Safety Data Sheet

Document group:	23-1246-0	**Version number:**	3.00
Revision date:	19/09/2018	**Supersedes date:**	04/07/2013

Transportation version number: 1.00 (04/07/2013)

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

IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

1.1. Product identifier
3M Clean-Trace Biomass Detection Kit

Product Identification Numbers
GH-6205-2247-0

7000006881

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

Identified uses
Microbiological testing

1.3. Details of the supplier of the safety data sheet

Address:	3M United Kingdom PLC, 3M Centre, Cain Road, Bracknell, Berkshire, RG12 8HT.
Telephone:	+44 (0)1344 858 000
E Mail:	tox.uk@mmm.com
Website:	www.3M.com/uk

1.4. Emergency telephone number
+44 (0)1344 858 000

This product is a kit or a multipart product which consists of multiple, independently packaged components. A Safety Data Sheet for each of these components is included. Please do not separate the component Safety Data Sheets from this cover page. The document numbers of the MSDSs for components of this product are:

22-9762-0, 23-0012-7, 23-0013-5

TRANSPORTATION INFORMATION

GH-6205-2247-0

Not hazardous for transportation

KIT LABEL

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

CLASSIFICATION:
This material is not classified as hazardous according to Regulation (EC) No. 1272/2008, as amended, on classification, labelling, and packaging of substances and mixtures.

2.2. Label elements
CLP REGULATION (EC) No 1272/2008
Not applicable

Revision information:
Kit: Component document group number(s) information was modified.
Company Telephone information was added.
Section 01: SAP Material Numbers information was added.
Section 2: Additional label requirements phrase information was deleted.
Section 2: EU sensitizer phrase information was deleted.
Section 2: Graphic information information was deleted.
Label: CLP Classification information was added.
Section 15: Symbol information information was deleted.

Safety Data Sheet

Document group:	23-0012-7	**Version number:**	1.03
Revision date:	19/09/2018	**Supersedes date:**	04/07/2013

Transportation version number: 1.00 (01/07/2011)

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
Diluent

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

Identified uses
Kit Component

1.3. Details of the supplier of the safety data sheet
Address: 3M United Kingdom PLC, 3M Centre, Cain Road, Bracknell, Berkshire, RG12 8HT.
Telephone: +44 (0)1344 858 000
E Mail: tox.uk@mmm.com
Website: www.3M.com/uk

1.4. Emergency telephone number
+44 (0)1344 858 000

SECTION 2: Hazard identification

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

CLASSIFICATION:
This material is not classified as hazardous according to Regulation (EC) No. 1272/2008, as amended, on classification, labelling, and packaging of substances and mixtures.

2.2. Label elements
CLP REGULATION (EC) No 1272/2008
Not applicable

2.3. Other hazards

None known.

Diluent

SECTION 3: Composition/information on ingredients

Ingredient	CAS Nbr	EC No.	REACH Registration No.	% by Wt	Classification
Non hazardous ingredients	Mixture			80 - 100	Substance not classified as hazardous
Lecithins	Trade Secret			< 1	Substance not classified as hazardous
Non-hazardous stabiliser	Trade Secret			< 1	Substance not classified as hazardous
Propan-2-ol	67-63-0	200-661-7		< 1	Flam. Liq. 2, H225; Eye Irrit. 2, H319; STOT SE 3, H336
Sodium Azide	26628-22-8	247-852-1		< 0.1	EUH032; Acute Tox. 2, H300; Aquatic Acute 1, H400,M=1; Aquatic Chronic 1, H410,M=1

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
No need for first aid is anticipated.

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
No need for first aid is anticipated.

4.2. Most important symptoms and effects, both acute and delayed
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
Material will not burn. Use a fire fighting agent suitable for the surrounding fire.

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

5.3. Advice for fire-fighters

Diluent

No special protective actions for fire-fighters are anticipated.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures
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. Observe precautions from other sections.

6.2. Environmental precautions
Avoid release to the environment.

6.3. Methods and material for containment and cleaning up
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. Collect as much of the spilled material as possible. Place in a closed container approved for transportation by appropriate authorities. Clean up residue with water. 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
Avoid release to the environment. No specific handling precautions are necessary.

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

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
Sodium Azide	26628-22-8	UK HSC	TWA(as NaN3):0.1 mg/m3;STEL(as NaN3):0.3 mg/m3	SKIN
Propan-2-ol	67-63-0	UK HSC	TWA:999 mg/m³(400 ppm);STEL:1250 mg/m³(500 ppm)	

UK HSC : UK Health and Safety Commission
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.

8.2. Exposure controls

Diluent

8.2.1. Engineering controls
No engineering controls required.

8.2.2. Personal protective equipment (PPE)

Eye/face protection

Eye protection not required.

Skin/hand protection
No chemical protective gloves are required.

Respiratory protection

Respiratory protection is not required.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	Liquid.
Appearance/Odour	Odourless; Colourless
Odour threshold	*No data available.*
pH	*No data available.*
Boiling point/boiling range	*No data available.*
Melting point	*Not applicable.*
Flammability (solid, gas)	Not applicable.
Explosive properties	Not classified
Oxidising properties	Not classified
Flash point	*Not applicable.*
Autoignition temperature	*No data available.*
Flammable Limits(LEL)	*Not applicable.*
Flammable Limits(UEL)	*Not applicable.*
Vapour pressure	*No data available.*
Relative density	*No data available.*
Water solubility	Complete
Solubility- non-water	*No data available.*
Partition coefficient: n-octanol/water	*No data available.*
Evaporation rate	*No data available.*
Vapour density	*No data available.*
Decomposition temperature	*No data available.*
Viscosity	*No data available.*
Density	*No data available.*

9.2. Other information

EU Volatile Organic Compounds	*No data available.*
Molecular weight	*Not applicable.*
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

Diluent

Stable.

10.3 Possibility of hazardous reactions
Hazardous polymerisation will not occur.

10.4 Conditions to avoid
Heat.

10.5 Incompatible materials
None known.

10.6 Hazardous decomposition products

Substance	Condition
None known.	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 3M assessments.

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
No known health effects.

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

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

Ingestion
No known health effects.

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	Ingestion		No data available; calculated ATE >5,000 mg/kg
Non-hazardous stabiliser	Dermal		LD50 estimated to be > 5,000 mg/kg
Non-hazardous stabiliser	Ingestion	Rat	LD50 > 38,000 mg/kg
Propan-2-ol	Dermal	Rabbit	LD50 12,870 mg/kg
Propan-2-ol	Inhalation-Vapour (4 hours)	Rat	LC50 72.6 mg/l
Propan-2-ol	Ingestion	Rat	LD50 4,710 mg/kg

Diluent

Sodium Azide	Dermal	Rabbit	LD50 20 mg/kg
Sodium Azide	Ingestion	Rat	LD50 42 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
Propan-2-ol	Multiple animal species	No significant irritation
Sodium Azide	Not available	Mild irritant

Serious Eye Damage/Irritation

Name	Species	Value
Propan-2-ol	Rabbit	Severe irritant
Sodium Azide	Not available	Moderate irritant

Skin Sensitisation

Name	Species	Value
Propan-2-ol	Guinea pig	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
Propan-2-ol	In Vitro	Not mutagenic
Propan-2-ol	In vivo	Not mutagenic
Sodium Azide	In Vitro	Some positive data exist, but the data are not sufficient for classification

Carcinogenicity

Name	Route	Species	Value
Propan-2-ol	Inhalation	Rat	Some positive data exist, but the data are not sufficient for classification
Sodium Azide	Ingestion	Rat	Not carcinogenic

Reproductive Toxicity

Reproductive and/or Developmental Effects

Name	Route	Value	Species	Test result	Exposure Duration
Propan-2-ol	Ingestion	Not classified for development	Rat	NOAEL 400 mg/kg/day	during organogenesis
Propan-2-ol	Inhalation	Not classified for development	Rat	LOAEL 9 mg/l	during gestation
Sodium Azide	Ingestion	Not classified for development	Rat	NOAEL 10 mg/kg/day	during gestation

Lactation

Name	Route	Species	Value
Sodium Azide	Ingestion	Rat	Not classified for effects on or via lactation

Target Organ(s)

Diluent

Specific Target Organ Toxicity - single exposure

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
Propan-2-ol	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Human	NOAEL Not available	
Propan-2-ol	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	Human	NOAEL Not available	
Propan-2-ol	Inhalation	auditory system	Not classified	Guinea pig	NOAEL 13.4 mg/l	24 hours
Propan-2-ol	Ingestion	central nervous system depression	May cause drowsiness or dizziness	Human	NOAEL Not available	poisoning and/or abuse
Sodium Azide	Inhalation	vascular system	Causes damage to organs	Human	NOAEL NA	occupational exposure
Sodium Azide	Ingestion	vascular system	Causes damage to organs	Human	NOAEL NA	poisoning and/or abuse

Specific Target Organ Toxicity - repeated exposure

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
Propan-2-ol	Inhalation	kidney and/or bladder	Not classified	Rat	NOAEL 12.3 mg/l	24 months
Propan-2-ol	Inhalation	nervous system	Not classified	Rat	NOAEL 12 mg/l	13 weeks
Propan-2-ol	Ingestion	kidney and/or bladder	Not classified	Rat	NOAEL 400 mg/kg/day	12 weeks
Sodium Azide	Ingestion	vascular system	Causes damage to organs through prolonged or repeated exposure	Human	NOAEL NA	2.5 years
Sodium Azide	Ingestion	central nervous system	May cause damage to organs though prolonged or repeated exposure	Rat	LOAEL 5 mg/kg/day	103 weeks
Sodium Azide	Ingestion	liver | respiratory system | heart | skin | endocrine system | bone, teeth, nails, and/or hair | hematopoietic system | immune system | muscles | kidney and/or bladder	Not classified	Rat	NOAEL 10 mg/kg/day	103 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.

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

Diluent

Propan-2-ol	67-63-0	Crustacea	Experimental	24 hours	LC50	>10,000 mg/l
Propan-2-ol	67-63-0	Green Algae	Experimental	72 hours	EC50	>1,000 mg/l
Propan-2-ol	67-63-0	Ricefish	Experimental	96 hours	LC50	>100 mg/l
Propan-2-ol	67-63-0	Water flea	Experimental	48 hours	EC50	>1,000 mg/l
Propan-2-ol	67-63-0	Green algae	Experimental	72 hours	NOEC	1,000 mg/l
Propan-2-ol	67-63-0	Water flea	Experimental	21 days	NOEC	100 mg/l
Lecithins	Trade Secret		Data not available or insufficient for classification			
Non-hazardous stabiliser	Trade Secret	Copepods	Estimated	48 hours	Lethal Level 50%	>10,000 mg/l
Non-hazardous stabiliser	Trade Secret	Green Algae	Estimated	72 hours	Effect Level 50%	58.84 mg/l
Non-hazardous stabiliser	Trade Secret	Zebra Fish	Estimated	96 hours	LC50	>100 mg/l
Non-hazardous stabiliser	Trade Secret	Green Algae	Estimated	72 hours	Effect Concentration 10%	19.05 mg/l
Non-hazardous stabiliser	Trade Secret	Water flea	Estimated	21 days	No obs Effect Level	10 mg/l
Sodium Azide	26628-22-8	Bluegill	Experimental	96 hours	LC50	0.68 mg/l
Sodium Azide	26628-22-8	Green Algae	Experimental	96 hours	EC50	0.348 mg/l
Sodium Azide	26628-22-8	Water flea	Experimental	48 hours	EC50	4.2 mg/l

12.2. Persistence and degradability

Material	CAS Nbr	Test type	Duration	Study Type	Test result	Protocol
Propan-2-ol	67-63-0	Experimental Biodegradation	14 days	BOD	86 % BOD/ThBOD	OECD 301C - MITI test (I)
Lecithins	Trade Secret	Data not availbl-insufficient			N/A	
Non-hazardous stabiliser	Trade Secret	Experimental Biodegradation	28 days	CO2 evolution	61 % weight	Other methods
Sodium Azide	26628-22-8	Experimental Biodegradation	28 days	BOD	1 % weight	OECD 301C - MITI test (I)

12.3 : Bioaccumulative potential

Material	Cas No.	Test type	Duration	Study Type	Test result	Protocol
Propan-2-ol	67-63-0	Experimental Bioconcentration		Log Kow	0.05	Other methods
Lecithins	Trade Secret	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Non-hazardous stabiliser	Trade Secret	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Sodium Azide	26628-22-8	Experimental Bioconcentration		Log Kow	<0.3	Other methods

12.4. Mobility in soil

Please contact manufacturer for more details

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

Diluent

12.6. Other adverse effects
No information available.

SECTION 13: Disposal considerations

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

This product has been classified as a non-hazardous waste. Prior to disposal, consult all applicable authorities and regulations to insure proper classification. Dispose of waste product in a permitted industrial waste facility. Empty and clean product containers may be disposed as non-hazardous waste. Consult your specific regulations and service providers to determine available options and requirements.

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)
160509 Discarded chemicals other than those mentioned in 16 05 06, 16 05 07 or 16 05 08

SECTION 14: Transportation information

ADR/IATA/IMDG Not hazardous for transport.

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 material are in compliance with the provisions of Philippines RA 6969 requirements. 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.

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

EUH032	Contact with acid liberates very toxic gas.
H225	Highly flammable liquid and vapour.

Diluent

H300	Fatal if swallowed.
H319	Causes serious eye irritation.
H336	May cause drowsiness or dizziness.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.

Revision information:
Company Telephone information was added.
Section 2.1: Classification information information was deleted.
Section 2: Graphic information information was deleted.
Label: CLP Classification information was added.
Section 2: Label ingredient information information was deleted.
Risk phrase - None information was deleted.
Section 3: Composition/ Information of ingredients table information was added.
Section 3: Composition/ Information of ingredients table information was deleted.
Section 3: Reference to H statement explanation in Section 016 information was added.
Section 3: Reference to R and H statement explanation in Section 16 information was deleted.
Section 3: Reference to section 15 for Nota info information was deleted.
Section 5: Fire - Advice for fire fighters information information was modified.
Section 6: Accidental release clean-up information information was modified.
Section 6: Accidental release personal information information was modified.
Section 7: Conditions safe storage information was modified.
Section 7: Precautions safe handling information information was modified.
Section 8: Appropriate Engineering controls information information was modified.
Section 8: BLV information was added.
Section 8: Eye/face protection information information was deleted.
Section 8: Eye/face protection text information was deleted.
Section 8: mg/m³ key information was deleted.
Section 8: Occupational exposure limit table information was added.
Section 8: Occupational exposure limit table information was modified.
OEL Reg Agency Desc information was modified.
Section 8: Personal Protection - Eye information information was added.
Section 8: Personal Protection - Respiratory Information information was added.
Section 8: Personal Protection - Skin/hand information information was modified.
Section 8: ppm key information was deleted.
Section 8: Respiratory protection information information was deleted.
Section 8: Skin protection - protective clothing text information was deleted.
Section 8: Skin protection - recommended gloves information information was deleted.
Section 8: Skin protection - recommended gloves text information was deleted.
Section 9: Property description for optional properties information was added.
Section 11: Acute Toxicity table information was modified.
Section 11: Aspiration Hazard Table information was deleted.
Section 11: Aspiration Hazard text information was added.
Section 11: Carcinogenicity Table information was modified.
Section 11: Classification disclaimer information was added.
Section 11: Classification disclaimer information was deleted.
Section 11: Disclosed components not in tables text information was added.
Section 11: Germ Cell Mutagenicity Table information was modified.
Section 11: Health Effects - Ingestion information information was modified.
Section 11: Health Effects - Inhalation information information was modified.
Lactation Table information was modified.
Section 11: Reproductive and/or Developmental Effects text information was added.
Section 11: Reproductive Toxicity Table information was modified.
Section 11: Respiratory Sensitization Table information was deleted.
Section 11: Respiratory Sensitization text information was added.
Section 11: Serious Eye Damage/Irritation Table information was modified.

Diluent

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 modified.
Section 11: Target Organs - Single Table information was modified.
Section 12: Classification Warning information was added.
Section 12: Classification Warning information was deleted.
Section 12: Component ecotoxicity information information was added.
Prints No Data if Bioccumulative potential information is not present information was deleted.
Prints No Data if Component ecotoxicity information is not present information was deleted.
Prints No Data if Persistence and Degradability information is not present information was deleted.
Section 12: No PBT/vPvB information available warning information was modified.
Section 12: Persistence and Degradability information information was added.
Section 12:Bioccumulative potential information information was added.
Section 13: 13.1. Waste disposal note information was modified.
Section 13: Standard Phrase Category Waste GHS information was modified.
Section 15: Chemical Safety Assessment information was modified.
Section 15: Regulations - Inventories information was modified.
Section 15: Symbol information information was deleted.
Section 16: List of relevant R phrase information information was deleted.
Section 16: List of relevant R-phrases information was deleted.

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 United Kingdom MSDSs are available at www.3M.com/uk

Safety Data Sheet

Document group:	23-0013-5	**Version number:**	1.02
Revision date:	19/09/2018	**Supersedes date:**	04/07/2013

Transportation version number: 1.00 (04/07/2013)

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 Extractant XM

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

Identified uses
Intermediate

1.3. Details of the supplier of the safety data sheet
Address: 3M United Kingdom PLC, 3M Centre, Cain Road, Bracknell, Berkshire, RG12 8HT.
Telephone: +44 (0)1344 858 000
E Mail: tox.uk@mmm.com
Website: www.3M.com/uk

1.4. Emergency telephone number
+44 (0)1344 858 000

SECTION 2: Hazard identification

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

CLASSIFICATION:
This material is not classified as hazardous according to Regulation (EC) No. 1272/2008, as amended, on classification, labelling, and packaging of substances and mixtures.

2.2. Label elements
CLP REGULATION (EC) No 1272/2008
Not applicable

2.3. Other hazards

None known.

SECTION 3: Composition/information on ingredients

Ingredient	CAS Nbr	EC No.	REACH Registration No.	% by Wt	Classification
Non-Hazardous Ingredients	Mixture			95 - 100	Substance not classified as hazardous
D-gluconic acid, compound with N,N''-bis(4-chlorophenyl)-3,12-diimino-2,4,11,13-tetraazatetradecanediamidine (2:1)	18472-51-0	242-354-0		< 1	Aquatic Acute 1, H400,M=10; Aquatic Chronic 1, H410,M=1 Eye Dam. 1, H318

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
No need for first aid is anticipated.

Skin contact
No need for first aid is anticipated.

Eye contact
No need for first aid is anticipated.

If swallowed
No need for first aid is anticipated.

4.2. Most important symptoms and effects, both acute and delayed
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
Material will not burn. Use a fire fighting agent suitable for the surrounding fire.

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

5.3. 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.

6.3. Methods and material for containment and cleaning up
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 water. 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
Avoid release to the environment.

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

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
No occupational exposure limit values exist for any of the components listed in Section 3 of this Safety Data Sheet.

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

8.2. Exposure controls

8.2.1. Engineering controls
Not applicable.

8.2.2. Personal protective equipment (PPE)

Eye/face protection

Eye protection not required.

Skin/hand protection
No chemical protective gloves are required.

Respiratory protection

Respiratory protection is not required.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	Liquid.
Appearance/Odour	Colourless liquid
Odour threshold	*No data available.*
pH	*No data available.*
Boiling point/boiling range	*No data available.*
Melting point	*No data available.*
Flammability (solid, gas)	Not applicable.
Explosive properties	Not classified
Oxidising properties	Not classified
Flash point	*Not applicable.*
Autoignition temperature	*No data available.*
Flammable Limits(LEL)	*No data available.*
Flammable Limits(UEL)	*No data available.*
Relative density	1 [*Ref Std:*WATER=1]
Water solubility	Complete
Solubility- non-water	*No data available.*
Partition coefficient: n-octanol/water	*No data available.*
Evaporation rate	*No data available.*
Vapour density	*No data available.*
Decomposition temperature	*No data available.*
Viscosity	*No data available.*
Density	1 g/ml

9.2. Other information

EU Volatile Organic Compounds	*No data available.*
Molecular weight	*Not applicable.*
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.

10.5 Incompatible materials
None known.

10.6 Hazardous decomposition products

Substance	Condition
None known.	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 3M assessments.

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
No known health effects.

Skin contact
Contact with the skin during product use is not expected to result in significant irritation. Allergic Skin Reaction (non-photo induced) in sensitive people: Signs/symptoms may include redness, swelling, blistering, and itching.

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

Ingestion
No known health effects.

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	Ingestion		No data available; calculated ATE >5,000 mg/kg
D-gluconic acid, compound with N,N''-bis(4-chlorophenyl)-3,12-diimino-2,4,11,13-tetraazatetradecanediamidine (2:1)	Dermal	Rabbit	LD50 > 5,000 mg/kg
D-gluconic acid, compound with N,N''-bis(4-chlorophenyl)-3,12-diimino-2,4,11,13-tetraazatetradecanediamidine (2:1)	Ingestion	Rat	LD50 2,000 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
D-gluconic acid, compound with N,N''-bis(4-chlorophenyl)-3,12-diimino-2,4,11,13-tetraazatetradecanediamidine (2:1)	Rabbit	No significant irritation

Serious Eye Damage/Irritation

Name	Species	Value
D-gluconic acid, compound with N,N''-bis(4-chlorophenyl)-3,12-diimino-2,4,11,13-tetraazatetradecanediamidine (2:1)	Rabbit	Corrosive

Skin Sensitisation

Name	Species	Value
D-gluconic acid, compound with N,N''-bis(4-chlorophenyl)-3,12-diimino-2,4,11,13-tetraazatetradecanediamidine (2:1)	Human and	Some positive data exist, but the data are not sufficient for classification

	animal	

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
D-gluconic acid, compound with N,N''-bis(4-chlorophenyl)-3,12-diimino-2,4,11,13-tetraazatetradecanediamidine (2:1)	In Vitro	Not mutagenic
D-gluconic acid, compound with N,N''-bis(4-chlorophenyl)-3,12-diimino-2,4,11,13-tetraazatetradecanediamidine (2:1)	In vivo	Not mutagenic

Carcinogenicity

Name	Route	Species	Value
D-gluconic acid, compound with N,N''-bis(4-chlorophenyl)-3,12-diimino-2,4,11,13-tetraazatetradecanediamidine (2:1)	Ingestion	Multiple animal species	Not carcinogenic

Reproductive Toxicity

Reproductive and/or Developmental Effects

Name	Route	Value	Species	Test result	Exposure Duration
D-gluconic acid, compound with N,N''-bis(4-chlorophenyl)-3,12-diimino-2,4,11,13-tetraazatetradecanediamidine (2:1)	Ingestion	Not classified for development	Rat	NOAEL 30 mg/kg/day	during gestation

Target Organ(s)

Specific Target Organ Toxicity - single exposure

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
D-gluconic acid, compound with N,N''-bis(4-chlorophenyl)-3,12-diimino-2,4,11,13-tetraazatetradecanediamidine (2:1)	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	similar health hazards	NOAEL Not available	

Specific Target Organ Toxicity - repeated exposure

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
D-gluconic acid, compound with N,N''-bis(4-chlorophenyl)-3,12-diimino-2,4,11,13-tetraazatetradecanediamidine (2:1)	Ingestion	liver	Some positive data exist, but the data are not sufficient for classification	Dog	NOAEL 0.89 mg/kg/day	1 years
D-gluconic acid, compound with N,N''-bis(4-chlorophenyl)-3,12-diimino-2,4,11,13-tetraazatetradecanediamidine (2:1)	Ingestion	immune system	Not classified	Rabbit	NOAEL 71 mg/kg/day	2 years
D-gluconic acid, compound with N,N''-bis(4-chlorophenyl)-3,12-diimino-2,4,11,13-tetraazatetradecanediamidine (2:1)	Ingestion	hematopoietic system | kidney and/or bladder	Not classified	Rat	NOAEL 71 mg/kg/day	2 years

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.

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
D-gluconic acid, compound with N,N''-bis(4-chlorophenyl)-3,12-diimino-2,4,11,13-tetraazatetradecanediamidine (2:1)	18472-51-0	Green algae	Experimental	72 hours	EC50	0.081 mg/l
D-gluconic acid, compound with N,N''-bis(4-chlorophenyl)-3,12-diimino-2,4,11,13-tetraazatetradecanediamidine (2:1)	18472-51-0	Water flea	Experimental	48 hours	EC50	0.087 mg/l
D-gluconic acid, compound with N,N''-bis(4-chlorophenyl)-3,12-diimino-2,4,11,13-tetraazatetradecanediamidine (2:1)	18472-51-0	Zebra Fish	Experimental	96 hours	LC50	2.08 mg/l
D-gluconic acid, compound with N,N''-bis(4-chlorophenyl)-3,12-diimino-2,4,11,13-tetraazatetradecanediamidine (2:1)	18472-51-0	Green algae	Experimental	72 hours	NOEC	0.007 mg/l
D-gluconic acid, compound with N,N''-bis(4-chlorophenyl)-3,12-diimino-2,4,11,13-tetraazatetradecanediamidine (2:1)	18472-51-0	Water flea	Experimental	21 days	NOEC	0.021 mg/l

12.2. Persistence and degradability

Material	CAS Nbr	Test type	Duration	Study Type	Test result	Protocol
D-gluconic acid, compound with N,N''-bis(4-chlorophenyl)-3,12-diimino-2,4,11,13-tetraazatetradecanediamidine (2:1)	18472-51-0	Experimental Biodegradation	28 days	Dissolv. Organic Carbon Deplet	71 % weight	OECD 301A - DOC Die Away Test

12.3 : Bioaccumulative potential

Material	Cas No.	Test type	Duration	Study Type	Test result	Protocol

D-gluconic acid, compound with N,N''-bis(4-chlorophenyl)-3,12-diimino-2,4,11,13-tetraazatetradecanediamidine (2:1)	18472-51-0	Experimental Bioconcentration		Log Kow	-1.81	Other methods

12.4. Mobility in soil
Please contact manufacturer for more details

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. Other adverse effects
No information available.

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. 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)
160506* Laboratory chemicals, consisting of or containing dangerous substances, including mixtures of laboratory chemicals

SECTION 14: Transportation information

ADR/IATA/IMDG: Not restricted for transport.

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 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.

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

H318	Causes serious eye damage.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.

Revision information:
Company Telephone information was added.
Section 2: EU sensitizer phrase information was deleted.
Section 2: Graphic information information was deleted.
Label: CLP Classification information was added.
Section 2: Label ingredient information information was deleted.
Section 2: Label remarks information was deleted.
Risk phrase - None information was deleted.
Section 3: Composition/ Information of ingredients table information was added.
Section 3: Composition/ Information of ingredients table information was deleted.
Section 3: Reference to H statement explanation in Section 016 information was added.
Section 3: Reference to R and H statement explanation in Section 16 information was deleted.
Section 3: Reference to section 15 for Nota info information was deleted.
Section 4: First aid for eye contact information information was modified.
Section 4: First aid for ingestion (swallowing) information information was modified.
Section 4: First aid for inhalation information information was modified.
Section 4: First aid for skin contact information information was modified.
Section 5: Fire - Advice for fire fighters information information was modified.
Section 6: Accidental release clean-up information information was modified.
Section 6: Accidental release personal information information was modified.
Section 7: Conditions safe storage information was modified.
Section 7: Precautions safe handling information information was modified.
Section 8: Appropriate Engineering controls information information was added.
Section 8: BLV information was added.
Section 8: Eye/face protection information information was deleted.
Section 8: Eye/face protection text information was deleted.
Section 8: Personal Protection - Eye information information was added.
Section 8: Personal Protection - Respiratory Information information was added.
Section 8: Personal Protection - Skin/hand information information was modified.
Section 8: Respiratory protection information information was deleted.
Section 9: Evaporation Rate information information was added.
Section 9: n-octanol/water coefficient information information was added.
Section 9: Property description for optional properties information was added.
Section 9: Relative density information information was modified.
Section 9: Viscosity information information was added.
Section 10.1: Reactivity information information was modified.
Section 11: Acute Toxicity table information was modified.
Section 11: Aspiration Hazard Table information was deleted.
Section 11: Aspiration Hazard text information was added.
Section 11: Carcinogenicity Table information was modified.
Section 11: Classification disclaimer information was added.
Section 11: Classification disclaimer information was deleted.
Section 11: Disclosed components not in tables text information was added.
Section 11: Germ Cell Mutagenicity Table information was modified.
Section 11: Health Effects - Ingestion information information was modified.
Section 11: Health Effects - Inhalation information information was modified.
Section 11: Health Effects - Skin information information was modified.
Section 11: Reproductive and/or Developmental Effects text information was added.
Section 11: Reproductive Toxicity Table information was modified.
Section 11: Respiratory Sensitization Table information was deleted.

Section 11: Respiratory Sensitization text information was added.
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 modified.
Section 11: Target Organs - Single Table information was modified.
Section 12: Classification Warning information was added.
Section 12: Classification Warning information was deleted.
Section 12: Component ecotoxicity information information was added.
Section 12: Material ecotoxicity information information was deleted.
Prints No Data if Bioccumulative potential information is not present information was deleted.
Prints No Data if Component ecotoxicity information is not present information was deleted.
Prints No Data if Material ecotoxicity information is not present information was added.
Prints No Data if Persistence and Degradability information is not present information was deleted.
Section 12: No PBT/vPvB information available warning information was modified.
Section 12: Persistence and Degradability information information was added.
Section 12:Bioccumulative potential information information was added.
Section 13: 13.1. Waste disposal note information was modified.
Section 13: Standard Phrase Category Waste GHS information was modified.
Section 14: Transportation classification information was modified.
Section 15: Chemical Safety Assessment information was modified.
Section 15: Regulations - Inventories information was modified.
Section 15: Symbol information information was deleted.
Section 16: List of relevant R phrase information information was deleted.
Section 16: List of relevant R-phrases information was deleted.
Two-column table displaying the unique list of H Codes and statements (std phrases) for all components of the given material. information was modified.

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 United Kingdom MSDSs are available at www.3M.com/uk

Safety Data Sheet

Document group:	22-9762-0	**Version number:**	2.01
Revision date:	19/09/2018	**Supersedes date:**	04/07/2013

Transportation version number: 1.00 (04/07/2013)

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 Enzyme B10

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

Identified uses
Kit Component

1.3. Details of the supplier of the safety data sheet

Address: 3M United Kingdom PLC, 3M Centre, Cain Road, Bracknell, Berkshire, RG12 8HT.
Telephone: +44 (0)1344 858 000
E Mail: tox.uk@mmm.com
Website: www.3M.com/uk

1.4. Emergency telephone number
+44 (0)1344 858 000

SECTION 2: Hazard identification

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

CLASSIFICATION:
This material is not classified as hazardous according to Regulation (EC) No. 1272/2008, as amended, on classification, labelling, and packaging of substances and mixtures.

2.2. Label elements
CLP REGULATION (EC) No 1272/2008
Not applicable

SUPPLEMENTAL INFORMATION

Supplemental Hazard Statements:

EUH210	Safety data sheet available on request.

2.3. Other hazards

None known.

SECTION 3: Composition/information on ingredients

Ingredient	CAS Nbr	EC No.	REACH Registration No.	% by Wt	Classification
Sucrose	57-50-1	200-334-9		40 - 70	Substance with a Community level exposure limit in the workplace
Sodium 4-(2-hydroxyethyl)piperazin-1-ylethanesulphonate	75277-39-3	278-169-7		10 - 30	Substance not classified as hazardous
Non hazardous ingredients	Mixture			3 - 7	Substance not classified as hazardous
4-(2-hydroxyethyl)piperazin-1-ylethanesulphonic acid	7365-45-9	230-907-9		3 - 7	Substance not classified as hazardous
Magnesium Sulfate	7487-88-9	231-298-2		3 - 7	Substance not classified as hazardous
Albumins, blood serum	9048-46-8	232-936-2		0.5 - 1.5	Substance not classified as hazardous
Edetic acid	60-00-4	200-449-4		0.5 - 1.5	Eye Irrit. 2, H319
(R*,R*)-1,4-dimercaptobutane-2,3-diol	3483-12-3	222-468-7		0.1 - 1	Substance not classified as hazardous
4-Thiazolecarboxylic acid, 4,5-dihydro-2-(6-hydroxy-2-benzothiazolyl)-, potassium salt (1:1), (4S)-	115144-35-9			0.1 - 1	Substance not classified as hazardous
Luciferase (firefly luciferin)	61970-00-1	263-359-4		< 0.01	Substance not classified as hazardous
Tetrasodium pyrophosphate	7722-88-5	231-767-1		< 0.01	Substance with a Community level exposure limit in the workplace

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
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
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.

Hazardous Decomposition or By-Products

Substance	Condition
Carbon monoxide.	During combustion.
Carbon dioxide.	During combustion.
Oxides of nitrogen.	During combustion.
Oxides of sulphur.	During combustion.

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. Observe precautions from other sections.

6.2. Environmental precautions
Avoid release to the environment.

6.3. Methods and material for containment and cleaning up
Collect as much of the spilled material as possible. Place in a closed container approved for transportation by appropriate authorities. Clean up residue. 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
Avoid breathing dust/fume/gas/mist/vapours/spray. Do not eat, drink or smoke when using this product. Wash thoroughly after handling.

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

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
Sucrose	57-50-1	UK HSC	TWA:10 mg/m3;STEL:20 mg/m3	
Tetrasodium pyrophosphate	7722-88-5	UK HSC	TWA:5 mg/m3	

UK HSC : UK Health and Safety Commission
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.

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:
Safety glasses with side shields.

Skin/hand protection
No chemical protective gloves are required.

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 particulates

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	Solid.
Specific Physical Form:	Freeze Dried Powder
Appearance/Odour	DTT Odour; White Colour
Odour threshold	*No data available.*
pH	7.7 - 7.8 [*Test Method:*ISO Method]

Boiling point/boiling range	*No data available.*
Melting point	*No data available.*
Flammability (solid, gas)	Not classified
Explosive properties	Not classified
Oxidising properties	Not classified
Flash point	*Not applicable.*
Autoignition temperature	*No data available.*
Flammable Limits(LEL)	*Not applicable.*
Flammable Limits(UEL)	*Not applicable.*
Vapour pressure	*No data available.*
Relative density	*No data available.*
Water solubility	Complete
Solubility- non-water	*No data available.*
Partition coefficient: n-octanol/water	*No data available.*
Evaporation rate	*No data available.*
Vapour density	*No data available.*
Decomposition temperature	*No data available.*
Viscosity	*No data available.*
Density	*No data available.*

9.2. Other information

EU Volatile Organic Compounds	*No data available.*
Molecular weight	*Not applicable.*
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.

10.5 Incompatible materials
None known.

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 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

3M assessments.

11.1 Information on Toxicological effects

Signs and Symptoms of Exposure

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

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

Skin contact
Mechanical skin irritation: Signs/symptoms may include abrasion, redness, pain, and itching.

Eye contact
Mechanical eye irritation: Signs/symptoms may include pain, redness, tearing and corneal abrasion.

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

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	Ingestion		No data available; calculated ATE >5,000 mg/kg
Sucrose	Dermal		LD50 estimated to be > 5,000 mg/kg
Sucrose	Ingestion	Rat	LD50 29,700 mg/kg
Magnesium Sulfate	Dermal		LD50 estimated to be > 5,000 mg/kg
Magnesium Sulfate	Ingestion	Mouse	LD50 > 5,000 mg/kg
Edetic acid	Dermal		LD50 estimated to be > 5,000 mg/kg
Edetic acid	Ingestion	Rat	LD50 > 2,000 mg/kg

ATE = acute toxicity estimate

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

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

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

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

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

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

Reproductive Toxicity

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

Target Organ(s)

Specific Target Organ Toxicity - single exposure
For the component/components, either no data is currently available or the data is not sufficient for classification.

Specific Target Organ Toxicity - repeated exposure
For the component/components, either no data is currently available or the data is not sufficient for classification.

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.

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
Sucrose	57-50-1		Data not available or insufficient for classification			
Sodium 4-(2-hydroxyethyl)piperazin-1-ylethanesulphonate	75277-39-3	Green Algae	Estimated	72 hours	EC50	>100 mg/l
Sodium 4-(2-hydroxyethyl)piperazin-1-ylethanesulphonate	75277-39-3	Zebra Fish	Estimated	96 hours	LC50	>100 mg/l
Sodium 4-(2-hydroxyethyl)piperazin-1-ylethanesulphonate	75277-39-3	Green Algae	Estimated	72 hours	NOEC	100 mg/l
4-(2-hydroxyethyl)piperazin-1-ylethanesulphonic acid	7365-45-9	Green Algae	Experimental	72 hours	EC50	>100 mg/l
4-(2-hydroxyethyl)piperazin-1-ylethanesulphonic acid	7365-45-9	Water flea	Experimental	48 hours	EC50	>100 mg/l
4-(2-hydroxyethyl)piperazin-1-ylethanesulphonic acid	7365-45-9	Zebra Fish	Experimental	96 hours	LC50	>100 mg/l
4-(2-hydroxyethyl)piperazin-1-ylethanesulphonic acid	7365-45-9	Green Algae	Experimental	72 hours	NOEC	100 mg/l
Magnesium Sulfate	7487-88-9	Algae other	Experimental	72 hours	IC50	1,215 mg/l
Magnesium Sulfate	7487-88-9	Fathead minnow	Experimental	96 hours	LC50	2,820 mg/l

Magnesium Sulfate	7487-88-9	Water flea	Experimental	48 hours	EC50	344 mg/l
Magnesium Sulfate	7487-88-9	Algae other	Experimental	72 hours	Inhibitory Concentration 10%	43 mg/l
Albumins, blood serum	9048-46-8		Data not available or insufficient for classification			
Edetic acid	60-00-4	Bluegill	Estimated	96 hours	LC50	792 mg/l
Edetic acid	60-00-4	Water flea	Estimated	24 hours	EC50	794 mg/l
Edetic acid	60-00-4	Water flea	Estimated	21 days	NOEC	22 mg/l
(R*,R*)-1,4-dimercaptobutane-2,3-diol	3483-12-3	Water flea	Experimental	48 hours	LC50	27 mg/l
4-Thiazolecarboxylic acid, 4,5-dihydro-2-(6-hydroxy-2-benzothiazolyl)-, potassium salt (1:1), (4S)-	115144-35-9		Data not available or insufficient for classification			
Luciferase (firefly luciferin)	61970-00-1		Data not available or insufficient for classification			
Tetrasodium pyrophosphate	7722-88-5	Water flea	Experimental	48 hours	LC50	391 mg/l

12.2. Persistence and degradability

Material	CAS Nbr	Test type	Duration	Study Type	Test result	Protocol
Sucrose	57-50-1	Data not availbl-insufficient			N/A	
Sodium 4-(2-hydroxyethyl)piperazin-1-ylethanesulphonate	75277-39-3	Estimated Biodegradation	28 days	BOD	0 % weight	OECD 301D - Closed bottle test
4-(2-hydroxyethyl)piperazin-1-ylethanesulphonic acid	7365-45-9	Experimental Biodegradation	28 days	BOD	-2 % weight	OECD 301D - Closed bottle test
Magnesium Sulfate	7487-88-9	Data not availbl-insufficient			N/A	
Albumins, blood serum	9048-46-8	Data not availbl-insufficient			N/A	
Edetic acid	60-00-4	Experimental Aquatic Biodegrad. - Aerobic	28 days	BOD	0 % BOD/ThBOD	OECD 301D - Closed bottle test
(R*,R*)-1,4-dimercaptobutane-2,3-diol	3483-12-3	Experimental Chemical Degradation		Half-life (t 1/2)	10 hours (t 1/2)	Other methods
4-Thiazolecarboxylic acid, 4,5-dihydro-2-(6-hydroxy-2-benzothiazolyl)-, potassium salt (1:1), (4S)-	115144-35-9	Estimated Biodegradation	28 days	BOD	0 % weight	OECD 301C - MITI test (I)
Luciferase (firefly luciferin)	61970-00-1	Data not availbl-insufficient			N/A	
Tetrasodium pyrophosphate	7722-88-5	Data not availbl-insufficient			N/A	

12.3 : Bioaccumulative potential

Material	Cas No.	Test type	Duration	Study Type	Test result	Protocol
Sucrose	57-50-1	Experimental Bioconcentration		Log Kow	-3.70	Other methods
Sodium 4-(2-hydroxyethyl)piperazin-1-ylethanesulphonate	75277-39-3	Estimated Bioconcentration		Log Kow	<-3.85	Estimated: Octanol-water partition coefficient

4-(2-hydroxyethyl)piperazin-1-ylethanesulphonic acid	7365-45-9	Estimated Bioconcentration		Log Kow	<-3.85	Estimated: Octanol-water partition coefficient
Magnesium Sulfate	7487-88-9	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Albumins, blood serum	9048-46-8	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Edetic acid	60-00-4	Experimental BCF - Bluegill	28 days	Bioaccumulation factor	1.8	Bioconcentration: Flow-through
(R*,R*)-1,4-dimercaptobutane-2,3-diol	3483-12-3	Estimated Bioconcentration		Bioaccumulation factor	2.5	Estimated: Bioconcentration factor
4-Thiazolecarboxylic acid, 4,5-dihydro-2-(6-hydroxy-2-benzothiazolyl)-, potassium salt (1:1), (4S)-	115144-35-9	Estimated Bioconcentration		Bioaccumulation factor	3.39	Estimated: Bioconcentration factor
Luciferase (firefly luciferin)	61970-00-1	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Tetrasodium pyrophosphate	7722-88-5	Data not available or insufficient for classification	N/A	N/A	N/A	N/A

12.4. Mobility in soil
Please contact manufacturer for more details

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. Other adverse effects
No information available.

SECTION 13: Disposal considerations

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

This product has been classified as a non-hazardous waste. Prior to disposal, consult all applicable authorities and regulations to insure proper classification. Incinerate in a permitted waste incineration facility. Proper destruction may require the use of additional fuel during incineration processes. As a disposal alternative, utilize an acceptable permitted waste disposal facility. If no other disposal options are available, waste product may be placed in a landfill properly designed for industrial waste.

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)
160509 Discarded chemicals other than those mentioned in 16 05 06, 16 05 07 or 16 05 08

SECTION 14: Transportation information

ADR/IATA/IMDG: Not hazardous for transport.

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.

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

H319	Causes serious eye irritation.

Revision information:
Company Telephone information was added.
Section 2.1: Classification information information was deleted.
Section 2: Additional label requirements phrase information was deleted.
Section 2: Graphic information information was deleted.
Label: CLP Classification information was added.
Label: CLP Supplemental Hazard Statements information was added.
Section 2: Label ingredient information information was deleted.
Risk phrase - None information was deleted.
Section 3: Composition/ Information of ingredients table information was added.
Section 3: Composition/ Information of ingredients table information was deleted.
Section 3: Reference to H statement explanation in Section 016 information was added.
Section 3: Reference to R and H statement explanation in Section 16 information was deleted.
Section 3: Reference to section 15 for Nota info information was deleted.
Section 4: First aid for ingestion (swallowing) information information was modified.
Section 4: First aid for inhalation information information was modified.
Section 5: Fire - Advice for fire fighters information information was modified.
Section 5: Fire - Extinguishing media information information was modified.
Section 6: Accidental release clean-up information information was modified.
Section 6: Accidental release personal information information was modified.
Section 7: Conditions safe storage information was modified.
Section 7: Precautions safe handling information information was modified.
Section 8: BLV information was added.
Section 8: Eye/face protection information information was modified.
Section 8: Eye/face protection text information was deleted.
Section 8: mg/m³ key information was deleted.
Section 8: Occupational exposure limit table information was added.
Section 8: Occupational exposure limit table information was modified.
OEL Reg Agency Desc information was modified.
Section 8: Personal Protection - Eye information information was added.
Section 8: Personal Protection - Respiratory Information information was added.
Section 8: Personal Protection - Skin/hand information information was added.
Section 8: ppm key information was deleted.
Section 8: Respiratory protection - recommended respirators guide information was added.
Section 8: Respiratory protection - recommended respirators information information was added.
Section 8: Respiratory protection information information was deleted.
Section 8: Skin protection - protective clothing text information was deleted.
Section 8: Skin protection - recommended gloves information information was deleted.
Section 8: Skin protection - recommended gloves text information was deleted.

Section 9: pH information information was modified.
Section 9: Property description for optional properties information was added.
Section 10: Hazardous decomposition products during combustion text information was added.
Section 11: Acute Toxicity table information was modified.
Section 11: Aspiration Hazard Table information was deleted.
Section 11: Aspiration Hazard text information was added.
Section 11: Carcinogenicity Table information was deleted.
Section 11: Carcinogenicity text information was added.
Section 11: Classification disclaimer information was added.
Section 11: Classification disclaimer information was deleted.
Section 11: Disclosed components not in tables text information was added.
Section 11: Germ Cell Mutagenicity Table information was deleted.
Section 11: Germ Cell Mutagenicity text information was added.
Section 11: Health Effects - Eye information information was modified.
Section 11: Health Effects - Ingestion information information was modified.
Section 11: Health Effects - Inhalation information information was modified.
Section 11: Health Effects - Skin information information was modified.
Section 11: Reproductive Toxicity Table information was deleted.
Section 11: Respiratory Sensitization Table information was deleted.
Section 11: Respiratory Sensitization text information was added.
Section 11: Serious Eye Damage/Irritation Table information was deleted.
Section 11: Serious Eye Damage/Irritation text information was added.
Section 11: Skin Corrosion/Irritation Table information was deleted.
Section 11: Skin Corrosion/Irritation text information was added.
Section 11: Skin Sensitization Table information was deleted.
Section 11: Skin Sensitization text information was added.
Section 11: Specific Target Organ Toxicity - repeated exposure text information was added.
Section 11: Specific Target Organ Toxicity - single exposure text information was added.
Section 11: Target Organs - Repeated Table information was deleted.
Section 11: Target Organs - Single Table information was deleted.
Section 12: Classification Warning information was added.
Section 12: Classification Warning information was deleted.
Section 12: Component ecotoxicity information information was added.
Prints No Data if Bioccumulative potential information is not present information was deleted.
Prints No Data if Component ecotoxicity information is not present information was deleted.
Prints No Data if Persistence and Degradability information is not present information was deleted.
Section 12: No PBT/vPvB information available warning information was modified.
Section 12: Persistence and Degradability information information was added.
Section 12:Bioccumulative potential information information was added.
Section 13: 13.1. Waste disposal note information was modified.
Section 13: Standard Phrase Category Waste GHS information was modified.
Section 15: Chemical Safety Assessment information was modified.
Section 15: Symbol information information was deleted.
Section 16: List of relevant R phrase information information was deleted.
Section 16: List of relevant R-phrases information was deleted.

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3M United Kingdom MSDSs are available at www.3M.com/uk