Safety Data Sheet

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This Safety Data Sheet has been prepared in accordance with the New Zealand, Hazardous Substances (Safety Data Sheets) Notice 2017.

SECTION 1: Identification

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

Product Identification Numbers
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 Healthcare use only

1.3. Supplier's details
Address: 3M New Zealand Ltd, 94 Apollo Drive, Rosedale 0632, Auckland
Telephone: (09) 477 4040
E Mail: innovation@nz.mmm.com
Website: 3m.co.nz

1.4. Emergency telephone number
24 hr Medical Emergency, National Poisons Centre, 0800 764 766 (0800 POISON)

SECTION 2: Hazard identification

Classified as hazardous in accordance with the relevant criteria of the HSNO Act 1996 and the Hazardous Substances (Hazard Classification) Notice 2020.
Refer to Section 14 of this Safety Data Sheet for product Dangerous Goods Classification.

2.1. Classification of the substance or mixture
Flammable Liquids: Category 3
Serious eye damage: Category 1
Carcinogenicity: Category 2
Reproductive Toxicity: Category 2
Hazardous to the aquatic environment acute: Category 1
Hazardous to the aquatic environment chronic: Category 2

2.2. Label elements
SIGNAL WORD
Danger

Symbols:
Flame |Corrosion |Health Hazard |Environment |

Pictograms

HAZARD STATEMENTS:

H226	Flammable liquid and vapour.
H318	Causes serious eye damage.
H351	Suspected of causing cancer.
H361	Suspected of damaging fertility or the unborn child.
H400	Very toxic to aquatic life.
H411	Toxic to aquatic life with long lasting effects.

PRECAUTIONARY STATEMENTS

Prevention

P201	Obtain special instructions before use.
P202	Do not handle until all safety precautions have been read and understood.
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.
P273	Avoid release to the environment.
P280B	Wear protective gloves and eye/face protection.

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 CENTER 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.
P391	Collect spillage.

Storage

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.

SECTION 3: Composition/information on ingredients

Ingredient	CAS Nbr	% by Weight
Water	7732-18-5	60 - 100
Propan-1-ol	71-23-8	3 - 7
Chlorhexidine Gluconate	18472-51-0	3 - 7
D-glucopyranose, oligomeric, C10-16-alkyl glycosides	110615-47-9	1 - 5
Coconut oil diethanolamide	8051-30-7	1 - 3
2-Phenoxyethanol	122-99-6	0.1 - 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 you are concerned, get medical advice.

Skin contact
Wash with soap and water. If you are concerned, get medical advice.

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.
A product risk assessment is recommended to determine if eye wash facilities may be required when using this product in the workplace.

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	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.

5.4. Hazchem code: Not applicable.

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 vapors 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

Refer to Section 15 - Controls for more information

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. Use personal protective equipment (eg. gloves, respirators…) as required. 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 vapor 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.

7.3. Certified handler
Not required

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 vapor):1 mg/m3	A3: Confirmed animal carcinogen, Danger of cutaneous absorption
Diethanolamine	111-42-2	New Zealand WES	TWA(8 hours): 13 mg/m3 (3 ppm)	Skin
Glycerol	56-81-5	New Zealand WES	TWA(as mist)(8 hours):10 mg/m3	
Propan-1-ol	71-23-8	ACGIH	TWA:100 ppm	A4: Not class. as human carcinogin
Propan-1-ol	71-23-8	New Zealand WES	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
CMRG : Chemical Manufacturer's Recommended Guidelines
New Zealand WES : New Zealand Workplace Exposure Standards.
TWA: Time-Weighted-Average
STEL: Short Term Exposure Limit
ppm: parts per million
mg/m^3: milligrams per cubic metre
CEIL: Ceiling

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.

Refer AS/NZS 1336 - Recommended practices for occupational eye protection and for performance specifications AS/NZS 1337, Parts 1 - 6 - Personal eye-protection.

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.

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 vapors and particulates

For questions about suitability for a specific application, consult with your respirator manufacturer.

Refer AS/NZS 1715 - Selection, use and maintenance of respiratory protective equipment and AS/NZS 1716 - Respiratory protective devices.

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	± 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.*

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 Possibility of hazardous reactions

Hazardous polymerisation will not occur.

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

10.5 Incompatible materials
Strong acids.
Strong oxidising agents.

10.6 Hazardous decomposition products

Substance	Condition
None known.	

Refer to Section 5.2 for hazardous decomposition products during combustion.

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. May cause additional health effects (see below).

Additional Health Effects:

Reproductive/Developmental Toxicity:
Contains a chemical or chemicals which can cause birth defects or other reproductive harm.

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-Vapor(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-Vapor (4 hours)	Rat	LC50 > 34 mg/l
Propan-1-ol	Ingestion	Rat	LD50 estimated to be 2,000 - 5,000 mg/kg
Chlorhexidine Gluconate	Dermal	Rabbit	LD50 > 5,000 mg/kg
Chlorhexidine Gluconate	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 Gluconate	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	Irritant

Serious Eye Damage/Irritation

Name	Species	Value
Propan-1-ol	Rabbit	Severe irritant
Chlorhexidine Gluconate	Rabbit	Corrosive
D-glucopyranose, oligomeric, C10-16-alkyl glycosides	Rabbit	Corrosive
Glycerol	Rabbit	No significant irritation
2-Phenoxyethanol	Rabbit	Corrosive
Diethanolamine	Rabbit	Corrosive

Sensitisation:

Skin Sensitisation

Name	Species	Value
Propan-1-ol	Guinea pig	Not classified
Chlorhexidine Gluconate	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 Gluconate	In Vitro	Not mutagenic
Chlorhexidine Gluconate	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 Gluconate	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 Gluconate	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	2 generation

				3,700 mg/kg/day	
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 male reproduction	Rat	NOAEL 128 mg/kg/day	1 generation
Diethanolamine	Dermal	Not classified for development	Rabbit	NOAEL 100 mg/kg/day	during organogenesis
Diethanolamine	Inhalation	Not classified for development	Rat	NOAEL 0.05 mg/l	during organogenesis
Diethanolamine	Ingestion	Toxic to female reproduction	Rat	NOAEL 38 mg/kg/day	1 generation
Diethanolamine	Ingestion	Toxic to development	Rat	NOAEL 38 mg/kg/day	1 generation

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 Gluconate	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 Gluconate	Ingestion	liver	Some positive data exist, but the data are not sufficient for classification	Dog	NOAEL 0.89 mg/kg/day	1 years
Chlorhexidine Gluconate	Ingestion	immune system	Not classified	Rabbit	NOAEL 71 mg/kg/day	2 years
Chlorhexidine Gluconate	Ingestion	hematopoietic system | kidney	Not classified	Rat	NOAEL 71 mg/kg/day	2 years

		and/or bladder				
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.

Please contact the address or phone number listed on the first page of the SDS for additional toxicological information on this material and/or its components.

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
Ecotoxic to the aquatic environment.
Acute Aquatic Toxicity: Category 1
Chronic Aquatic Toxicity: Category 2

No product test data available.

Material	CAS Number	Organism	Type	Exposure	Test endpoint	Test result
Chlorhexidine Gluconate	18472-51-0	Activated sludge	Experimental	3 hours	EC50	25 mg/l
Chlorhexidine Gluconate	18472-51-0	Green algae	Experimental	72 hours	ErC50	0.081 mg/l
Chlorhexidine Gluconate	18472-51-0	Water flea	Experimental	48 hours	EC50	0.087 mg/l
Chlorhexidine Gluconate	18472-51-0	Zebra Fish	Experimental	96 hours	LC50	2.08 mg/l
Chlorhexidine Gluconate	18472-51-0	Green algae	Experimental	72 hours	NOEC	0.007 mg/l
Chlorhexidine Gluconate	18472-51-0	Water flea	Experimental	21 days	NOEC	0.021 mg/l
Propan-1-ol	71-23-8	Activated sludge	Experimental	3 hours	IC50	>1,000 mg/l
Propan-1-ol	71-23-8	Algae or other aquatic plants	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
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	ErC50	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-	110615-47-9	Water flea	Experimental	21 days	NOEC	2 mg/l

glucopyranose, oligomeric, C10-16-alkyl glycosides						
D-glucopyranose, oligomeric, C10-16-alkyl glycosides	110615-47-9	Zebra Fish	Experimental	28 days	NOEC	1.8 mg/l
2-Phenoxyethanol	122-99-6	Activated sludge	Experimental	30 minutes	EC50	>1,000 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	>100 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	EC50	>500 mg/l
2-Phenoxyethanol	122-99-6	Fathead minnow	Experimental	34 days	NOEC	24 mg/l
2-Phenoxyethanol	122-99-6	Green algae	Experimental	72 hours	NOEC	46 mg/l
2-Phenoxyethanol	122-99-6	Water flea	Experimental	21 days	NOEC	9.43 mg/l
Coconut oil diethanolamide	8051-30-7	Bacteria	Analogous Compound	30 minutes	NOEC	1,000 mg/l
Coconut oil diethanolamide	8051-30-7	Green algae	Analogous Compound	96 hours	EbC50	2.2 mg/l
Coconut oil diethanolamide	8051-30-7	Water flea	Analogous Compound	48 hours	EC50	2.15 mg/l
Coconut oil diethanolamide	8051-30-7	Zebra Fish	Analogous Compound	96 hours	LC50	3.6 mg/l
Coconut oil diethanolamide	8051-30-7	Green algae	Analogous Compound	72 hours	NOEC	0.32 mg/l
Coconut oil diethanolamide	8051-30-7	Water flea	Analogous Compound	21 days	NOEC	0.07 mg/l
Glycerol	56-81-5	Bacteria	Experimental	16 hours	NOEC	10,000 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 Gluconate	18472-51-0	Experimental Biodegradation	28 days	Dissolv. Organic Carbon Deplet	71 % removal of DOC	OECD 301A - DOC Die Away Test
Propan-1-ol	71-23-8	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 %BOD/ThOD	OECD 301D - Closed bottle test
2-Phenoxyethanol	122-99-6	Experimental Biodegradation	28 days	BOD	90 %BOD/ThOD	OECD 301F - Manometric respirometry
Coconut oil diethanolamide	8051-30-7	Analogous Compound Biodegradation	28 days	BOD	71 %BOD/ThOD	OECD 301D - Closed bottle test
Glycerol	56-81-5	Experimental Biodegradation	14 days	BOD	63 %BOD/ThOD	OECD 301C - MITI test (I)
Diethanolamine	111-42-2	Experimental Biodegradation	10 days	BOD	72 %BOD/ThOD	OECD 301D - Closed bottle test
Diethanolamine	111-42-2	Experimental Biodegradation	9 days	Dissolv. Organic Carbon Deplet	98 % removal of DOC	OECD 302C - Modified MITI (II)

12.3 : Bioaccumulative potential

Material	CAS Number	Test type	Duration	Study Type	Test result	Protocol
Chlorhexidine Gluconate	18472-51-0	Experimental Bioconcentration		Log Kow	-1.81	OECD 107 log Kow shke flsk mtd
Propan-1-ol	71-23-8	Experimental Bioconcentration		Log Kow	0.2	
D-glucopyranose, oligomeric, C10-16-alkyl glycosides	110615-47-9	Estimated Bioconcentration		Log Kow	≤0.07	
2-Phenoxyethanol	122-99-6	Experimental Bioconcentration		Log Kow	1.2	EC A.8 Partition Coefficient
Coconut oil diethanolamide	8051-30-7	Modeled Bioconcentration		Bioaccumulation factor	5.8	Catalogic™
Glycerol	56-81-5	Experimental Bioconcentrati		Log Kow	-1.76	

		on				
Diethanolamine	111-42-2	Experimental Bioconcentration		Log Kow	-2.18	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
In accordance with the Hazardous Substances (Disposal) Notice 2017 and the relevant criteria of the HSNO Act 1996.

Incinerate in a permitted waste incineration facility. Combustion products will include halogen acid (HCl/HF/HBr). Facility must be capable of handling halogenated materials. As a disposal alternative, utilize an acceptable permitted waste disposal facility. Empty drums/barrels/containers used for transporting and handling hazardous chemicals (chemical substances/mixtures/preparations classified as Hazardous as per applicable regulations) shall be considered, stored, treated & disposed of as hazardous wastes unless otherwise defined by applicable waste regulations. Consult with the respective regulating authorities to determine the available treatment and disposal facilities.

Packaging (that may or may not contain any residual substance) may be lawfully disposed of by householders or other consumers through public or commercial waste collection services.

SECTION 14: Transport Information

New Zealand Land Transport Rule: Dangerous Goods - 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: NZS 5433: Part 1:2012, 2.3.1.2. 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

HSNO Approval number	HSR002552
Group standard name	Cosmetic Products Group Standard 2020
HSNO Hazard classification	Refer to Section 2: Hazard identification

NZ Inventory of Chemicals (NZIoC) Status
All applicable chemical ingredients in this material are in compliance with NZIoC listing requirements.

Controls in accordance with The Health and Safety at Work Act 2015, Health and Safety at Work (Hazardous Substances) Regulations 2017 and the HSNO Act 1996, Hazardous Substances (Hazardous Property Controls) Notice 2017

Certified handler	Not required
Location Compliance Certificate	500 L (closed containers greater than 5 L) 1,500 L (closed containers up to and including 5 L) 250 L (open containers)
Hazardous atmosphere zone	100 L (closed containers) 25 L (decanting) 5 L (open occasionally) 1 L (open containers in continuous use)
Fire extinguishers	Two required for 500 L
Emergency response plan	100 L (for Hazardous to the aquatic environment Category 1 substances); or 1 000 L (for Acute toxicity Category 4, Skin sensitisation Category 1, Respiratory sensitisation Category 1, Hazardous to the aquatic environment Category 2 or Hazardous to the aquatic environment Category 3 substances); or 10 000 L (for all other Flammable liquid Category 3 substances)
Secondary containment	100 L (for Hazardous to the aquatic environment Category 1 substances); or 1 000 L (for Acute toxicity Category 4, Skin sensitisation Category 1, Respiratory sensitisation Category 1, Hazardous to the aquatic environment Category 2 or Hazardous to the aquatic environment Category 3 substances); or 10 000 L (for all other Flammable liquid Category 3 substances)
Tracking	Not required
Warning signage	100 L (for Hazardous to the aquatic environment Category 1 substances); or 1 000 L (for all other Flammable liquid Category 3 substances)

SECTION 16: Other information

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Complete document review.

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Key to abbreviations and acronyms
GHS refers to the Globally Harmonised System of Classification and Labelling of Chemicals, 7th revised edition of 2017
HSNO means Hazardous Substances and New Organisms Act 1996

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