Safety Data Sheet

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This Safety Data Sheet has been prepared in accordance with the REACH Regulation (EC) 1907/2006 and its modifications.

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier
3M Graffiti Remover 3000 (New formulation)

Product Identification Numbers

UU-0014-7298-2	UU-0014-7299-0	UU-0014-7472-3
7100030783	7100030786	7100030784

1.2. Relevant identified uses of the substance or mixture and uses advised against

Identified uses
Graffiti Removal

1.3. Details of the supplier of the safety data sheet

Address: 3M Ireland Limited, The Iveagh Building, The Park, Carrickmines, Dublin 18.
Telephone: +353 1 280 3555
E Mail: tox.uk@mmm.com
Website: www.3M.com

1.4. Emergency telephone number
Emergency medical information: 8am-10pm (seven days) contact National Poisons Information Centre, Beaumont Hospital, Dublin 9 DOV2NO, Ireland. Telephone Number: +353 (0)1 809 2166

SECTION 2: Hazard identification

2.1. Classification of the substance or mixture
CLP REGULATION (EC) No 1272/2008

The health and environmental classifications of this material have been derived using the calculation method, except in cases where test data are available or the physical form impacts classification. Classification(s) based on test data or physical form are noted below, if applicable.

CLASSIFICATION:
Skin Corrosion/Irritation, Category 2 - Skin Irrit. 2; H315
Serious Eye Damage/Eye Irritation, Category 2 - Eye Irrit. 2; H319

For full text of H phrases, see Section 16.

2.2. Label elements
CLP REGULATION (EC) No 1272/2008

SIGNAL WORD
WARNING.

Symbols
GHS07 (Exclamation mark) |

Pictograms

HAZARD STATEMENTS:

H315	Causes skin irritation.
H319	Causes serious eye irritation.

PRECAUTIONARY STATEMENTS

Response:

P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

4% of the mixture consists of components of unknown acute oral toxicity.

Contains 10% of components with unknown hazards to the aquatic environment.

Notes on labelling
Updated per Regulation (EC) No. 648/2004 on detergents.
Ingredients required per 648/2004 (not required on industrial label): <5%: Anionic surfactant.

2.3. Other hazards

None known.
This material does not contain any substances that are assessed to be a PBT or vPvB

SECTION 3: Composition/information on ingredients

3.1. Substances
Not applicable

3.2. Mixtures

Ingredient	Identifier(s)	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Dimethyl Glutarate	(CAS-No.) 1119-40-0 (EC-No.) 214-277-2	30 - 40	Substance not classified as hazardous
Fatty acids, C16-18 and C18-unsaturated,	(CAS-No.) 67762-38-3	10 - 20	Aquatic Chronic 3, H412

methyl esters	(EC-No.) 267-015-4		
Ethyl 3-ethoxypropionate	(CAS-No.) 763-69-9 (EC-No.) 212-112-9	10 - 20	Flam. Liq. 3, H226
Dimethyl Adipate	(CAS-No.) 627-93-0 (EC-No.) 211-020-6	5 - 10	Eye Irrit. 2, H319
Dimethyl Succinate	(CAS-No.) 106-65-0 (EC-No.) 203-419-9	5 - 10	Eye Irrit. 2, H319
Dipropylene glycol dimethyl ether	(CAS-No.) 111109-77-4 (EC-No.) ELINCS 404-640-5	5 - 10	Substance not classified as hazardous
3-butoxypropan-2-ol	(CAS-No.) 5131-66-8 (EC-No.) 225-878-4	5 - 10	Skin Irrit. 2, H315 Eye Irrit. 2, H319
Isopropylamine Dodecylbenzenesulphonate	(CAS-No.) 26264-05-1 (EC-No.) 247-556-2	1 - 5	Aquatic Chronic 3, H412
2,2'-iminodiethanol	(CAS-No.) 111-42-2 (EC-No.) 203-868-0	0 - 1	Acute Tox. 4, H302 Skin Irrit. 2, H315 Eye Dam. 1, H318 STOT RE 2, H373 Repr. 2, H361df Aquatic Chronic 3, H412
Triethanolamine	(CAS-No.) 102-71-6 (EC-No.) 203-049-8	0 - 1	Substance with a national occupational exposure limit

Please see section 16 for the full text of any H statements referred to in this section

For information on ingredient occupational exposure limits or PBT or vPvB status, see sections 8 and 12 of this SDS

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 wash with soap and water. Remove contaminated clothing and wash before reuse. If signs/symptoms develop, get medical attention.

Eye contact
Immediately flush with large amounts of water. Remove contact lenses if easy to do. Continue rinsing. 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
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. Extinguishing media
In case of fire: Use a fire fighting agent suitable for ordinary combustible material such as water or foam to extinguish.

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

5.3. Advice 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. Ventilate the area with fresh air. For large spill, or spills in confined spaces, provide mechanical ventilation to disperse or exhaust vapours, 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 closed container approved for transportation by appropriate authorities. Clean up residue with an appropriate solvent selected by a qualified and authorised person. Ventilate the area with fresh air. Read and follow safety precautions on the solvent label and Safety Data Sheet. Seal the container. Dispose of collected material as soon as possible.

6.4. Reference to other sections
Refer to Section 8 and Section 13 for more information

SECTION 7: Handling and storage

7.1. Precautions for safe handling
For industrial/occupational use only. Not for consumer sale or use. 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. Avoid contact with oxidising agents (eg. chlorine, chromic acid etc.) Use personal protective equipment (eg. gloves, respirators…) as required.

7.2. Conditions for safe storage including any incompatibilities
Store away from heat. Store away from oxidising agents.

7.3. Specific end use(s)
See information in Section 7.1 and 7.2 for handling and storage recommendations. See Section 8 for exposure controls and personal protection recommendations.

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
Triethanolamine	102-71-6	Ireland OELs	TWA(8 hours):5 mg/m3	
2,2'-iminodiethanol	111-42-2	Ireland OELs	TWA(inhalable fraction and vapour)(8 hours):0.2 ppm(1 mg/m3)	

Ireland OELs : Ireland. OELs
TWA: Time-Weighted-Average
STEL: Short Term Exposure Limit
CEIL: Ceiling

Biological limit values
No biological limit values exist for any of the components listed in Section 3 of this safety data sheet.

Recommended monitoring procedures: Information on recommended monitoring procedures can be obtained from Indust. Inspect./Ministry (IE)

8.2. Exposure controls

8.2.1. Engineering controls
Use general dilution ventilation and/or local exhaust ventilation to control airborne exposures to below relevant Exposure Limits and/or control dust/fume/gas/mist/vapours/spray. If ventilation is not adequate, use respiratory protection equipment.

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.

Applicable Norms/Standards
Use eye protection conforming to EN 166

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.
Gloves made from the following material(s) are recommended:

Material	Thickness (mm)	Breakthrough Time
Nitrile rubber.	No data available	No data available

Applicable Norms/Standards
Use gloves tested to EN 374

Respiratory protection

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

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

Applicable Norms/Standards
Use a respirator conforming to EN 140 or EN 136: filter type A

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	Liquid.
Colour	Colourless, Light Yellow
Odor	Mild Odor
Odour threshold	*No data available.*
Melting point/freezing point	*No data available.*
Boiling point/boiling range	166 ºC
Flammability (solid, gas)	Not applicable.
Flammable Limits(LEL)	*No data available.*
Flammable Limits(UEL)	*No data available.*
Flash point	95 - 105 ºC
Autoignition temperature	*No data available.*
Decomposition temperature	*Not applicable.*
pH	
Kinematic Viscosity	*No data available.*
Water solubility	*No data available.*
Solubility- non-water	*No data available.*
Partition coefficient: n-octanol/water	*No data available.*
Vapour pressure	*No data available.*
Relative density	1.025 - 1.045
Relative Vapour Density	*No data available.*

9.2. Other information

9.2.2 Other safety characteristics

EU Volatile Organic Compounds	*No data available.*
Evaporation rate	*No data available.*
Percent volatile	*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.

High shear and high temperature conditions
Sparks and/or flames.

10.5 Incompatible materials
Strong oxidising agents.
Drugs, medicines and/or food supplies.
Alkali and alkaline earth metals.

10.6 Hazardous decomposition products

Substance	Condition
Carbon monoxide	Not specified.
Carbon dioxide.	Not specified.

SECTION 11: Toxicological information

The information below may not agree with the EU material classification in Section 2 and/or the ingredient classifications in Section 3 if specific ingredient classifications are mandated by a competent authority. In addition, statements and data presented in Section 11 are based on UN GHS calculation rules and classifications derived from internal hazard assessments.

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Signs and Symptoms of Exposure

Based on test data and/or information on the components, this material may produce the following health effects:

Inhalation
Respiratory tract irritation: Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain.

Skin contact
Skin Irritation: Signs/symptoms may include localised redness, swelling, itching, dryness, cracking, blistering, and pain. May cause additional health effects (see below).

Eye contact
Severe eye irritation: Signs/symptoms may include significant redness, swelling, pain, tearing, cloudy appearance of the cornea, and impaired vision.

Ingestion
Gastrointestinal irritation: Signs/symptoms may include abdominal pain, stomach upset, nausea, vomiting and diarrhoea. May cause additional health effects (see below).

Additional Health Effects:

Single exposure may cause target organ effects:
Kidney/Bladder effects: Signs/symptoms may include changes in urine production, abdominal or lower back pain, increased protein in urine, increased blood urea nitrogen (BUN), blood in urine, and painful urination.

Prolonged or repeated exposure may cause target organ effects:
Hematopoietic effects: Signs/symptoms may include generalised weakness, fatigue and alterations in numbers of circulating blood cells.

Carcinogenicity:
Contains a chemical or chemicals which can cause cancer.

Toxicological Data
If a component is disclosed in section 3 but does not appear in a table below, either no data are available for that endpoint or the data are not sufficient for classification.

Acute Toxicity

Name	Route	Species	Value
Overall product	Dermal		No data available; calculated ATE >5,000 mg/kg
Overall product	Inhalation-Vapour(4 hr)		No data available; calculated ATE >50 mg/l
Overall product	Ingestion		No data available; calculated ATE >5,000 mg/kg
Dimethyl Glutarate	Dermal	similar compounds	LD50 > 2,000 mg/kg
Dimethyl Glutarate	Inhalation-Dust/Mist (4 hours)	similar compounds	LC50 > 11 mg/l
Dimethyl Glutarate	Ingestion	similar compounds	LD50 > 5,000 mg/kg
Ethyl 3-ethoxypropionate	Dermal	Rabbit	LD50 4,080 mg/kg
Ethyl 3-ethoxypropionate	Inhalation-Vapour (4 hours)	Rat	LC50 > 14.4 mg/l
Ethyl 3-ethoxypropionate	Ingestion	Rat	LD50 3,200 mg/kg
3-butoxypropan-2-ol	Dermal	Rat	LD50 > 2,000 mg/kg
3-butoxypropan-2-ol	Inhalation-Vapour	Rat	LC50 > 8.5 mg/l
3-butoxypropan-2-ol	Ingestion	Rat	LD50 2,124 mg/kg
Dimethyl Succinate	Dermal	Rat	LD50 > 2,000 mg/kg
Dimethyl Succinate	Ingestion	Rat	LD50 6,892 mg/kg
Dipropylene glycol dimethyl ether	Dermal	Rat	LD50 > 2,000 mg/kg
Dipropylene glycol dimethyl ether	Inhalation-Vapour (4 hours)	Rat	LC50 > 5.2 mg/l
Dipropylene glycol dimethyl ether	Ingestion	Rat	LD50 3,075 mg/kg
Dimethyl Succinate	Inhalation-Dust/Mist (4 hours)	similar compounds	LC50 > 11 mg/l
Dimethyl Adipate	Dermal	Rabbit	LD50 > 5,000 mg/kg
Dimethyl Adipate	Ingestion	Rat	LD50 > 5,000 mg/kg
Dimethyl Adipate	Inhalation-Dust/Mist (4 hours)	similar compounds	LC50 > 11 mg/l
2,2'-iminodiethanol	Dermal	Rabbit	LD50 8,180 mg/kg
2,2'-iminodiethanol	Ingestion	Rat	LD50 1,410 mg/kg
Triethanolamine	Dermal	Rabbit	LD50 > 2,000 mg/kg
Triethanolamine	Ingestion	Rat	LD50 9,000 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
Dimethyl Glutarate	similar compounds	No significant irritation
Ethyl 3-ethoxypropionate	Rabbit	No significant irritation
3-butoxypropan-2-ol	Rabbit	Mild irritant
Dimethyl Succinate	Rabbit	No significant irritation
Dipropylene glycol dimethyl ether	Rabbit	No significant irritation
Dimethyl Adipate	Rabbit	No significant irritation
2,2'-iminodiethanol	Rabbit	Irritant
Triethanolamine	Rabbit	Minimal irritation

Serious Eye Damage/Irritation

Name	Species	Value
Dimethyl Glutarate	similar compounds	Mild irritant
Ethyl 3-ethoxypropionate	Rabbit	Mild irritant
3-butoxypropan-2-ol	Rabbit	Severe irritant
Dimethyl Succinate	Rabbit	Moderate irritant
Dipropylene glycol dimethyl ether	Rabbit	Mild irritant
Dimethyl Adipate	Rabbit	Moderate irritant
2,2'-iminodiethanol	Rabbit	Corrosive
Triethanolamine	Rabbit	Mild irritant

Skin Sensitisation

Name	Species	Value
Dimethyl Glutarate	similar compounds	Not classified
Ethyl 3-ethoxypropionate	Guinea pig	Not classified
Dimethyl Succinate	Mouse	Not classified
Dipropylene glycol dimethyl ether	Guinea pig	Not classified
Dimethyl Adipate	similar compounds	Not classified
2,2'-iminodiethanol	Human and animal	Not classified
Triethanolamine	Human	Not classified

Respiratory Sensitisation

For the component/components, either no data is currently available or the data is not sufficient for classification.

Germ Cell Mutagenicity

Name	Route	Value
Dimethyl Glutarate	In vivo	Not mutagenic
Dimethyl Glutarate	In Vitro	Some positive data exist, but the data are not sufficient for classification
Ethyl 3-ethoxypropionate	In Vitro	Not mutagenic
Dimethyl Succinate	In Vitro	Not mutagenic
Dipropylene glycol dimethyl ether	In Vitro	Not mutagenic
Dipropylene glycol dimethyl ether	In vivo	Not mutagenic
Dimethyl Adipate	In Vitro	Some positive data exist, but the data are not sufficient for classification
2,2'-iminodiethanol	In Vitro	Not mutagenic
Triethanolamine	In Vitro	Not mutagenic
Triethanolamine	In vivo	Not mutagenic

Carcinogenicity

Name	Route	Species	Value
2,2'-iminodiethanol	Dermal	Mouse	Carcinogenic.
Triethanolamine	Dermal	Multiple animal species	Not carcinogenic
Triethanolamine	Ingestion	Mouse	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
Dimethyl Glutarate	Inhalation	Not classified for development	Rabbit	NOAEL 1 mg/l	during gestation
Dipropylene glycol dimethyl ether	Ingestion	Not classified for development	Rabbit	NOAEL 250 mg/kg/day	during gestation
2,2'-iminodiethanol	Ingestion	Not classified for male reproduction	Rat	NOAEL 128 mg/kg/day	1 generation
2,2'-iminodiethanol	Dermal	Not classified for development	Rabbit	NOAEL 100 mg/kg/day	during organogenesis
2,2'-iminodiethanol	Inhalation	Not classified for development	Rat	NOAEL 0.05 mg/l	during organogenesis
2,2'-iminodiethanol	Ingestion	Toxic to female reproduction	Rat	NOAEL 38 mg/kg/day	1 generation
2,2'-iminodiethanol	Ingestion	Toxic to development	Rat	NOAEL 38 mg/kg/day	1 generation
Triethanolamine	Ingestion	Not classified for development	Mouse	NOAEL 1,125 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
Dimethyl Glutarate	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	Professional judgement	NOAEL Not available	
Dimethyl Succinate	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	Professional judgement	NOAEL Not available	
Dimethyl Adipate	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	Professional judgement	NOAEL Not available	
2,2'-iminodiethanol	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification		NOAEL not available	
2,2'-iminodiethanol	Ingestion	kidney and/or bladder	May cause damage to organs	Rat	NOAEL 200 mg/kg	not applicable
2,2'-iminodiethanol	Ingestion	central nervous system depression	Some positive data exist, but the data are not sufficient for classification	Rat	LOAEL 200 mg/kg	not applicable
2,2'-iminodiethanol	Ingestion	liver	Not classified	Rat	NOAEL 1,600 mg/kg	not applicable

Specific Target Organ Toxicity - repeated exposure

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
Dimethyl Glutarate	Inhalation	endocrine system | respiratory system | hematopoietic system | liver | nervous system | eyes | kidney and/or bladder	Not classified	Rat	NOAEL 0.4 mg/l	90 days
Ethyl 3-ethoxypropionate	Inhalation	hematopoietic system	Not classified	Rat	NOAEL 6 mg/l	90 days
Ethyl 3-ethoxypropionate	Inhalation	nervous system | heart | liver |	Not classified	Rat	NOAEL 6 mg/l	17 days

		immune system | kidney and/or bladder				
Ethyl 3-ethoxypropionate	Ingestion	liver	Not classified	Rat	NOAEL 1,000 mg/kg/day	17 days
Ethyl 3-ethoxypropionate	Ingestion	hematopoietic system	Not classified	Rat	NOAEL 1,000 mg/kg/day	28 days
Ethyl 3-ethoxypropionate	Ingestion	kidney and/or bladder | respiratory system	Not classified	Rat	NOAEL 1,000 mg/kg/day	17 days
Dimethyl Succinate	Inhalation	respiratory system | heart | skin | endocrine system | gastrointestinal tract | hematopoietic system | liver | immune system | muscles | nervous system | eyes | kidney and/or bladder | vascular system	Not classified	Rat	NOAEL 1 mg/l	90 days
Dipropylene glycol dimethyl ether	Ingestion	liver	Not classified	Rat	NOAEL 1,000 mg/kg/day	28 days
Dimethyl Adipate	Inhalation	respiratory system | hematopoietic system | liver | nervous system | eyes | kidney and/or bladder	Not classified	Rat	NOAEL 0.4 mg/l	90 days
2,2'-iminodiethanol	Dermal	hematopoietic system	May cause damage to organs though prolonged or repeated exposure	Rat	LOAEL 32 mg/kg/day	13 weeks
2,2'-iminodiethanol	Dermal	kidney and/or bladder	Some positive data exist, but the data are not sufficient for classification	Rat	LOAEL 8 mg/kg/day	2 years
2,2'-iminodiethanol	Dermal	liver	Not classified	Rat	NOAEL 500 mg/kg/day	13 weeks
2,2'-iminodiethanol	Inhalation	liver | kidney and/or bladder	Not classified	Rat	NOAEL 0.03 mg/l	13 weeks
2,2'-iminodiethanol	Ingestion	hematopoietic system	May cause damage to organs though prolonged or repeated exposure	Rat	NOAEL 14 mg/kg/day	13 weeks
2,2'-iminodiethanol	Ingestion	nervous system	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 57 mg/kg/day	13 weeks
2,2'-iminodiethanol	Ingestion	kidney and/or bladder	Not classified	Rat	NOAEL not available	13 weeks
2,2'-iminodiethanol	Ingestion	liver	Not classified	Rat	NOAEL 436 mg/kg/day	13 weeks
Triethanolamine	Dermal	kidney and/or bladder	Not classified	Multiple animal species	NOAEL 2,000 mg/kg/day	2 years
Triethanolamine	Dermal	liver	Not classified	Mouse	NOAEL 4,000 mg/kg/day	13 weeks
Triethanolamine	Ingestion	kidney and/or bladder	Some positive data exist, but the data are not sufficient for classification	Rat	LOAEL 1,000 mg/kg/day	2 years
Triethanolamine	Ingestion	liver	Not classified	Guinea pig	NOAEL 1,600 mg/kg/day	24 weeks

Aspiration Hazard

For the component/components, either no data is currently available or the data is 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.

11.2. Information on other hazards

This material does not contain any substances that are assessed to be an endocrine disruptor for human health.

SECTION 12: Ecological information

The information below may not agree with the EU material classification in Section 2 and/or the ingredient classifications in Section 3 if specific ingredient classifications are mandated by a competent authority. In addition, statements and data presented in Section 12 are based on UN GHS calculation rules and classifications derived from 3M assessments.

12.1. Toxicity

No product test data available.

Material	CAS #	Organism	Type	Exposure	Test endpoint	Test result
Dimethyl Glutarate	1119-40-0	Bacteria	Experimental	18 hours	EC10	62.5 mg/l
Dimethyl Glutarate	1119-40-0	Bluegill	Experimental	96 hours	LC50	30.9 mg/l
Dimethyl Glutarate	1119-40-0	Green algae	Experimental	72 hours	EC50	>85 mg/l
Dimethyl Glutarate	1119-40-0	Green algae	Experimental	72 hours	NOEC	36 mg/l
Ethyl 3-ethoxypropionate	763-69-9	Activated sludge	Experimental	5 hours	EC50	>5,000 mg/l
Ethyl 3-ethoxypropionate	763-69-9	Fathead minnow	Experimental	96 hours	LC50	45.3 mg/l
Ethyl 3-ethoxypropionate	763-69-9	Green algae	Experimental	72 hours	EC50	>86 mg/l
Ethyl 3-ethoxypropionate	763-69-9	Water flea	Experimental	48 hours	EC50	>92 mg/l
Ethyl 3-ethoxypropionate	763-69-9	Green algae	Experimental	72 hours	NOEC	86 mg/l
Fatty acids, C16-18 and C18-unsaturated, methyl esters	67762-38-3	Green algae	Endpoint not reached	72 hours	EC50	>100 mg/l
Fatty acids, C16-18 and C18-unsaturated, methyl esters	67762-38-3	Water flea	Experimental	48 hours	No tox obs at lmt of water sol	>100 mg/l
Fatty acids, C16-18 and C18-unsaturated, methyl esters	67762-38-3	Zebra Fish	Experimental	96 hours	No tox obs at lmt of water sol	>100 mg/l
Fatty acids, C16-18 and C18-unsaturated, methyl esters	67762-38-3	Green algae	Experimental	72 hours	NOEL	<1 mg/l
Fatty acids, C16-18 and C18-unsaturated, methyl esters	67762-38-3	Bacteria	Experimental	16 hours	EC0	5,250 mg/l
3-butoxypropan-2-ol	5131-66-8	Green algae	Experimental	96 hours	EC50	>1,000 mg/l
3-butoxypropan-2-ol	5131-66-8	Guppy	Experimental	96 hours	LC50	>560 mg/l
3-butoxypropan-2-ol	5131-66-8	Water flea	Experimental	48 hours	EC50	>1,000 mg/l
3-butoxypropan-2-ol	5131-66-8	Green algae	Experimental	96 hours	NOEC	560 mg/l
Dimethyl Adipate	627-93-0	Green algae	Experimental	72 hours	ErC50	>100 mg/l

Dimethyl Adipate	627-93-0	Water flea	Experimental	48 hours	EC50	72 mg/l
Dimethyl Adipate	627-93-0	Green algae	Experimental	72 hours	NOEC	12.5 mg/l
Dimethyl Succinate	106-65-0	Activated sludge	Experimental	3 hours	EC50	>1,000 mg/l
Dimethyl Succinate	106-65-0	Green algae	Experimental	72 hours	ErC50	>100 mg/l
Dimethyl Succinate	106-65-0	Water flea	Experimental	48 hours	EC50	>100 mg/l
Dimethyl Succinate	106-65-0	Zebra Fish	Experimental	96 hours	LC50	50 mg/l
Dimethyl Succinate	106-65-0	Green algae	Experimental	72 hours	NOEC	100 mg/l
Dipropylene glycol dimethyl ether	111109-77-4	Green algae	Experimental	72 hours	EC50	4,307 mg/l
Dipropylene glycol dimethyl ether	111109-77-4	Guppy	Experimental	96 hours	LC50	>1,000 mg/l
Dipropylene glycol dimethyl ether	111109-77-4	Water flea	Experimental	24 hours	LC50	>1,000 mg/l
Dipropylene glycol dimethyl ether	111109-77-4	Water flea	Experimental	21 days	NOEC	10 mg/l
Dipropylene glycol dimethyl ether	111109-77-4	Activated sludge	Experimental	30 minutes	NOEC	100 mg/l
Dipropylene glycol dimethyl ether	111109-77-4	Redworm	Experimental	14 days	LC50	>1,000 mg/kg (Dry Weight)
Isopropylamine Dodecylbenzenesulphonate	26264-05-1	Fathead minnow	Experimental	96 hours	LC50	20 mg/l
Isopropylamine Dodecylbenzenesulphonate	26264-05-1	Green algae	Experimental	72 hours	ErC50	>100 mg/l
Isopropylamine Dodecylbenzenesulphonate	26264-05-1	Water flea	Experimental	48 hours	EC50	2.2 mg/l
Isopropylamine Dodecylbenzenesulphonate	26264-05-1	Rainbow trout	Analogous Compound	70 days	NOEC	0.23 mg/l
Isopropylamine Dodecylbenzenesulphonate	26264-05-1	Water flea	Analogous Compound	21 days	NOEC	1.18 mg/l
Isopropylamine Dodecylbenzenesulphonate	26264-05-1	Green algae	Experimental	72 hours	NOEC	3.2 mg/l
Isopropylamine Dodecylbenzenesulphonate	26264-05-1	Activated sludge	Analogous Compound	3 hours	EC50	>500 mg/l
2,2'-iminodiethanol	111-42-2	Fathead minnow	Experimental	96 hours	LC50	100 mg/l
2,2'-iminodiethanol	111-42-2	Green algae	Experimental	72 hours	EC50	9.5 mg/l
2,2'-iminodiethanol	111-42-2	Water flea	Experimental	48 hours	LC50	2.15 mg/l
2,2'-iminodiethanol	111-42-2	Green algae	Experimental	72 hours	NOEC	0.6 mg/l
2,2'-iminodiethanol	111-42-2	Water flea	Experimental	21 days	NOEC	0.78 mg/l
Triethanolamine	102-71-6	Activated sludge	Experimental	3 hours	IC50	>1,000 mg/l
Triethanolamine	102-71-6	Fathead minnow	Experimental	96 hours	LC50	11,800 mg/l
Triethanolamine	102-71-6	Green algae	Experimental	72 hours	ErC50	512 mg/l
Triethanolamine	102-71-6	Water flea	Experimental	48 hours	EC50	609.98 mg/l
Triethanolamine	102-71-6	Green algae	Experimental	72 hours	ErC10	26 mg/l

Triethanolamine	102-71-6	Water flea	Experimental	21 days	NOEC	16 mg/l

12.2. Persistence and degradability

Material	CAS Nbr	Test type	Duration	Study Type	Test result	Protocol
Dimethyl Glutarate	1119-40-0	Experimental Biodegradation	14 days	BOD	90 %BOD/ThOD	OECD 301C - MITI test (I)
Ethyl 3-ethoxypropionate	763-69-9	Experimental Biodegradation	18 days	CO2 evolution	100 %CO2 evolution/THCO2 evolution	OECD 301B - Modified sturm or CO2
Ethyl 3-ethoxypropionate	763-69-9	Experimental Photolysis		Photolytic half-life (in air)	1.2 days (t 1/2)	
Fatty acids, C16-18 and C18-unsaturated, methyl esters	67762-38-3	Experimental Biodegradation	29 days	CO2 evolution	75 %CO2 evolution/THCO2 evolution	OECD 301B - Modified sturm or CO2
3-butoxypropan-2-ol	5131-66-8	Experimental Biodegradation	28 days	BOD	89 %BOD/ThOD	OECD 301C - MITI test (I)
Dimethyl Adipate	627-93-0	Analogous Compound Biodegradation	28 days	Dissolv. Organic Carbon Deplet	97 %removal of DOC	ISO 7827 Ready Ult Aer Biodeg
Dimethyl Succinate	106-65-0	Experimental Biodegradation	28 days	CO2 evolution	74.1 %CO2 evolution/THCO2 evolution	OECD 301B - Modified sturm or CO2
Dipropylene glycol dimethyl ether	111109-77-4	Experimental Biodegradation	28 days	CO2 evolution	≤32 %CO2 evolution/THCO2 evolution	OECD 301B - Modified sturm or CO2
Dipropylene glycol dimethyl ether	111109-77-4	Experimental Aquatic Inherent Biodegrad.	28 days	Dissolv. Organic Carbon Deplet	25 %removal of DOC	OECD 302B Zahn-Wellens/EVPA
Isopropylamine Dodecylbenzenesulphonate	26264-05-1	Experimental Biodegradation	28 days	CO2 evolution	62-67 %CO2 evolution/THCO2 evolution	OECD 301D - Closed bottle test
2,2'-iminodiethanol	111-42-2	Experimental Biodegradation	10 days	BOD	72 %BOD/ThOD	OECD 301D - Closed bottle test
2,2'-iminodiethanol	111-42-2	Experimental Biodegradation	9 days	Dissolv. Organic Carbon Deplet	98 %removal of DOC	OECD 302C - Modified MITI (II)
Triethanolamine	102-71-6	Experimental Biodegradation	19 days	Dissolv. Organic Carbon Deplet	96 %removal of DOC	similar to OECD 301E

12.3 : Bioaccumulative potential

Material	Cas No.	Test type	Duration	Study Type	Test result	Protocol
Dimethyl Glutarate	1119-40-0	Experimental Bioconcentration		Log Kow	0.49	
Ethyl 3-ethoxypropionate	763-69-9	Experimental Bioconcentration		Log Kow	1.35	OECD 117 log Kow HPLC method
Fatty acids, C16-18 and C18-unsaturated, methyl esters	67762-38-3	Experimental Bioconcentration		Log Kow	> 6.2	OECD 117 log Kow HPLC method
3-butoxypropan-2-ol	5131-66-8	Experimental Bioconcentration		Log Kow	1.2	
Dimethyl Adipate	627-93-0	Experimental Bioconcentration		Log Kow	1.4	OECD 117 log Kow HPLC method
Dimethyl Succinate	106-65-0	Experimental Bioconcentration		Log Kow	0.33	OECD 117 log Kow HPLC method
Dipropylene glycol dimethyl ether	111109-77-4	Experimental BCF - Fish	43 days	Bioaccumulation factor	4	OECD305-Bioconcentration
Dipropylene glycol dimethyl ether	111109-77-4	Experimental Bioconcentration		Log Kow	0.42	OECD 107 log Kow shke flsk mtd
Isopropylamine Dodecylbenzenesulphonate	26264-05-1	Analogous Compound BCF - Fish	21 days	Bioaccumulation factor	104	
Isopropylamine Dodecylbenzenesulphonate	26264-05-1	Experimental Bioconcentration		Log Kow	2.4	OECD 107 log Kow shke flsk mtd

2,2'-iminodiethanol	111-42-2	Experimental Bioconcentration		Log Kow	-2.18	OECD 107 log Kow shke flsk mtd
Triethanolamine	102-71-6	Experimental BCF - Fish	42 days	Bioaccumulation factor	<3.9	similar to OECD 305

12.4. Mobility in soil

Material	Cas No.	Test type	Study Type	Test result	Protocol
Fatty acids, C16-18 and C18-unsaturated, methyl esters	67762-38-3	Experimental Mobility in Soil	Koc	> 4.27E+05 l/kg	OECD 121 Estim. of Koc by HPLC
Dimethyl Adipate	627-93-0	Modeled Mobility in Soil	Koc	10 l/kg	Episuite™
Dimethyl Succinate	106-65-0	Modeled Mobility in Soil	Koc	10 l/kg	Episuite™
Dipropylene glycol dimethyl ether	111109-77-4	Experimental Mobility in Soil	Koc	24 l/kg	OECD 106 Adsp-Desb Batch Equil
Isopropylamine Dodecylbenzenesulphonate	26264-05-1	Modeled Mobility in Soil	Koc	250 l/kg	Episuite™
2,2'-iminodiethanol	111-42-2	Modeled Mobility in Soil	Koc	<1 l/kg	Episuite™

12.5. Results of the PBT and vPvB assessment

This material does not contain any substances that are assessed to be a PBT or vPvB

12.6. Endocrine disrupting properties

This material does not contain any substances that are assessed to be an endocrine disruptor for environmental effects

12.7. Other adverse effects
No information available.

This surfactant complies with the biodegradability criteria as laid down in Regulation (EC) No.648/2004 on detergents.

SECTION 13: Disposal considerations

13.1 Waste treatment methods
Dispose of contents/ container in accordance with the local/regional/national/international regulations.

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.

The coding of a waste stream is based on the application of the product by the consumer. Since this is out of the control of 3M, no waste code(s) for products after use will be provided. Please refer to the European Waste Code (EWC - 2000/532/EC and amendments) to assign the correct waste code to your waste stream. Ensure national and/or regional regulations are complied with and always use a licensed waste contractor.

EU waste code (product as sold)
070604* Other organic solvents, washing liquids and mother liquors

SECTION 14: Transportation information

Not hazardous for transportation.

	Ground Transport (ADR)	Air Transport (IATA)	Marine Transport (IMDG)
14.1 UN number or ID number	No data available.	No data available.	No data available.
14.2 UN proper shipping name	No data available.	No data available.	No data available.
14.3 Transport hazard class(es)	No data available.	No data available.	No data available.
14.4 Packing group	No data available.	No data available.	No data available.
14.5 Environmental hazards	No data available.	No data available.	No data available.
14.6 Special precautions for user	Please refer to the other sections of the SDS for further information.	Please refer to the other sections of the SDS for further information.	Please refer to the other sections of the SDS for further information.
14.7 Marine Transport in bulk according to IMO instruments	No data available.	No data available.	No data available.
Control Temperature	No data available.	No data available.	No data available.
Emergency Temperature	No data available.	No data available.	No data available.
ADR Classification Code	No data available.	No data available.	No data available.
IMDG Segregation Code	No data available.	No data available.	No data available.

Please contact the address or phone number listed on the first page of the SDS for additional information on the transport/shipment of the material by rail (RID) or inland waterways (ADN).

SECTION 15: Regulatory information

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

Carcinogenicity

Ingredient	CAS Nbr	Classification	Regulation
Triethanolamine	102-71-6	Gr. 3: Not classifiable	International Agency for Research on Cancer
2,2'-iminodiethanol	111-42-2	Grp. 2B: Possible human carc.	International Agency for Research on Cancer

Global inventory status
Contact 3M for more information.

DIRECTIVE 2012/18/EU
Seveso hazard categories, Annex 1, Part 1
None

Seveso named dangerous substances, Annex 1, Part 2
None

Regulation (EU) No 649/2012
No chemicals listed

15.2. Chemical Safety Assessment
A chemical safety assessment has not been carried out for this substance/mixture in accordance with Regulation (EC) No 1907/2006, as amended.

SECTION 16: Other information

List of relevant H statements

H226	Flammable liquid and vapour.
H302	Harmful if swallowed.
H315	Causes skin irritation.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H361df	Suspected of damaging fertility. Suspected of damaging the unborn child.
H373	May cause damage to organs through prolonged or repeated exposure.
H412	Harmful to aquatic life with long lasting effects.

Revision information:
EU Section 09: pH information information was added.
Section 1: Emergency telephone information was modified.
Label: CLP Classification information was modified.
Section 03: Composition table % Column heading information was added.
Section 3: Composition/ Information of ingredients table information was modified.
Section 03: Substance not applicable information was added.
Section 04: Information on toxicological effects information was modified.
Section 7: Precautions safe handling information information was modified.
Section 8: Occupational exposure limit table information was added.
Section 8: Occupational exposure limit table information was modified.
OEL Reg Agency Desc information was added.
Section 8: STEL key information was added.
Section 8: TWA key information was added.
Section 09: Color information was added.
Section 9: Evaporation Rate information information was deleted.
Section 9: Explosive properties information information was deleted.
Section 09: Kinematic Viscosity information information was added.
Section 9: Melting point information information was modified.
Section 09: Odor information was added.
Sections 3 and 9: Odour, colour, grade information information was deleted.
Section 9: Oxidising properties information information was deleted.

Section 9: pH information information was deleted.
Section 9: Property description for optional properties information was modified.
Section 9: Vapour density value information was added.
Section 9: Vapour density value information was deleted.
Section 9: Viscosity information information was deleted.
Section 10: Hazardous decomposition or by-products table information was modified.
Section 11: Acute Toxicity table information was modified.
Section 11: Carcinogenicity Table information was modified.
Section 11: Classification disclaimer information was modified.
Section 11: Germ Cell Mutagenicity Table information was modified.
Section 11: No endocrine disruptor information available warning information was added.
Section 11: Reproductive and/or Developmental Effects text information was deleted.
Section 11: Reproductive Toxicity Table information was modified.
Section 11: Serious Eye Damage/Irritation Table information was modified.
Section 11: Skin Corrosion/Irritation Table information was modified.
Section 11: Skin Sensitization Table information was modified.
Section 11: Target Organs - Repeated Table information was added.
Section 11: Target Organs - Repeated Table information was deleted.
Section 11: Target Organs - Single Table information was modified.
Section 12: 12.6. Endocrine Disrupting Properties information was added.
Section 12: 12.7. Other adverse effects information was modified.
Section 12: Component ecotoxicity information information was modified.
Section 12: Contact manufacturer for more detail. information was deleted.
Section 12: Mobility in soil information information was added.
Section 12: No endocrine disruptor information available warning information was added.
Section 12: No PBT/vPvB information available warning information was modified.
Section 12: Persistence and Degradability information information was modified.
Section 12:Bioccumulative potential information information was modified.
Section 13: 13.1. Waste disposal note information was modified.
Section 13: Standard Phrase Category Waste GHS information was modified.
Section 14 Classification Code – Main Heading information was added.
Section 14 Classification Code – Regulation Data information was added.
Section 14 Control Temperature – Main Heading information was added.
Section 14 Control Temperature – Regulation Data information was added.
Section 14 Disclaimer Information information was added.
Section 14 Emergency Temperature – Main Heading information was added.
Section 14 Emergency Temperature – Regulation Data information was added.
Section 14 Hazard Class + Sub Risk – Main Heading information was added.
Section 14 Hazard Class + Sub Risk – Regulation Data information was added.
Section 14 Hazardous/Not Hazardous for Transportation information was added.
Section 14 Other Dangerous Goods – Main Heading information was added.
Section 14 Other Dangerous Goods – Regulation Data information was added.
Section 14 Packing Group – Main Heading information was added.
Section 14 Packing Group – Regulation Data information was added.
Section 14 Proper Shipping Name information was added.
Section 14 Regulations – Main Headings information was added.
Section 14 Segregation – Regulation Data information was added.
Section 14 Segregation Code – Main Heading information was added.
Section 14 Special Precautions – Main Heading information was added.
Section 14 Special Precautions – Regulation Data information was added.
Section 14 Transport in bulk – Regulation Data information was added.
Section 14 Marine transport in bulk according to IMO instruments – Main Heading information was added.
Section 14 UN Number Column data information was added.
Section 14 UN Number information was added.
Section 15: Carcinogenicity information information was modified.
Section 15: Chemical Safety Assessment information was modified.

Two-column table displaying the unique list of H Codes and statements (std phrases) for all components of the given material.
information was modified.
Sectio 16: UK disclaimer information was deleted.
Section 2: No PBT/vPvB information available warning information was added.

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