Safety Data Sheet

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This Safety Data Sheet has been prepared in accordance with the Malaysia Occupational Safety and Health (Chemical Classification, Labelling and Safety Data Sheets) Regulations 2013.

SECTION 1: Identification

1.1. Product identifier
Scotchgard™ Spot Remover

Product Identification Numbers
70-0711-6295-5 XN-0021-9828-3 XN-0021-9829-1 XN-0021-9830-9 XN-0021-9831-7

XN-1014-3527-1

1.2. Recommended use and restrictions on use

Recommended use
Carpet Care

1.3. Supplier's details
ADDRESS: 3M Malaysia Sdn. Bhd., Level 8, Block F, Oasis Square, No.2, Jalan PJU 1A/7A, Ara Damansara 47301 Petaling, Jaya, Selangor
Telephone: 03-7884 2888
E Mail: 3mmyehsr@mmm.com
Website: www.3M.com.my

1.4. Emergency telephone number
+60 03-7884 2888

SECTION 2: Hazard identification

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

2.2. Label elements
Signal word
Danger

Symbols
Flame |Gas cylinder |Health Hazard |

Pictograms

Hazard Statements:

H222	Extremely flammable aerosol.
H280	Contains gas under pressure; may explode if heated.
H371	May cause damage to organs: cardiovascular system.

Precautionary statements

Prevention:

P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. 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/vapors/spray.

Storage:

P403	Store in a well-ventilated place.
P410 + P412	Protect from sunlight. Do not expose to temperatures exceeding 122°F (50°C).

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	C.A.S. No.	% 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 OLEYLMETHYLTAURIDE	137-20-2	0.5 - 1.5
SODIUM LAURYL SULFATE	151-21-3	< 1
AMMONIA	7664-41-7	< 0.5
Ammonium Hydroxide	1336-21-6	< 0.5
Ethanolamine	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:
If exposed, flush eyes with large amounts of water. Remove contact lenses if easy to do. Continue rinsing. If signs/symptoms develop, 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 Vapors 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. Use personal protective equipment based on the results of an exposure assessment. Refer to Section 8 for PPE recommendations. If anticipated exposure resulting from an accidental release exceeds the protective capabilities of the PPE listed in Section 8, or are unknown, select PPE that offers an appropriate level of protection. Consider the physical and chemical hazards of the material when doing so. Examples of PPE ensembles for emergency response could include wearing bunker gear for a release of flammable material; wearing chemical protective clothing if the spilled material is a corrosive, a sensitizer, a significant dermal irritant, or can be absorbed through the skin; or donning a positive pressure supplied-air respirator for chemicals with inhalation hazards. For information regarding physical and health hazards, refer to sections 2 and 11 of the SDS.

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

For industrial/occupational use only. Not for consumer sale or use. Do not use in a confined area with minimal air exchange. 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/vapors/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 oxidizing 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 50°C/122°F. Store away from heat. Store away from acids. Store away from oxidizing 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	C.A.S. No.	Agency	Limit type	Additional Comments
2-BUTOXYETHANOL	111-76-2	ACGIH	TWA:20 ppm	A3: Confirmed animal carcin.
2-BUTOXYETHANOL	111-76-2	Malaysia OELs	TWA(8 hours):96.7 mg/m3(20 ppm)	SKIN
Ammonia	1336-21-6	ACGIH	TWA:25 ppm;STEL:35 ppm	
Ammonia	1336-21-6	Malaysia OELs	TWA(8 hours):17 mg/m3(25 ppm)	
Ethanolamine	141-43-5	ACGIH	TWA:3 ppm;STEL:6 ppm	
Ethanolamine	141-43-5	Malaysia OELs	TWA(8 hours):7.5 mg/m3(3 ppm)	
Ammonia	7664-41-7	ACGIH	TWA:25 ppm;STEL:35 ppm	
AMMONIA	7664-41-7	Malaysia OELs	TWA(8 hours):17 mg/m3(25 ppm)	

ACGIH : American Conference of Governmental Industrial Hygienists
CMRG : Chemical Manufacturer's Recommended Guidelines
Malaysia OELs : Malaysia. Occupational Safety and Health (Use and Standards of Exposure of Chemicals Hazardous to Health) Regulations
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/vapors/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:
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.

For prolonged or repeated contact, gloves made from the following material(s) are recommended (breakthrough times are >4 hours): Butyl Rubber, Polymer laminate

Any glove recommended for prolonged/repeated contact is also suitable for short-term/splash contact.

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
Half facepiece or full facepiece supplied-air respirator

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	Mild Not Determined
Odor 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 Data Available*
Evaporation rate	*No Data Available*
Flammability	Flammable Aerosol: Category 1.
Flammable Limits(LEL)	*No Data Available*
Flammable Limits(UEL)	*No Data Available*
Vapor Pressure	*No Data Available*
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*

Kinematic Viscosity	*No Data Available*
Volatile Organic Compounds	< 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*

Particle Characteristics	*Not Applicable*

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 polymerization will not occur.

10.4. Conditions to avoid
Heat
Sparks and/or flames

10.5. Incompatible materials
Strong oxidizing 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 labeling, 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 diarrhea.

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 OLEYLMETHYLTAURIDE	Dermal	Rat	LD50 > 2,000 mg/kg
SODIUM OLEYLMETHYLTAURIDE	Ingestion	Rat	LD50 1,700 mg/kg
SODIUM LAURYL SULFATE	Ingestion	Rat	LD50 911 mg/kg
SODIUM LAURYL SULFATE	Dermal	similar compounds	LD50 > 2,000 mg/kg
Ammonium Hydroxide	Ingestion	Rat	LD50 350 mg/kg
Ethanolamine	Inhalation-Vapor	official classification	LC50 estimated to be 10 - 20 mg/l
Ethanolamine	Dermal	Rabbit	LD50 2,504 mg/kg
Ethanolamine	Ingestion	Rat	LD50 1,089 mg/kg
AMMONIA	Inhalation-Gas (4 hours)	Mouse	LC50 2,115 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 LAURYL SULFATE	Rabbit	Irritant
Ammonium Hydroxide	Rabbit	Corrosive
Ethanolamine	Rabbit	Corrosive
AMMONIA	Human and	Corrosive

	animal	

Serious Eye Damage/Irritation

Name	Species	Value
PETROLEUM GASES, LIQUEFIED, SWEETENED	Professional judgement	No significant irritation
2-BUTOXYETHANOL	Rabbit	Severe irritant
SODIUM OLEYLMETHYLTAURIDE	Rabbit	Moderate irritant
SODIUM LAURYL SULFATE	Rabbit	Corrosive
Ammonium Hydroxide	Rabbit	Corrosive
Ethanolamine	Rabbit	Corrosive
AMMONIA	Human and animal	Corrosive

Sensitization:

Skin Sensitization

Name	Species	Value
2-BUTOXYETHANOL	Guinea pig	Not classified
SODIUM OLEYLMETHYLTAURIDE	Guinea pig	Not classified
SODIUM LAURYL SULFATE	similar compounds	Not classified
Ethanolamine	Guinea pig	Not classified

Respiratory Sensitization

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 OLEYLMETHYLTAURIDE	In Vitro	Not mutagenic
SODIUM LAURYL SULFATE	In Vitro	Not mutagenic
SODIUM LAURYL SULFATE	In vivo	Not mutagenic
Ethanolamine	In Vitro	Not mutagenic
Ethanolamine	In vivo	Not mutagenic
AMMONIA	In Vitro	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	during gestation

				mg/kg/day	
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 OLEYLMETHYLTAURIDE	Ingestion	Not classified for female reproduction	Rat	NOAEL 1,000 mg/kg/day	premating into lactation
SODIUM OLEYLMETHYLTAURIDE	Ingestion	Not classified for male reproduction	Rat	NOAEL 1,000 mg/kg/day	28 days
SODIUM OLEYLMETHYLTAURIDE	Ingestion	Not classified for development	Rat	NOAEL 1,000 mg/kg/day	premating into lactation
Ethanolamine	Dermal	Not classified for development	Rat	NOAEL 225 mg/kg/day	during organogenesis
Ethanolamine	Ingestion	Not classified for development	Rat	NOAEL 450 mg/kg/day	during organogenesis
AMMONIA	Inhalation	Not classified for development	Pig	NOAEL 35 ppm	premating & during gestation

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	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	Human	NOAEL Not available	
2-BUTOXYETHANOL	Inhalation	central nervous system depression	Not classified	Professional judgement	NOAEL Not available	
2-BUTOXYETHANOL	Inhalation	blood	Not classified	Multiple animal species	NOAEL Not available	
2-BUTOXYETHANOL	Ingestion	central nervous system depression	Not classified	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 OLEYLMETHYLTAURI	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for	similar health	NOAEL Not available	

DE			classification	hazards		
SODIUM LAURYL SULFATE	Inhalation	respiratory irritation	May cause respiratory irritation	similar health hazards	NOAEL Not available	
Ammonium Hydroxide	Inhalation	respiratory irritation	May cause respiratory irritation	Human	NOAEL not available	
Ethanolamine	Inhalation	respiratory irritation	May cause respiratory irritation	Human and animal	NOAEL Not available	
AMMONIA	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 OLEYLMETHYLTAURIDE	Ingestion	hematopoietic system	Not classified	Rat	NOAEL 1,000 mg/kg/day	14 days
SODIUM LAURYL SULFATE	Ingestion	liver	Not classified	Rat	NOAEL 1,840 mg/kg/day	90 days
Ethanolamine	Inhalation	hematopoietic system	Not classified	Rat	NOAEL 0.1559 mg/l	28 days
Ethanolamine	Inhalation	liver	Not classified	Rat	NOAEL 0.1559 mg/l	28 days
Ethanolamine	Inhalation	respiratory system	Not classified	Rat	LOAEL 0.0102 mg/l	28 days
Ethanolamine	Inhalation	heart	Not classified	Rat	NOAEL 0.1559 mg/l	28 days
Ethanolamine	Inhalation	endocrine system	Not classified	Rat	NOAEL 0.1559 mg/l	28 days
Ethanolamine	Inhalation	immune system	Not classified	Rat	NOAEL 0.1559 mg/l	28 days
Ethanolamine	Inhalation	nervous system	Not classified	Rat	NOAEL 0.1559 mg/l	28 days
Ethanolamine	Inhalation	eyes	Not classified	Rat	NOAEL 0.1559 mg/l	28 days
Ethanolamine	Inhalation	kidney and/or bladder	Not classified	Rat	NOAEL 0.1559 mg/l	28 days
Ethanolamine	Ingestion	hematopoietic system	Not classified	Rat	NOAEL Not available	
Ethanolamine	Ingestion	liver	Not classified	Rat	NOAEL Not available	
Ethanolamine	Ingestion	kidney and/or bladder	Not classified	Rat	NOAEL Not available	
Ethanolamine	Ingestion	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 labeling, 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:
Not acutely toxic to aquatic life by GHS criteria.

Chronic aquatic hazard:
Not chronically toxic to aquatic life by GHS criteria.

No product test data available

Material	Cas #	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 OLEYLMETHYL TAURIDE	137-20-2	N/A	Data not available or insufficient for classification	N/A	N/A	N/A
SODIUM LAURYL SULFATE	151-21-3	Algae or other aquatic plants	Experimental	96 hours	ErC50	30.2 mg/l
SODIUM	151-21-3	Atlantic Silverside	Experimental	96 hours	LC50	2.8 mg/l

LAURYL SULFATE						
SODIUM LAURYL SULFATE	151-21-3	Bluegill	Experimental	96 hours	LC50	4.5 mg/l
SODIUM LAURYL SULFATE	151-21-3	Duckweed	Experimental	7 days	EC50	18 mg/l
SODIUM LAURYL SULFATE	151-21-3	Green algae	Experimental	96 hours	ErC50	117 mg/l
SODIUM LAURYL SULFATE	151-21-3	Invertebrate	Experimental	48 hours	EC50	1.2 mg/l
SODIUM LAURYL SULFATE	151-21-3	Fathead Minnow	Experimental	42 days	NOEC	1.357 mg/l
SODIUM LAURYL SULFATE	151-21-3	Green algae	Experimental	96 hours	ErC10	12 mg/l
SODIUM LAURYL SULFATE	151-21-3	Water flea	Experimental	7 days	NOEC	0.88 mg/l
SODIUM LAURYL SULFATE	151-21-3	Activated sludge	Experimental	3 hours	EC50	135 mg/l
SODIUM LAURYL SULFATE	151-21-3	Wheat	Experimental	6 days	EC50	269.6 mg/l
AMMONIA	7664-41-7	Rainbow Trout	Estimated	96 hours	LC50	0.89 mg/l
AMMONIA	7664-41-7	Invertebrate	Experimental	48 hours	EC50	10 mg/l
AMMONIA	7664-41-7	Water flea	Experimental	48 hours	LC50	3.57 mg/l
AMMONIA	7664-41-7	Rainbow Trout	Estimated	73 days	NOEC	0.0135 mg/l
AMMONIA	7664-41-7	Water flea	Experimental	21 days	NOEC	0.51 mg/l
Ammonium Hydroxide	1336-21-6	Invertebrate	Estimated	48 hours	EC50	21 mg/l
Ammonium Hydroxide	1336-21-6	Rainbow Trout	Estimated	96 hours	LC50	1.8 mg/l
Ammonium Hydroxide	1336-21-6	Water flea	Estimated	48 hours	LC50	7.36 mg/l
Ammonium Hydroxide	1336-21-6	Rainbow Trout	Estimated	73 days	NOEC	0.0278 mg/l
Ammonium Hydroxide	1336-21-6	Water flea	Estimated	21 days	NOEC	1.1 mg/l
Ethanolamine	141-43-5	Diatom	Experimental	72 hours	ErC50	198 mg/l
Ethanolamine	141-43-5	Green algae	Experimental	72 hours	ErC50	2.5 mg/l
Ethanolamine	141-43-5	Rainbow Trout	Experimental	96 hours	LC50	105 mg/l
Ethanolamine	141-43-5	Water flea	Experimental	48 hours	EC50	27.04 mg/l
Ethanolamine	141-43-5	Green algae	Experimental	72 hours	NOEC	1 mg/l
Ethanolamine	141-43-5	Medaka	Experimental	41 days	NOEC	1.24 mg/l
Ethanolamine	141-43-5	Water flea	Experimental	21 days	NOEC	0.85 mg/l
Ethanolamine	141-43-5	Activated sludge	Experimental	30 minutes	IC50	>1,000 mg/l
Ethanolamine	141-43-5	Plant	Experimental	21 days	EC50	1,290 mg/kg (Dry Weight)
Ethanolamine	141-43-5	Redworm	Experimental	35 days	LC50	3,715 mg/kg (Dry Weight)
Ethanolamine	141-43-5	Springtail	Experimental	28 days	LC50	1,893 mg/kg (Dry Weight)

12.2. Persistence and degradability

Material	CAS No.	Test Type	Duration	Study Type	Test Result	Protocol
PETROLEUM GASES, LIQUEFIED,	68476-86-8	Data not availbl-insufficient	N/A	N/A	N/A	N/A

SWEETENED						
2-BUTOXYETHANOL	111-76-2	Experimental Biodegradation	28 days	Carbon dioxide evolution	90.4 %CO2 evolution/THCO2 evolution	OECD 301B - Mod. 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 availbl-insufficient	N/A	N/A	N/A	N/A
SODIUM OLEYLMETHYL TAURIDE	137-20-2	Experimental Biodegradation	14 days	Biological Oxygen Demand	75 %BOD/ThOD	OECD 301C - MITI (I)
SODIUM LAURYL SULFATE	151-21-3	Experimental Aquatic Inherent Biodegrad.	28 days	Dissolv. Organic Carbon Deplet	100 %removal of DOC	
SODIUM LAURYL SULFATE	151-21-3	Experimental Biodegradation	28 days	Carbon dioxide evolution	95 %CO2 evolution/THCO2 evolution	OECD 301B - Mod. Sturm or CO2
AMMONIA	7664-41-7	Experimental Photolysis		Photolytic half-life (in air)	201 days (t 1/2)	
AMMONIA	7664-41-7	Experimental Soil Metabolism Aerobic		Half-life (t 1/2)	6 hours (t 1/2)	
Ammonium Hydroxide	1336-21-6	Analogous Compound Soil Metabolism Aerobic		Half-life (t 1/2)	6 hours (t 1/2)	
Ethanolamine	141-43-5	Experimental Biodegradation	28 days	Carbon dioxide evolution	80 %CO2 evolution/THCO2 evolution	
Ethanolamine	141-43-5	Experimental Biodegradation	21 days	Dissolv. Organic Carbon Deplet	>90 %removal of DOC	OECD 301A - DOC Die Away Test
Ethanolamine	141-43-5	Experimental Photolysis		Photolytic half-life (in air)	5.5 hours (t 1/2)	

12.3. Bioaccumulative potential

Material	CAS No.	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 of Octanol/H2O part. coeff	2.8	
2-BUTOXYETHANOL	111-76-2	Experimental Bioconcentration		Log of Octanol/H2O part. coeff	0.81	
Organic Copolymer	Trade Secret	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
SODIUM OLEYLMETHYL TAURIDE	137-20-2	Modeled Bioconcentration		Log of Octanol/H2O part. coeff	1.7	ACD/Labs ChemSketch™
SODIUM LAURYL SULFATE	151-21-3	Experimental Bioconcentration		Log of Octanol/H2O part. coeff	0.83	OECD 123 log Kow slow stir
AMMONIA	7664-41-7	Experimental Bioconcentration		Log of Octanol/H2O part. coeff	-1.14	OECD 107 log Kow shke flsk mtd
Ammonium Hydroxide	1336-21-6	Analogous Compound Bioconcentration		Log of Octanol/H2O part. coeff	-1.14	OECD 107 log Kow shke flsk mtd
Ethanolamine	141-43-5	Experimental Bioconcentration		Log of Octanol/H2O part. coeff	-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

According to the Environmental Quality (Scheduled Wastes) Regulations 2005, scheduled waste has to be sent to a prescribed premise for recycling, treatment or disposal. Please approach Kualiti Alam for proper schedule waste classification and disposal.

SECTION 14: Transport Information

Marine Transport (IMDG)

UN Number:UN1950
Proper Shipping Name:AEROSOLS, FLAMMABLE
Technical Name: None assigned.
Hazard Class/Division:2.1
Subsidiary Risk: None assigned.
Packing Group: None assigned.
Limited Quantity: Yes
Marine Pollutant: None assigned.
Marine Pollutant Technical Name: None assigned.
Other Dangerous Goods Descriptions:
None assigned.

Air Transport (IATA)

UN Number:UN1950
Proper Shipping Name:AEROSOLS, FLAMMABLE
Technical Name: None assigned.
Hazard Class/Division:2.1
Subsidiary Risk: None assigned.
Packing Group: None assigned.
Limited Quantity: None assigned.
Marine Pollutant: None assigned.
Marine Pollutant Technical Name: None assigned.
Other Dangerous Goods Descriptions:
None assigned.

Transportation classifications are provided as a customer service. As for shipping, YOU remain responsible for complying with all applicable laws and regulations, including proper transportation classification and packaging. 3M's transportation classifications are based on product formulation, packaging, 3M policies and 3M's understanding of applicable current regulations. 3M does not guarantee the accuracy of this classification information. This information applies only to transportation classification and not the packaging, labeling or marking requirements. The above information is only for reference. If you are shipping by air or ocean, YOU are advised to check & meet applicable regulatory requirements.

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.

SECTION 16: Other information

DISCLAIMER: The information in this Safety Data Sheet (SDS) 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 SDS or use of the product in combination with other materials. For these reasons, it is important that customers carry out their own evaluation to satisfy themselves as to the suitability of the product for their own intended applications. In addition, this SDS is being provided to convey health and safety information. If you are the importer of record of this product into Malaysia, you are responsible for all applicable regulatory requirements, including, but not limited to, product registrations/notifications, substance volume tracking, and potential substance registration/notification.

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