Safety Data Sheet

Document group:	24-1364-9	**Version number:**	5.00
Issue Date:	01/05/2023	**Supersedes date:**	19/04/2018

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™ Neutral Quat Disinfectant Cleaner Concentrate (Product No. 23, 3M™ Chemical Management Systems)

Product Identification Numbers
70-0713-1500-9

1.2. Recommended use and restrictions on use

Recommended use
Disinfectant, EPA-registered, quaternary disinfectant cleaner for hospital use. Kills HIV-1, MRSA, VRE, Herpes Simplex I and II, and other pathogens. Rinse-free, low-foaming, neutral pH formula.

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
Corrosive to metal: Category 1
Acute Toxicity (oral): Category 4
Skin Corrosion/Irritation: Category 1B
Serious Eye Damage/Irritation: Category 1
Reproductive Toxicity: Category 2
Acute Aquatic Toxicity: Category 1
Chronic Aquatic Toxicity: Category 2

2.2. Label elements
SIGNAL WORD
Danger

Symbols:
Corrosion |Exclamation mark |Health Hazard |Environment |

Pictograms

HAZARD STATEMENTS:

H290	May be corrosive to metals.
H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.
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.
P234	Keep only in original packaging.
P260	Do not breathe dust/fume/gas/mist/vapours/spray.
P264	Wash thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P273	Avoid release to the environment.
P280D	Wear protective gloves, protective clothing, and eye/face protection.

Response

P301 + P330 + P331	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
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.
P310	Immediately call a POISON CENTER or doctor/physician.
P363	Wash contaminated clothing before reuse.
P390	Absorb spillage to prevent material damage.
P391	Collect spillage.

Storage

P405	Store locked up.
P406	Store in a corrosion-resistant container with a resistant inner liner.

Disposal

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

2.3. Other hazards
May cause chemical gastrointestinal burns.

SECTION 3: Composition/information on ingredients

Ingredient	CAS Nbr	% by Weight
Water	7732-18-5	60 - 90
Didecyldimonium Chloride	7173-51-5	10 - 11
Alkyl C12-16 Dimethylbenzyl Ammonium Chloride	68424-85-1	5 - 7
Octyl Dimethyl Amine Oxide	2605-78-9	3 - 5
EDTA	60-00-4	2 - 3
Ethanol	64-17-5	2 - 3
Sodium Hydroxide	1310-73-2	0.5 - 1.5
Methanol	67-56-1	< 0.5
Orange Terpenes	68647-72-3	< 0.5

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
Immediately flush with large amounts of water for at least 15 minutes. Remove contaminated clothing. Get immediate medical attention. Wash clothing before reuse.

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
Use a fire fighting agent suitable for the surrounding fire.

5.2. Special hazards arising from the substance or mixture
None inherent in this product.

5.3. Special protective actions for fire-fighters
No special protective actions for fire-fighters are anticipated.

5.4. Hazchem code: 2X

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures
Evacuate area. 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. Refer to other sections of this SDS for information regarding physical and health hazards, respiratory protection, ventilation, and personal protective equipment.

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

6.3. Methods and material for containment and cleaning up
Contain spill. Working from around the edges of the spill inward, cover with bentonite, vermiculite, or commercially available inorganic absorbent material. Mix in sufficient absorbent until it appears dry. Remember, adding an absorbent material does not remove a physical, health, or environmental hazard. Collect as much of the spilled material as possible. Place in a metal container approved for use in transportation by appropriate authorities. The container must be lined with polyethylene plastic or contain a plastic drum liner made of polyethylene. Clean up residue with water. Cover, but do not seal for 48 hours. 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
This product is not intended to be used without prior dilution as specified on the product label. Grounding or safety shoes with electrostatic dissipating soles (ESD) are not required with a chemical dispensing system. Keep out of reach of children. Do not handle until all safety precautions have been read and understood. Do not breathe 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. Wash contaminated clothing before reuse. Use personal protective equipment (eg. gloves, respirators…) as required.

7.2. Conditions for safe storage including any incompatibilities
Keep only in original container. Store in a corrosive resistant container with a resistant inner liner. Store away from acids. Store away from areas where product may come into contact with food or pharmaceuticals.

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
Sodium Hydroxide	1310-73-2	ACGIH	CEIL:2 mg/m3	
Sodium Hydroxide	1310-73-2	New Zealand WES	CEIL:2 mg/m3	
Ethanol	64-17-5	ACGIH	STEL:1000 ppm	A3: Confirmed animal carcinogen.
Ethanol	64-17-5	New Zealand	TWA(8 hours):1880	

		WES	mg/m3(1000 ppm)	
Methanol	67-56-1	ACGIH	TWA:200 ppm;STEL:250 ppm	Danger of cutaneous absorption
Methanol	67-56-1	New Zealand WES	TWA(8 hours):262 mg/m3(200 ppm);STEL(15 minutes):328 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/m³: milligrams per cubic metre
CEIL: Ceiling

8.2. Exposure controls

8.2.1. Engineering controls
NOTE: When used with a chemical dispensing system as directed, special ventilation is not required. 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.

8.2.2. Personal protective equipment (PPE)

Eye/face protection

NOTE: When used with a chemical dispensing system as directed, eye contact with the concentrate is not expected to occur. The following protection(s) are recommended if the product is not used with a chemical dispensing system or if there is an accidental release, wear protective 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
NOTE: When used with a chemical dispensing system as directed, skin contact with the concentrate is not expected to occur.
If product is not used with a chemical dispensing system or if there is an accidental release:
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.
Note: Nitrile gloves may be worn over polymer laminate gloves to improve dexterity.
Gloves made from the following material(s) are recommended: Polymer laminate

If this product is used in a manner that presents a higher potential for exposure (eg. spraying, high splash potential etc.), then use of protective coveralls may be necessary.
If product is not used with a chemical dispensing system or if there is an accidental release:
Select and use body protection to prevent contact based on the results of an exposure assessment. The following protective clothing material(s) are recommended:
Apron - polymer laminate
Rubber boots.

Respiratory protection

NOTE: When used with a chemical dispensing system as directed, respiratory protection is not required.
If product is not used with a chemical dispensing system or if there is an accidental release:

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
Organic vapor respirators may have short service life.

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:	Liquid.
Colour	Dark Green
Odour	Lemon
Odour threshold	*No data available.*
pH	7 - 8.2
Melting point/Freezing point	*Not applicable.*
Boiling point/Initial boiling point/Boiling range	> 100 ºC
Flash point	No flash point
Evaporation rate	*No data available.*
Flammability (solid, gas)	Not applicable.
Flammable Limits(LEL)	*Not applicable.*
Flammable Limits(UEL)	*Not applicable.*
Vapor Density and/or Relative Vapor Density	*No data available.*
Density	0.991 - 1.003 g/ml
Relative density	0.991 - 1.003 [*Ref Std:*WATER=1]
Water solubility	Complete
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	17.2 Saybolt Universal Second - 19.2 Saybolt Universal Second [@ 22.2 ºC] [*Details:*S-90 Zahn # 2]
Volatile organic compounds (VOC)	< 3 % weight
Percent volatile	60 - 90 % weight
VOC less H2O & exempt solvents	< 110 g/l

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 Possibility of hazardous reactions

Hazardous polymerisation will not occur.

10.4 Conditions to avoid
Not determined

10.5 Incompatible materials
Strong acids.

10.6 Hazardous decomposition products

Substance	Condition
Carbon monoxide.	Not specified.
Carbon dioxide.	Not specified.
Oxides of nitrogen.	Not specified.

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
Corrosive (skin burns): Signs/symptoms may include localised redness, swelling, itching, intense pain, blistering, ulceration, and tissue destruction. 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
Harmful if swallowed.
Gastrointestinal corrosion: Signs/symptoms may include severe mouth, throat and abdominal pain, nausea, vomiting, and diarrhea; blood in the faeces and/or vomitus may also be seen. 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.

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 >300 - =2,000 mg/kg
Didecyldimonium Chloride	Ingestion	Rat	LD50 84 mg/kg
Alkyl C12-16 Dimethylbenzyl Ammonium Chloride	Dermal	Rabbit	LD50 3,413 mg/kg
Alkyl C12-16 Dimethylbenzyl Ammonium Chloride	Inhalation-Dust/Mist (4 hours)	Rat	LC50 0.25 mg/l
Alkyl C12-16 Dimethylbenzyl Ammonium Chloride	Ingestion	Rat	LD50 398 mg/kg
EDTA	Dermal		LD50 estimated to be > 5,000 mg/kg
EDTA	Ingestion	Rat	LD50 > 2,000 mg/kg
Ethanol	Dermal	Rabbit	LD50 > 15,800 mg/kg
Ethanol	Inhalation-Vapor (4 hours)	Rat	LC50 124.7 mg/l
Ethanol	Ingestion	Rat	LD50 17,800 mg/kg
Orange Terpenes	Inhalation-Vapor (4 hours)	Mouse	LC50 > 3.14 mg/l
Orange Terpenes	Dermal	Rabbit	LD50 > 5,000 mg/kg
Orange Terpenes	Ingestion	Rat	LD50 4,400 mg/kg
Methanol	Dermal		LD50 estimated to be 1,000 - 2,000 mg/kg
Methanol	Inhalation-Vapor		LC50 estimated to be 10 - 20 mg/l
Methanol	Ingestion		LD50 estimated to be 50 - 300 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
Alkyl C12-16 Dimethylbenzyl Ammonium Chloride	Rabbit	Corrosive
Ethanol	Rabbit	No significant irritation
Sodium Hydroxide	Rabbit	Corrosive
Orange Terpenes	Rabbit	Mild irritant
Methanol	Rabbit	Mild irritant

Serious Eye Damage/Irritation

Name	Species	Value
Alkyl C12-16 Dimethylbenzyl Ammonium Chloride	Rabbit	Corrosive
Ethanol	Rabbit	Severe irritant
Sodium Hydroxide	Rabbit	Corrosive
Orange Terpenes	Rabbit	Mild irritant
Methanol	Rabbit	Moderate irritant

Sensitisation:

Skin Sensitisation

Name	Species	Value
Alkyl C12-16 Dimethylbenzyl Ammonium Chloride	Guinea pig	Not classified

Ethanol	Human	Not classified
Sodium Hydroxide	Human	Not classified
Orange Terpenes	Mouse	Sensitising
Methanol	Guinea pig	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
Alkyl C12-16 Dimethylbenzyl Ammonium Chloride	In Vitro	Not mutagenic
Alkyl C12-16 Dimethylbenzyl Ammonium Chloride	In vivo	Not mutagenic
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
Sodium Hydroxide	In Vitro	Not mutagenic
Orange Terpenes	In Vitro	Not mutagenic
Orange Terpenes	In vivo	Not mutagenic
Methanol	In Vitro	Some positive data exist, but the data are not sufficient for classification
Methanol	In vivo	Some positive data exist, but the data are not sufficient for classification

Carcinogenicity

Name	Route	Species	Value
Alkyl C12-16 Dimethylbenzyl Ammonium Chloride	Ingestion	Rat	Not carcinogenic
Ethanol	Ingestion	Multiple animal species	Some positive data exist, but the data are not sufficient for classification
Orange Terpenes	Ingestion	Rat	Some positive data exist, but the data are not sufficient for classification
Methanol	Inhalation	Multiple animal species	Not carcinogenic

Reproductive Toxicity

Reproductive and/or Developmental Effects

Name	Route	Value	Species	Test result	Exposure Duration
Alkyl C12-16 Dimethylbenzyl Ammonium Chloride	Ingestion	Not classified for female reproduction	Rat	NOAEL 48 mg/kg/day	2 generation
Alkyl C12-16 Dimethylbenzyl Ammonium Chloride	Ingestion	Not classified for male reproduction	Rat	NOAEL 30.5 mg/kg/day	2 generation
Alkyl C12-16 Dimethylbenzyl Ammonium Chloride	Ingestion	Not classified for development	Rat	NOAEL 48 mg/kg/day	2 generation
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
Orange Terpenes	Ingestion	Not classified for female reproduction	Rat	NOAEL 750 mg/kg/day	premating & during gestation
Orange Terpenes	Ingestion	Not classified for development	Multiple animal species	NOAEL 591 mg/kg/day	during organogenesis
Methanol	Ingestion	Not classified for male reproduction	Rat	NOAEL 1,600 mg/kg/day	21 days
Methanol	Ingestion	Toxic to development	Mouse	LOAEL	during

				4,000 mg/kg/day	organogenesis
Methanol	Inhalation	Toxic to development	Mouse	NOAEL 1.3 mg/l	during organogenesis

Target Organ(s)

Specific Target Organ Toxicity - single exposure

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
Alkyl C12-16 Dimethylbenzyl Ammonium Chloride	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	similar health hazards	NOAEL Not available.	
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	
Sodium Hydroxide	Inhalation	respiratory irritation	May cause respiratory irritation	Human	NOAEL Not available	
Orange Terpenes	Ingestion	nervous system	Not classified		NOAEL Not available	
Methanol	Inhalation	blindness	Causes damage to organs	Human	NOAEL Not available	occupational exposure
Methanol	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Human	NOAEL Not available	not available
Methanol	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL Not available	6 hours
Methanol	Ingestion	blindness	Causes damage to organs	Human	NOAEL Not available	poisoning and/or abuse
Methanol	Ingestion	central nervous system depression	May cause drowsiness or dizziness	Human	NOAEL Not available	poisoning and/or abuse

Specific Target Organ Toxicity - repeated exposure

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
Alkyl C12-16 Dimethylbenzyl Ammonium Chloride	Ingestion	heart | endocrine system | gastrointestinal tract | bone, teeth, nails, and/or hair | hematopoietic system | liver | immune system | nervous system | eyes | kidney and/or bladder | respiratory system | vascular system	Not classified	Rat	NOAEL 50 mg/kg/day	95 days
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	Not classified	Dog	NOAEL	7 days

		bladder			3,000 mg/kg/day	
Orange Terpenes	Ingestion	kidney and/or bladder	Not classified	Rat	LOAEL 75 mg/kg/day	103 weeks
Orange Terpenes	Ingestion	liver	Not classified	Mouse	NOAEL 1,000 mg/kg/day	103 weeks
Orange Terpenes	Ingestion	heart | endocrine system | bone, teeth, nails, and/or hair | hematopoietic system | immune system | muscles | nervous system | respiratory system	Not classified	Rat	NOAEL 600 mg/kg/day	103 weeks
Methanol	Inhalation	liver	Not classified	Rat	NOAEL 6.55 mg/l	4 weeks
Methanol	Inhalation	respiratory system	Not classified	Rat	NOAEL 13.1 mg/l	6 weeks
Methanol	Ingestion	liver | nervous system	Not classified	Rat	NOAEL 2,500 mg/kg/day	90 days

Aspiration Hazard

Name	Value
Orange Terpenes	Aspiration hazard

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
Didecyldimonium Chloride	7173-51-5	Green algae	Experimental	72 hours	ErC50	0.062 mg/l
Didecyldimonium Chloride	7173-51-5	Water flea	Experimental	48 hours	EC50	0.029 mg/l
Didecyldimonium Chloride	7173-51-5	Zebra Fish	Experimental	96 hours	LC50	0.49 mg/l
Didecyldimonium Chloride	7173-51-5	Green algae	Experimental	72 hours	NOEC	0.013 mg/l
Didecyldimonium Chloride	7173-51-5	Water flea	Experimental	21 days	NOEC	0.021 mg/l
Didecyldimonium Chloride	7173-51-5	Activated sludge	Experimental	3 hours	EC10	5.95 mg/l
Didecyldimoni	7173-51-5	Red Clover	Experimental	14 days	EC50	106 mg/kg (Dry

um Chloride						Weight)
Didecyldimonium Chloride	7173-51-5	Redworm	Experimental	56 days	NOEC	125 mg/kg (Dry Weight)
Didecyldimonium Chloride	7173-51-5	Soil microbes	Experimental	28 days	EC10	70 mg/kg (Dry Weight)
Alkyl C12-16 Dimethylbenzyl Ammonium Chloride	68424-85-1	Diatom	Experimental	96 hours	ErC50	0.089 mg/l
Alkyl C12-16 Dimethylbenzyl Ammonium Chloride	68424-85-1	Green algae	Experimental	72 hours	ErC50	0.049 mg/l
Alkyl C12-16 Dimethylbenzyl Ammonium Chloride	68424-85-1	Mysid Shrimp	Experimental	96 hours	LC50	0.092 mg/l
Alkyl C12-16 Dimethylbenzyl Ammonium Chloride	68424-85-1	Rainbow trout	Experimental	96 hours	LC50	0.064 mg/l
Alkyl C12-16 Dimethylbenzyl Ammonium Chloride	68424-85-1	Sheepshead Minnow	Experimental	96 hours	LC50	0.86 mg/l
Alkyl C12-16 Dimethylbenzyl Ammonium Chloride	68424-85-1	Water flea	Experimental	48 hours	EC50	0.0058 mg/l
Alkyl C12-16 Dimethylbenzyl Ammonium Chloride	68424-85-1	Diatom	Experimental	96 hours	NOEC	0.035 mg/l
Alkyl C12-16 Dimethylbenzyl Ammonium Chloride	68424-85-1	Fathead minnow	Experimental	28 days	NOEC	0.0322 mg/l
Alkyl C12-16 Dimethylbenzyl Ammonium Chloride	68424-85-1	Green algae	Experimental	72 hours	ErC10	0.009 mg/l
Alkyl C12-16 Dimethylbenzyl Ammonium Chloride	68424-85-1	Water flea	Experimental	21 days	NOEC	0.00415 mg/l
Alkyl C12-16 Dimethylbenzyl Ammonium Chloride	68424-85-1	Activated sludge	Experimental	3 hours	EC50	7.75 mg/l
Alkyl C12-16 Dimethylbenzyl Ammonium Chloride	68424-85-1	Mustard	Experimental	16 days	EC50	277 mg/kg (Dry Weight)
Alkyl C12-16 Dimethylbenzy	68424-85-1	Redworm	Experimental	14 days	LC50	7,070 mg/kg (Dry Weight)

l Ammonium Chloride						
Alkyl C12-16 Dimethylbenzyl Ammonium Chloride	68424-85-1	Redworm	Experimental	56 days	NOEC	125 mg/kg (Dry Weight)
Alkyl C12-16 Dimethylbenzyl Ammonium Chloride	68424-85-1	Soil microbes	Experimental	28 days	EC50	130 mg/kg (Dry Weight)
Octyl Dimethyl Amine Oxide	2605-78-9	Green algae	Experimental	72 hours	ErC50	49 mg/l
Octyl Dimethyl Amine Oxide	2605-78-9	Rainbow trout	Experimental	96 hours	LC50	>100 mg/l
Octyl Dimethyl Amine Oxide	2605-78-9	Water flea	Experimental	48 hours	EC50	130 mg/l
Octyl Dimethyl Amine Oxide	2605-78-9	Green algae	Experimental	72 hours	ErC10	10 mg/l
Octyl Dimethyl Amine Oxide	2605-78-9	Activated sludge	Experimental	3 hours	EC50	>1,000 mg/l
EDTA	60-00-4	Bluegill	Analogous Compound	96 hours	LC50	1,030 mg/l
EDTA	60-00-4	Water flea	Analogous Compound	24 hours	EC50	1,033 mg/l
EDTA	60-00-4	Water flea	Analogous Compound	21 days	NOEC	25 mg/l
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
Sodium Hydroxide	1310-73-2	N/A	Data not available or insufficient for classification	N/A	N/A	N/A
Methanol	67-56-1	Algae or other aquatic plants	Experimental	96 hours	EC50	16.9 mg/l
Methanol	67-56-1	Bay mussel	Experimental	96 hours	LC50	15,900 mg/l
Methanol	67-56-1	Bluegill	Experimental	96 hours	LC50	15,400 mg/l
Methanol	67-56-1	Green algae	Experimental	96 hours	ErC50	22,000 mg/l
Methanol	67-56-1	Sediment organism	Experimental	96 hours	LC50	54,890 mg/l
Methanol	67-56-1	Water flea	Experimental	48 hours	LC50	3,289 mg/l
Methanol	67-56-1	Green algae	Experimental	96 hours	NOEC	9.96 mg/l
Methanol	67-56-1	Medaka	Experimental	8.33 days	NOEC	158,000 mg/l
Methanol	67-56-1	Water flea	Experimental	21 days	NOEC	122 mg/l
Methanol	67-56-1	Activated sludge	Experimental	3 hours	IC50	>1,000 mg/l
Methanol	67-56-1	Barley	Experimental	14 days	EC50	15,492 mg/kg (Dry Weight)
Methanol	67-56-1	Redworm	Experimental	63 days	EC50	26,646 mg/kg (Dry Weight)

Methanol	67-56-1	Springtail	Experimental	28 days	EC50	5,683 mg/kg (Dry Weight)
Orange Terpenes	68647-72-3	Fathead minnow	Analogous Compound	96 hours	LC50	0.702 mg/l
Orange Terpenes	68647-72-3	Green algae	Analogous Compound	72 hours	ErC50	0.32 mg/l
Orange Terpenes	68647-72-3	Water flea	Analogous Compound	48 hours	EC50	0.307 mg/l
Orange Terpenes	68647-72-3	Green algae	Analogous Compound	72 hours	ErC10	0.174 mg/l
Orange Terpenes	68647-72-3	Water flea	Analogous Compound	21 days	NOEC	0.08 mg/l

12.2. Persistence and degradability

Material	CAS Number	Test type	Duration	Study Type	Test result	Protocol
Didecyldimonium Chloride	7173-51-5	Experimental Aquatic Inherent Biodegrad.	28 days	Dissolv. Organic Carbon Deplet	80 % removal of DOC	OECD 301B - Modified sturm or CO2
Didecyldimonium Chloride	7173-51-5	Experimental Biodegradation	28 days	CO2 evolution	67-71 %CO2 evolution/THCO2 evolution	OECD 301B - Modified sturm or CO2
Didecyldimonium Chloride	7173-51-5	Experimental Biodegradation	59 days	Dissolv. Organic Carbon Deplet	>99.95 % removal of DOC	OECD 303A - Simulated Aerobic
Didecyldimonium Chloride	7173-51-5	Experimental Soil Inherent Biodegradability	114 days	CO2 evolution	49 %CO2 evolution/THCO2 evolution	
Alkyl C12-16 Dimethylbenzyl Ammonium Chloride	68424-85-1	Experimental Biodegradation	28 days	CO2 evolution	95.5 %CO2 evolution/THCO2 evolution	OECD 301B - Modified sturm or CO2
Alkyl C12-16 Dimethylbenzyl Ammonium Chloride	68424-85-1	Experimental Hydrolysis		Hydrolytic half-life (pH 7)	>1 years (t 1/2)	EC C.7 Hydrolysis at pH
Octyl Dimethyl Amine Oxide	2605-78-9	Experimental Biodegradation	28 days	BOD	>100 %BOD/COD	OECD 301D - Closed bottle test
Octyl Dimethyl Amine Oxide	2605-78-9	Experimental Hydrolysis		Hydrolytic half-life (pH 7)	>1 years (t 1/2)	EC C.7 Hydrolysis at pH
EDTA	60-00-4	Experimental Aquatic Biodegrad. - Aerobic	28 days	BOD	0 %BOD/ThOD	OECD 301D - Closed bottle test
Ethanol	64-17-5	Experimental Biodegradation	14 days	BOD	89 %BOD/ThOD	OECD 301C - MITI test (I)
Sodium Hydroxide	1310-73-2	Data not availbl-insufficient	N/A	N/A	N/A	N/A
Methanol	67-56-1	Experimental Biodegradation	3 days	Percent degraded	91 % degraded	
Methanol	67-56-1	Experimental	14 days	BOD	92 %BOD/ThO	OECD 301C - MITI

		Biodegradation			D	test (I)
Methanol	67-56-1	Experimental Photolysis		Photolytic half-life (in air)	35 days (t 1/2)	
Methanol	67-56-1	Experimental Soil Metabolism Aerobic	5 days	CO2 evolution	53.4 %CO2 evolution/THCO2 evolution	
Orange Terpenes	68647-72-3	Analogous Compound Biodegradation	28 days	CO2 evolution	72 %CO2 evolution/THCO2 evolution	OECD 301B - Modified sturm or CO2

12.3 : Bioaccumulative potential

Material	CAS Number	Test type	Duration	Study Type	Test result	Protocol
Didecyldimonium Chloride	7173-51-5	Experimental BCF - Fish	60 days	Bioaccumulation factor	<=95	OECD305-Bioconcentration
Didecyldimonium Chloride	7173-51-5	Experimental Bioconcentration		Log Kow	2.58	OECD 107 log Kow shke flsk mtd
Alkyl C12-16 Dimethylbenzyl Ammonium Chloride	68424-85-1	Experimental BCF - Fish	35 days	Bioaccumulation factor	79	
Alkyl C12-16 Dimethylbenzyl Ammonium Chloride	68424-85-1	Estimated Bioconcentration		Log Kow	2.75	
Octyl Dimethyl Amine Oxide	2605-78-9	Modeled Bioconcentration		Log Kow	1.05	ACD/Labs ChemSketch™
EDTA	60-00-4	Experimental BCF - Fish	28 days	Bioaccumulation factor	1.8	OECD305-Bioconcentration
Ethanol	64-17-5	Experimental Bioconcentration		Log Kow	-0.35	
Sodium Hydroxide	1310-73-2	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Methanol	67-56-1	Experimental BCF - Fish	3 days	Bioaccumulation factor	<4.5	
Methanol	67-56-1	Experimental Bioconcentration		Log Kow	-0.77	
Orange Terpenes	68647-72-3	Modeled Bioconcentration		Bioaccumulation factor	620	Catalogic™
Orange Terpenes	68647-72-3	Experimental Bioconcentration		Log Kow	5.3	OECD 117 log Kow HPLC 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
In accordance with the Hazardous Substances (Disposal) Notice 2017 and the relevant criteria of the HSNO Act 1996.

Dispose of waste product in a permitted industrial waste facility. As a disposal alternative, incinerate in a permitted waste incineration facility. Proper destruction may require the use of additional fuel during incineration processes. 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.: UN1903
Proper Shipping Name: DISINFECTANT, LIQUID, CORROSIVE, N.O.S. , (Didecyldimethylammonium Chloride, Benzyl-C12-16-Alkyldimethyl Ammonium Chlorides)
Class/Division: 8
Sub Risk: Not applicable.
Packing Group: III
Special Instructions: Limited quantity may apply
Hazchem Code: 2X
IERG: 36

International Air Transport Association (IATA) - Air Transport
UN No.: UN1903
Proper Shipping Name: DISINFECTANT, LIQUID, CORROSIVE, N.O.S. , (Didecyldimethylammonium Chloride, Benzyl-C12-16-Alkyldimethyl Ammonium Chlorides)
Class/Division: 8
Sub Risk: Not applicable.
Packing Group: III

International Maritime Dangerous Goods Code (IMDG) - Marine Transport
UN No.: UN1903
Proper Shipping Name: DISINFECTANT, LIQUID, CORROSIVE, N.O.S. , (Didecyldimethylammonium Chloride, Benzyl-C12-16-Alkyldimethyl Ammonium Chlorides)
Class/Division: 8
Sub Risk: Not applicable.
Packing Group: III
Marine Pollutant: Not applicable.
Special Instructions: Limited quantity may apply

SECTION 15: Regulatory information

HSNO Approval number	HSR002526
Group standard name	Cleaning Products (Corrosive) 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	Not required
Hazardous atmosphere zone	Not required
Fire extinguishers	Not required
Emergency response plan	100 L or 100 kg (for Hazardous to the aquatic environment Category 1 substances); or 1 000 L or 1 000 kg (for Acute toxicity Category 4, Skin sensitisation Category 1, Respiratory sensitisation Category 1, Skin corrosion Category 1B, Hazardous to the aquatic environment Category 2 or Hazardous to the aquatic environment Category 3 substances); or 10 000 L or 10 000 kg (for all other substances)
Secondary containment	100 L or 100 kg (for Hazardous to the aquatic environment Category 1 substances); or 1 000 L or 1 000 kg (for Acute toxicity Category 4, Skin sensitisation Category 1, Respiratory sensitisation Category 1, Skin corrosion Category 1B, Hazardous to the aquatic environment Category 2 or Hazardous to the aquatic environment Category 3 substances); or 10 000 L or 10 000 kg (for all other substances)
Tracking	Not required
Warning signage	100 L or 100 kg (for Hazardous to the aquatic environment Category 1 substances); or 250 L or 250 kg (for Skin corrosion Category 1B substances); or 1 000 L or 1 000 kg (for all other substances)

SECTION 16: Other information

Revision information:
Complete document review.

Document group:	24-1364-9	**Version number:**	5.00
Issue Date:	01/05/2023	**Supersedes date:**	19/04/2018

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

The information in this Safety Data Sheet (SDS) is believed to be correct as of the date of issue. TO THE EXTENT PERMITTED BY LAW, 3M MAKES NO WARRANTY, EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY, OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR COURSE OF PERFORMANCE OR USAGE OF TRADE. User is responsible for determining whether the 3M product is fit for a particular purpose and suitable for user's method of use or application. Given the variety of factors that can affect the use and application of a 3M product, some of which are uniquely within the user's knowledge and control, it is essential that the user evaluates the 3M product to determine whether it is fit for a particular purpose and suitable for user's method of use or application. 3M provides information in electronic form as a service to customers. Due to the remote possibility of electronic transfer may have resulted in errors, omissions or alterations in this information; 3M makes no representations as to its completeness or accuracy. In addition, information obtained from a database may not be as current as the information in the SDS available directly from 3M.

3M New Zealand SDS are available at 3M New Zealand Website: http://solutions.3mnz.co.nz