Safety Data Sheet

This Safety Data Sheet has been prepared in accordance with the SS586 Specification for Hazard Communication for Hazardous Chemicals and Dangerous Goods.

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SECTION 1: Identification

1.1. Product identifier
Scotchgard™ Spot Remover

1.2. Recommended use and restrictions on use

Recommended use
Carpet Care

1.3. Supplier's details
Address: 3M Technologies (S) Pte Ltd,10 Ang Mo Kio Street 65, Singapore 569059
Telephone: +65 6450 8888
Website: www.3m.com.sg

1.4. Emergency telephone number
+65 6591 6601 (8.15am - 5.00pm, Monday - Friday)

SECTION 2: Hazard identification

2.1. Classification of the substance or mixture
Flammable Aerosol: Category 1.
Specific Target Organ Toxicity (single exposure): Category 2.

2.2. Label elements
SIGNAL WORD
DANGER!

Symbols
Flame | Health Hazard |

Pictograms

HAZARD STATEMENTS

H222	Extremely flammable aerosol.
H229	Pressurized container: may burst if heated.
H371	May cause damage to organs: cardiovascular system

PRECAUTIONARY STATEMENTS

Prevention:

P210	Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
P211	Do not spray on an open flame or other ignition source.
P251	Do not pierce or burn, even after use.
P260	Do not breathe dust/fume/gas/mist/vapours/spray.

Storage:

P410 + P412	Protect from sunlight. Do not expose to temperatures exceeding 50C/122F.
P405	Store locked up.

Disposal:

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

2.3. Other hazards

Intentional misuse by deliberately concentrating and inhaling contents can be harmful or fatal.

SECTION 3: Composition/information on ingredients

This material is a mixture.

Ingredient	CAS Nbr	% by Wt
Water	7732-18-5	60 - 90
Petroleum gases, liquefied, sweetened	68476-86-8	3 - 7
2-Butoxyethanol	111-76-2	1 - 5
Organic Copolymer	Trade Secret	0.5 - 1.5
Sodium 2-[methyloleoylamino]ethane-1-sulphonate	137-20-2	0.5 - 1.5
Sodium dodecyl sulphate	151-21-3	< 1
Ammonia, anhydrous	7664-41-7	< 0.5
Ammonia, aqueous solution	1336-21-6	< 0.5
2-aminoethanol	141-43-5	< 0.5

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation

Remove person to fresh air. Get medical attention.

Skin contact

Wash with soap and water. If signs/symptoms develop, get medical attention.

Eye contact

Flush with large amounts of water. Remove contact lenses if easy to do. Continue rinsing. If signs/symptoms persist, get medical attention.

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

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

Target organ effects. See Section 11 for additional details.

4.3. Indication of any immediate medical attention and special treatment required
Exposure may increase myocardial irritability. Do not administer sympathomimetic drugs unless absolutely necessary.

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
Closed containers exposed to heat from fire may build pressure and explode.

Hazardous Decomposition or By-Products

Substance	Condition
Carbon monoxide.	During combustion.
Carbon dioxide.	During combustion.
Irritant vapours or gases.	During combustion.

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

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.

6.3. Methods and material for containment and cleaning up
If possible, seal leaking container. Place leaking containers in a well-ventilated area, preferably an operating exhaust hood, or if necessary outdoors on an impermeable surface until appropriate packaging for the leaking container or its contents is available. 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 using non-sparking tools. Place in a metal container approved for transportation by appropriate authorities. Clean up residue with 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
Do not use in a confined area with minimal air exchange. Keep out of reach of children. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Do not spray on an open flame or other ignition source. Do not pierce or burn, even after use. 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 contact with oxidising agents (eg. chlorine, chromic acid etc.)

7.2. Conditions for safe storage including any incompatibilities
Store in a well-ventilated place. Protect from sunlight. Do not expose to temperatures exceeding 50C/122F. 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
2-Butoxyethanol	111-76-2	ACGIH	TWA:20 ppm	A3: Confirmed animal carcin.
2-Butoxyethanol	111-76-2	Singapore PELs	TWA(8 hours):121 mg/m3(25 ppm)	
Ammonia	1336-21-6	ACGIH	TWA:25 ppm;STEL:35 ppm	
Ammonia	1336-21-6	Singapore PELs	TWA(8 hours):17 mg/m3(25 ppm);STEL(15 minutes):24 mg/m3(35 ppm)	
Ammonia released from ammonium hydroxide/aqueous ammonia solutions	1336-21-6	ACGIH	TWA:25 ppm;STEL:35 ppm	
Ammonia released from ammonium hydroxide/aqueous ammonia solutions	1336-21-6	Singapore PELs	TWA(8 hours):17 mg/m3(25 ppm);STEL(15 minutes):24 mg/m3(35 ppm)	
2-aminoethanol	141-43-5	ACGIH	TWA:3 ppm;STEL:6 ppm	
ETHANOLAMINES	141-43-5	Singapore PELs	TWA(8 hours):7.5 mg/m3(3 ppm);STEL(15 minutes):15 mg/m3(6 ppm)	
Ammonia, anhydrous	7664-41-7	ACGIH	TWA:25 ppm;STEL:35 ppm	
Ammonia, anhydrous	7664-41-7	Singapore PELs	TWA(8 hours):17 mg/m3(25 ppm);STEL(15 minutes):24 mg/m3(35 ppm)	

ACGIH : American Conference of Governmental Industrial Hygienists
AIHA : American Industrial Hygiene Association
CMRG : Chemical Manufacturer's Recommended Guidelines
Singapore PELs : Singapore. Workplace Safety and Health (Permissible Exposure Levels of Toxic Substances) Order
TWA: Time-Weighted-Average
STEL: Short Term Exposure Limit
CEIL: Ceiling

8.2. Exposure controls

8.2.1. Engineering controls
Do not remain in area where available oxygen may be reduced. 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

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.

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. Note: Nitrile gloves may be worn over polymer laminate gloves to improve dexterity.
Gloves made from the following material(s) are recommended: Polymer laminate

Respiratory protection

An exposure assessment may be needed to decide if a respirator is required. If a respirator is needed, use respirators as part of a full respiratory protection program. Based on the results of the exposure assessment, select from the following respirator type(s) to reduce inhalation exposure:
Half facepiece or full facepiece air-purifying respirator suitable for organic vapours and particulates
Half facepiece or full facepiece supplied-air respirator
Organic vapor respirators may have short service life.

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

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	Liquid. Aerosol
Specific Physical Form:	Aerosol
Color	White
Odor	Not determined.
Odour threshold	*No data available.*
pH	8.9 - 9.5
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)	*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	0.99 - 1.05 [*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	*No data available.*
Volatile organic compounds (VOC)	< 7 % weight [*Test Method:*calculated per CARB title 2]
Percent volatile	60 - 100 %
VOC less H2O & exempt solvents	800 - 850 g/l [*Test Method:*calculated per CARB title 2]

Molecular weight	*No data available.*

SECTION 10: Stability and reactivity

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

10.2 Chemical stability
Stable.

10.3 Possibility of hazardous reactions
Hazardous polymerisation will not occur.

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

10.5 Incompatible materials
Strong oxidising agents.
Strong acids.

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. May cause additional health effects (see below).

Skin contact
Mild Skin Irritation: Signs/symptoms may include localized redness, swelling, itching, and dryness.

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

Ingestion
Gastrointestinal irritation: Signs/symptoms may include abdominal pain, stomach upset, nausea, vomiting and diarrhoea.

Additional Health Effects:

Single exposure may cause target organ effects:
Single exposure, above recommended guidelines, may cause: Cardiac Sensitization: Signs/symptoms may include irregular heartbeat (arrhythmia), faintness, chest pain, and may be fatal.

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
Petroleum gases, liquefied, sweetened	Inhalation-Gas (4 hours)	Rat	LC50 277,000 ppm
2-Butoxyethanol	Dermal	Guinea pig	LD50 > 2,000 mg/kg
2-Butoxyethanol	Inhalation-Vapor (4 hours)	Guinea pig	LC50 > 2.6 mg/l
2-Butoxyethanol	Ingestion	Guinea pig	LD50 1,200 mg/kg
Sodium 2-[methyloleoylamino]ethane-1-sulphonate	Dermal	Rat	LD50 > 2,000 mg/kg
Sodium 2-[methyloleoylamino]ethane-1-sulphonate	Ingestion	Rat	LD50 1,700 mg/kg
Sodium dodecyl sulphate	Ingestion	Rat	LD50 911 mg/kg
Sodium dodecyl sulphate	Dermal	similar compounds	LD50 > 2,000 mg/kg
Ammonia, aqueous solution	Ingestion	Rat	LD50 350 mg/kg
2-aminoethanol	Inhalation-Vapor	official classification	LC50 estimated to be 10 - 20 mg/l
2-aminoethanol	Dermal	Rabbit	LD50 2,504 mg/kg
2-aminoethanol	Ingestion	Rat	LD50 1,089 mg/kg
Ammonia, anhydrous	Inhalation-Gas (4 hours)	Rat	LC50 2,000 ppm

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
Petroleum gases, liquefied, sweetened	Professional judgement	No significant irritation
2-Butoxyethanol	Rabbit	Irritant
Sodium dodecyl sulphate	Rabbit	Irritant
Ammonia, aqueous solution	Rabbit	Corrosive
2-aminoethanol	Rabbit	Corrosive
Ammonia, anhydrous	Human and animal	Corrosive

Serious Eye Damage/Irritation

Name	Species	Value
Petroleum gases, liquefied, sweetened	Professio	No significant irritation

	nal judgement	
2-Butoxyethanol	Rabbit	Severe irritant
Sodium 2-[methyloleoylamino]ethane-1-sulphonate	Rabbit	Moderate irritant
Sodium dodecyl sulphate	Rabbit	Corrosive
Ammonia, aqueous solution	Rabbit	Corrosive
2-aminoethanol	Rabbit	Corrosive
Ammonia, anhydrous	Human and animal	Corrosive

Sensitization:

Skin Sensitisation

Name	Species	Value
2-Butoxyethanol	Guinea pig	Not classified
Sodium 2-[methyloleoylamino]ethane-1-sulphonate	Guinea pig	Not classified
Sodium dodecyl sulphate	similar compounds	Not classified
2-aminoethanol	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
Petroleum gases, liquefied, sweetened	In Vitro	Not mutagenic
2-Butoxyethanol	In Vitro	Some positive data exist, but the data are not sufficient for classification
Sodium 2-[methyloleoylamino]ethane-1-sulphonate	In Vitro	Not mutagenic
Sodium dodecyl sulphate	In Vitro	Not mutagenic
Sodium dodecyl sulphate	In vivo	Not mutagenic
2-aminoethanol	In Vitro	Not mutagenic
2-aminoethanol	In vivo	Not mutagenic

Carcinogenicity

Name	Route	Species	Value
2-Butoxyethanol	Inhalation	Multiple animal species	Some positive data exist, but the data are not sufficient for classification

Reproductive Toxicity

Reproductive and/or Developmental Effects

Name	Route	Value	Species	Test result	Exposure Duration
2-Butoxyethanol	Dermal	Not classified for development	Rat	NOAEL 1,760 mg/kg/day	during gestation
2-Butoxyethanol	Ingestion	Not classified for development	Rat	NOAEL 100 mg/kg/day	during organogenesis
2-Butoxyethanol	Inhalation	Not classified for development	Multiple animal species	NOAEL 0.48 mg/l	during organogenesis
Sodium 2-[methyloleoylamino]ethane-1-sulphonate	Ingestion	Not classified for female reproduction	Rat	NOAEL 1,000	premating into lactation

				mg/kg/day	
Sodium 2-[methyloleoylamino]ethane-1-sulphonate	Ingestion	Not classified for male reproduction	Rat	NOAEL 1,000 mg/kg/day	28 days
Sodium 2-[methyloleoylamino]ethane-1-sulphonate	Ingestion	Not classified for development	Rat	NOAEL 1,000 mg/kg/day	premating into lactation
2-aminoethanol	Dermal	Not classified for development	Rat	NOAEL 225 mg/kg/day	during organogenesis
2-aminoethanol	Ingestion	Not classified for development	Rat	NOAEL 450 mg/kg/day	during organogenesis

Target Organ(s)

Specific Target Organ Toxicity - single exposure

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
Petroleum gases, liquefied, sweetened	Inhalation	cardiac sensitization	Causes damage to organs	similar compounds	NOAEL Not available	
Petroleum gases, liquefied, sweetened	Inhalation	central nervous system depression	May cause drowsiness or dizziness		NOAEL Not available	
Petroleum gases, liquefied, sweetened	Inhalation	respiratory irritation	Not classified		NOAEL Not available	
2-Butoxyethanol	Dermal	endocrine system	Not classified	Rabbit	NOAEL 902 mg/kg	6 hours
2-Butoxyethanol	Dermal	liver	Not classified	Rabbit	LOAEL 72 mg/kg	not available
2-Butoxyethanol	Dermal	kidney and/or bladder	Not classified	Rabbit	LOAEL 451 mg/kg	6 hours
2-Butoxyethanol	Dermal	blood	Not classified	Multiple animal species	NOAEL Not available	
2-Butoxyethanol	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Human	NOAEL Not available	
2-Butoxyethanol	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	Human	NOAEL Not available	
2-Butoxyethanol	Inhalation	blood	Not classified	Multiple animal species	NOAEL Not available	
2-Butoxyethanol	Ingestion	central nervous system depression	May cause drowsiness or dizziness	Professional judgement	NOAEL Not available	
2-Butoxyethanol	Ingestion	blood	Not classified	Multiple animal species	NOAEL Not available	
2-Butoxyethanol	Ingestion	kidney and/or bladder	Not classified	Human	NOAEL Not available	poisoning and/or abuse
Sodium 2-[methyloleoylamino]ethane-1-sulphonate	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	similar health hazards	NOAEL Not available	
Sodium dodecyl sulphate	Inhalation	respiratory irritation	May cause respiratory irritation	similar health hazards	NOAEL Not available	
Ammonia, aqueous solution	Inhalation	respiratory irritation	May cause respiratory irritation	Human	NOAEL not available	
2-aminoethanol	Inhalation	respiratory irritation	May cause respiratory irritation	Human and animal	NOAEL Not available	
Ammonia, anhydrous	Inhalation	respiratory irritation	May cause respiratory irritation	Human	NOAEL not available	

Specific Target Organ Toxicity - repeated exposure

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

						Duration
Petroleum gases, liquefied, sweetened	Inhalation	kidney and/or bladder	Not classified	Rat	NOAEL Not available	
2-Butoxyethanol	Dermal	blood	Not classified	Multiple animal species	NOAEL Not available	not available
2-Butoxyethanol	Dermal	endocrine system	Not classified	Rabbit	NOAEL 150 mg/kg/day	90 days
2-Butoxyethanol	Inhalation	liver	Not classified	Rat	NOAEL 2.4 mg/l	14 weeks
2-Butoxyethanol	Inhalation	kidney and/or bladder	Not classified	Rat	NOAEL 0.15 mg/l	14 weeks
2-Butoxyethanol	Inhalation	blood	Not classified	Rat	LOAEL 0.15 mg/l	6 months
2-Butoxyethanol	Inhalation	endocrine system	Not classified	Dog	LOAEL 1.9 mg/l	8 days
2-Butoxyethanol	Ingestion	blood	Not classified	Rat	LOAEL 69 mg/kg/day	13 weeks
2-Butoxyethanol	Ingestion	kidney and/or bladder	Not classified	Multiple animal species	NOAEL Not available	not available
Sodium 2-[methyloleoylamino]ethane-1-sulphonate	Ingestion	hematopoietic system	Not classified	Rat	NOAEL 1,000 mg/kg/day	14 days
Sodium dodecyl sulphate	Ingestion	liver	Not classified	Rat	NOAEL 1,840 mg/kg/day	90 days
2-aminoethanol	Inhalation	hematopoietic system | liver	Not classified	Rat	NOAEL 0.1559 mg/l	28 days
2-aminoethanol	Inhalation	respiratory system	Not classified	Rat	LOAEL 0.0102 mg/l	28 days
2-aminoethanol	Inhalation	heart | endocrine system | immune system | nervous system | eyes | kidney and/or bladder	Not classified	Rat	NOAEL 0.1559 mg/l	28 days
2-aminoethanol	Ingestion	hematopoietic system | liver | kidney and/or bladder | respiratory system	Not classified	Rat	NOAEL Not available	

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

Acute aquatic hazard:
GHS Acute 3: Harmful to aquatic life.

Chronic aquatic hazard:

Not chronically toxic to aquatic life by GHS criteria.

No product test data available.

Material	CAS Nbr	Organism	Type	Exposure	Test endpoint	Test result
Petroleum gases, liquefied, sweetened	68476-86-8	N/A	Data not available or insufficient for classification	N/A	N/A	n/a
2-Butoxyethanol	111-76-2	Activated sludge	Experimental	16 hours	IC50	>1,000 mg/l
2-Butoxyethanol	111-76-2	Eastern oyster	Experimental	96 hours	LC50	89.4 mg/l
2-Butoxyethanol	111-76-2	Green algae	Experimental	72 hours	ErC50	1,840 mg/l
2-Butoxyethanol	111-76-2	Rainbow trout	Experimental	96 hours	LC50	1,474 mg/l
2-Butoxyethanol	111-76-2	Water flea	Experimental	48 hours	EC50	1,550 mg/l
2-Butoxyethanol	111-76-2	Green algae	Experimental	72 hours	ErC10	679 mg/l
2-Butoxyethanol	111-76-2	Water flea	Experimental	21 days	NOEC	100 mg/l
Organic Copolymer	Trade Secret	N/A	Data not available or insufficient for classification	N/A	N/A	N/A
Sodium 2-[methyloleoylamino]ethane-1-sulphonate	137-20-2	N/A	Data not available or insufficient for classification	N/A	N/A	N/A
Sodium dodecyl sulphate	151-21-3	Activated sludge	Experimental	3 hours	EC50	135 mg/l
Sodium dodecyl sulphate	151-21-3	Algae or other aquatic plants	Experimental	96 hours	EC50	30.2 mg/l
Sodium dodecyl sulphate	151-21-3	Atlantic Silverside	Experimental	96 hours	LC50	2.8 mg/l
Sodium dodecyl sulphate	151-21-3	Fish	Experimental	96 hours	LC50	0.59 mg/l
Sodium dodecyl sulphate	151-21-3	Green algae	Experimental	96 hours	EC50	117 mg/l
Sodium dodecyl sulphate	151-21-3	Invertebrate	Experimental	48 hours	LC50	1.9 mg/l
Sodium dodecyl sulphate	151-21-3	Water flea	Experimental	48 hours	LC50	1.4 mg/l
Sodium dodecyl sulphate	151-21-3	Fathead minnow	Experimental	42 days	NOEC	1.357 mg/l
Sodium dodecyl sulphate	151-21-3	Green algae	Experimental	96 hours	EC10	12 mg/l
Sodium dodecyl sulphate	151-21-3	Water flea	Experimental	7 days	NOEC	0.88 mg/l
Ammonia, anhydrous	7664-41-7	Rainbow trout	Estimated	96 hours	LC50	0.89 mg/l
Ammonia, anhydrous	7664-41-7	Invertebrate	Experimental	48 hours	EC50	10 mg/l
Ammonia, anhydrous	7664-41-7	Water flea	Experimental	48 hours	LC50	3.57 mg/l
Ammonia, anhydrous	7664-41-7	Rainbow trout	Estimated	73 days	NOEC	0.0135 mg/l
Ammonia, anhydrous	7664-41-7	Water flea	Experimental	21 days	NOEC	0.51 mg/l
Ammonia, aqueous solution	1336-21-6	Invertebrate	Estimated	48 hours	EC50	21 mg/l
Ammonia, aqueous solution	1336-21-6	Rainbow trout	Estimated	96 hours	LC50	1.8 mg/l
Ammonia, aqueous solution	1336-21-6	Water flea	Estimated	48 hours	LC50	7.36 mg/l
Ammonia, aqueous solution	1336-21-6	Rainbow trout	Estimated	73 days	NOEC	0.0278 mg/l
Ammonia, aqueous solution	1336-21-6	Water flea	Estimated	21 days	NOEC	1.1 mg/l
2-aminoethanol	141-43-5	Diatom	Experimental	72 hours	ErC50	198 mg/l
2-aminoethanol	141-43-5	Green algae	Experimental	72 hours	ErC50	2.5 mg/l
2-aminoethanol	141-43-5	Rainbow trout	Experimental	96 hours	LC50	105 mg/l
2-aminoethanol	141-43-5	Water flea	Experimental	48 hours	EC50	27.04 mg/l

2-aminoethanol	141-43-5	Green algae	Experimental	72 hours	NOEC	1 mg/l
2-aminoethanol	141-43-5	Medaka	Experimental	41 days	NOEC	1.24 mg/l
2-aminoethanol	141-43-5	Water flea	Experimental	21 days	NOEC	0.85 mg/l
2-aminoethanol	141-43-5	Activated sludge	Experimental	30 minutes	IC50	>1,000 mg/l
2-aminoethanol	141-43-5	Plant	Experimental	21 days	EC50	1,290 mg/kg (Dry Weight)
2-aminoethanol	141-43-5	Redworm	Experimental	35 days	LC50	3,715 mg/kg (Dry Weight)
2-aminoethanol	141-43-5	Springtail	Experimental	28 days	LC50	1,893 mg/kg (Dry Weight)

12.2. Persistence and degradability

Material	CAS Nbr	Test type	Duration	Study Type	Test result	Protocol
Petroleum gases, liquefied, sweetened	68476-86-8	Data not available-insufficient	N/A	N/A	N/A	N/A
2-Butoxyethanol	111-76-2	Experimental Biodegradation	28 days	CO2 evolution	90.4 %CO2 evolution/THCO2 evolution	OECD 301B - Modified sturm or CO2
2-Butoxyethanol	111-76-2	Experimental Biodegradation	28 days	Dissolv. Organic Carbon Deplet	100 %removal of DOC	OECD 302B Zahn-Wellens/EVPA
Organic Copolymer	Trade Secret	Data not available-insufficient	N/A	N/A	N/A	N/A
Sodium 2-[methyloleoylamino]ethane-1-sulphonate	137-20-2	Experimental Biodegradation	14 days	BOD	75 %BOD/ThOD	OECD 301C - MITI test (I)
Sodium dodecyl sulphate	151-21-3	Experimental Biodegradation	28 days	CO2 evolution	95 %CO2 evolution/THCO2 evolution	OECD 301B - Modified sturm or CO2
Ammonia, anhydrous	7664-41-7	Experimental Photolysis		Photolytic half-life (in air)	201 days (t 1/2)	
Ammonia, anhydrous	7664-41-7	Experimental Soil Metabolism Aerobic		Half-life (t 1/2)	6 hours (t 1/2)	
Ammonia, aqueous solution	1336-21-6	Analogous Compound Soil Metabolism Aerobic		Half-life (t 1/2)	6 hours (t 1/2)	
2-aminoethanol	141-43-5	Experimental Biodegradation	28 days	CO2 evolution	80 %CO2 evolution/THCO2 evolution	
2-aminoethanol	141-43-5	Experimental Biodegradation	21 days	Dissolv. Organic Carbon Deplet	>90 %removal of DOC	OECD 301A - DOC Die Away Test
2-aminoethanol	141-43-5	Experimental Photolysis		Photolytic half-life (in air)	5.5 hours (t 1/2)	

12.3 : Bioaccumulative potential

Material	CAS Nbr	Test type	Duration	Study Type	Test result	Protocol
Petroleum gases, liquefied, sweetened	68476-86-8	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Petroleum gases, liquefied, sweetened	68476-86-8	Estimated Bioconcentration		Log Kow	2.8	
2-Butoxyethanol	111-76-2	Experimental Bioconcentration		Log Kow	0.81	
Organic Copolymer	Trade Secret	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Sodium 2-[methyloleoylamin	137-20-2	Modeled Bioconcentration		Log Kow	1.7	ACD/Labs ChemSketch™

o]ethane-1-sulphonate						
Sodium dodecyl sulphate	151-21-3	Experimental Bioconcentration		Log Kow	≤-2.03	
Ammonia, anhydrous	7664-41-7	Experimental Bioconcentration		Log Kow	-1.14	OECD 107 log Kow shke flsk mtd
Ammonia, aqueous solution	1336-21-6	Analogous Compound Bioconcentration		Log Kow	-1.14	OECD 107 log Kow shke flsk mtd
2-aminoethanol	141-43-5	Experimental Bioconcentration		Log Kow	-2.3	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.

The surfactant(s) contained in this preparation comply with the biodegradability criteria as laid down in Regulation (EC) No.648/2004 on detergents.

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. Facility must be capable of handling aerosol cans. 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.

SECTION 14: Transport Information

International Regulations

UN No.: UN1950
UN Proper shipping name: AEROSOLS

Transportation Class (IMO): None assigned
Transportation Class (IATA): None assigned
Other Dangerous Goods Descriptions (IMO): None assigned
Other Dangerous Goods Descriptions (IATA): None assigned
Packing Group: None assigned
Marine pollutant: None assigned

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

Global inventory status
Contact 3M for more information. The components of this material are in compliance with the provisions of the Korea Chemical Control Act. Certain restrictions may apply. Contact the selling division for additional information. The components of this material are in compliance with the provisions of Australia National Industrial Chemical Notification and Assessment Scheme (NICNAS). Certain restrictions may apply. Contact the selling division for additional information. The

components of this material are in compliance with the provisions of Japan Chemical Substance Control Law. Certain restrictions may apply. Contact the selling division for additional information. The components of this product are in compliance with the new substance notification requirements of CEPA. This product complies with Measures on Environmental Management of New Chemical Substances. All ingredients are listed on or exempt from on China IECSC inventory. The components of this product are in compliance with the chemical notification requirements of TSCA. All required components of this product are listed on the active portion of the TSCA Inventory.

This product may contain component(s) that are regulated by the following:
Workplace Safety and Health Act & Workplace Safety and Health (General Provisions) Regulations: this product is subject to SDS, labelling, PEL and other requirements in the Act/Regulations.
Fire Safety (Petroleum and Flammable Materials) Regulations: This product is subject to the requirements in the Regulations
Environmental Protection and Management (Hazardous Substances) Regulations: This product is subject to the requirements in the Regulations

SECTION 16: Other information

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 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.

3M Singapore SDSs are available at www.3m.com.sg