited quantity may apply

**Hazchem Code:** •2Y

**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:** III

**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:** III

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