Safety Data Sheet

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This Safety Data Sheet has been prepared in accordance with the GHS guidelines & India Hazardous substances (Classification, Labeling & Packaging) Draft Rules 2011.

SECTION 1: Identification

1.1. Product identifier
Ultra multi enzymatic cleaner-NEW

Product Identification Numbers
IA-4201-0082-7

1.2. Recommended use and restrictions on use

Recommended use
Instrument Cleaner, Hard Surface Cleaner

1.3. Supplier's details

Address:	3M India Limited, plot-48-51, Electronic city, Hosur road, Bangalore-560100
Telephone:	080-45543000, contact Product EHS team
E Mail:	productehs.in@mmm.com
Website:	http://solutions.3mindia.co.in

1.4. Emergency telephone number
080-45543000 (Contact hours: 8:00 AM to 5:00 PM)

SECTION 2: Hazard identification

Under MSIHC Rules, information is noted below on flammability, acute toxicity and explosivity relevant to this product. In line with international standards, information on other hazard classes and associated precautionary statements relevant to this product are included as well.

2.1. Classification of the substance or mixture
Respiratory Sensitizer: Category 1.
Skin Sensitizer: Category 1.
Reproductive Toxicity: Category 1B.
Specific Target Organ Toxicity (single exposure): Category 1.
Acute Aquatic Toxicity: Category 3.

2.2. Label elements
Signal Word
DANGER!

Symbols
Health Hazard |

Pictograms

HAZARD STATEMENTS:

H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H317	May cause an allergic skin reaction.
H360	May damage fertility or the unborn child.
H370	Causes damage to organs: cardiovascular system nervous system kidney/urinary tract respiratory system
H402	Harmful to aquatic life.

PRECAUTIONARY STATEMENTS

Prevention:

P201	Obtain special instructions before use.
P260	Do not breathe dust/fume/gas/mist/vapours/spray.
P284A	In case of inadequate ventilation wear respiratory protection.
P280E	Wear protective gloves.

Response:

P304 + P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P342 + P311	If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician.
P333 + P313	If skin irritation or rash occurs: Get medical advice/attention.
P308 + P311	IF exposed or concerned: Call a POISON CENTER or doctor/physician.

Storage:

P405	Store locked up.

Disposal:

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

2.3. Other hazards
None known.

SECTION 3: Composition/information on ingredients

This material is a mixture.

Ingredient	CAS Nbr	% by Wt
Water	7732-18-5	40 - 70

Glycerol	56-81-5	7 - 13
Sodium xylene sulfonate	1300-72-7	5 - 10
.beta.-Alanine, N-(2-carboxyethyl)-N-(2-ethylhexyl)-, monosodium salt	94441-92-6	3 - 7
Ethylene glycol	107-21-1	3 - 7
Borax decahydrate	1303-96-4	1 - 5
Propane-1,2-diol	57-55-6	1 - 5
Subtilisin	9014-01-1	0.5 - 1.5
Alkoxylated alcohol 2	Trade Secret	0.5 - 1.5
.ALPHA.-AMYLASE	9000-90-2	0 - 1
2-methyl-2H-isothiazol-3-one	2682-20-4	0 - 0.5
5-chloro-2-methyl-4-isothiazoline-3-one	26172-55-4	0 - 0.5

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation
Remove person to fresh air. If you feel unwell, get medical attention.

Skin contact
Immediately wash with soap and water. Remove contaminated clothing and wash before reuse. 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
This product contains ethylene glycol. Effects of oral ethylene glycol poisoning can be divided into three stages which generally occur over a time-course of hours to days following ingestion: Stage 1 (neurological effects), stage2 (cardiopulmonary effects) and stage 3 (renal effects). If ethylene glycol poisoning is confirmed, intravenous (IV) administration of ethanol should be considered. Additional pharmacologic and supportive care should be based on the treating physician's judgement.

SECTION 5: Fire-fighting measures

5.1. Suitable 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
Aldehydes.	During combustion.
Hydrocarbons.	During combustion.
Carbon monoxide.	During combustion.

Carbon dioxide.	During combustion.

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

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures
Evacuate area. Ventilate the area with fresh air. For large spill, or spills in confined spaces, provide mechanical ventilation to disperse or exhaust vapors, in accordance with good industrial hygiene practice. Refer to other sections of this SDS for information regarding physical and health hazards, respiratory protection, ventilation, and personal protective equipment.

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

6.3. Methods and material for containment and cleaning up
Contain spill. Working from around the edges of the spill inward, cover with bentonite, vermiculite, or commercially available inorganic absorbent material. Mix in sufficient absorbent until it appears dry. Remember, adding an absorbent material does not remove a physical, health, or environmental hazard. Collect as much of the spilled material as possible. Place in a 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 in accordance with applicable local/regional/national/international regulations.

SECTION 7: Handling and storage

7.1. Precautions for safe handling
For industrial/occupational use only. Not for consumer sale or use. Do not 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. Use personal protective equipment (eg. gloves, respirators…) as required.

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

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
Ethylene glycol	107-21-1	ACGIH	TWA(Vapor fraction):25 ppm;STEL(Vapor fraction):50 ppm;STEL(Inhalable aerosol):10 mg/m3	A4: Not class. as human carcin
Borax decahydrate	1303-96-4	ACGIH	TWA(inhalable fraction):2 mg/m3;STEL(inhalable fraction):6 mg/m3	A4: Not class. as human carcin
Propane-1,2-diol	57-55-6	AIHA	TWA(as aerosol):10 mg/m3	
Subtilisin	9014-01-1	ACGIH	CEIL(as pure cystalline enzyme):0.00006 mg/m3	

ACGIH : American Conference of Governmental Industrial Hygienists

AIHA : American Industrial Hygiene Association
CMRG : Chemical Manufacturer's Recommended Guidelines
TWA: Time-Weighted-Average
STEL: Short Term Exposure Limit
CEIL: Ceiling

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.

Skin/hand protection
Select and use gloves and/or protective clothing approved to relevant local standards to prevent skin contact based on the results of an exposure assessment. Selection should be based on use factors such as exposure levels, concentration of the substance or mixture, frequency and duration, physical challenges such as temperature extremes, and other use conditions. Consult with your glove and/or protective clothing manufacturer for selection of appropriate compatible gloves/protective clothing. Note: Nitrile gloves may be worn over polymer laminate gloves to improve dexterity.
Gloves made from the following material(s) are recommended: Polymer laminate

If this product is used in a manner that presents a higher potential for exposure (eg. spraying, high splash potential etc.), then use of protective coveralls may be necessary. Select and use body protection to prevent contact based on the results of an exposure assessment. The following protective clothing material(s) are recommended: Apron - polymer laminate

Respiratory protection

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

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

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	Liquid.
Specific Physical Form:	Emulsion
Color	Colorless
Odor	Odourless
Odour threshold	*Not applicable.*
pH	6.8
Melting point/Freezing point: NA	*Not applicable.*
Boiling point/Initial boiling point/Boiling range	*Not applicable.*
Flash point	*Not applicable.*
Evaporation rate	*Not applicable.*
Flammability (solid, gas)	Not applicable.

Flammable Limits(LEL)	*Not applicable.*
Flammable Limits(UEL)	*Not applicable.*
Vapour pressure	*Not applicable.*
Vapour density	*Not applicable.*
Density	1.09 g/cm3
Relative density	*Not applicable.*
Water solubility	*Not applicable.*
Solubility- non-water	*Not applicable.*
Partition coefficient: n-octanol/water	*Not applicable.*
Autoignition temperature	*Not applicable.*
Decomposition temperature	*Not applicable.*
Viscosity	*Not applicable.*

SECTION 10: Stability and reactivity

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

10.2 Chemical stability
Stable.

10.3 Possibility of hazardous reactions
Hazardous polymerisation will not occur.

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

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 be consistent with the material classification in Section 2 if specific ingredient classifications are mandated by a competent authority. In addition, toxicological data on ingredients may not be reflected in the material classification and/or the signs and symptoms of exposure, because an ingredient may be present below the threshold for labelling, an ingredient may not be available for exposure, or the data may not be relevant to the material as a whole.

11.1 Information on Toxicological effects

Signs and Symptoms of Exposure

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

Inhalation
Allergic respiratory reaction: Signs/symptoms may include difficulty breathing, wheezing, cough, and tightness of chest.

Skin contact

Contact with the skin during product use is not expected to result in significant irritation. Allergic skin reaction (non-photo induced): 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
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:
Cardiac effects: Signs/symptoms may include irregular heartbeat (arrhythmia), changes in heart rate, damage to heart muscle, heart attack, and may be fatal. Neurological effects: Signs/symptoms may include personality changes, lack of coordination, sensory loss, tingling or numbness of the extremities, weakness, tremors, and changes in blood pressure and heart rate. Respiratory effects: Signs/symptoms may include cough, shortness of breath, chest tightness, wheezing, increased heart rate, bluish coloured skin (cyanosis), sputum production, changes in lung function tests, and respiratory failure. 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.

Reproductive/Developmental Toxicity:
Contains a chemical or chemicals which can cause birth defects or other reproductive harm.

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
Glycerol	Dermal	Rabbit	LD50 estimated to be > 5,000 mg/kg
Glycerol	Ingestion	Rat	LD50 > 5,000 mg/kg
Sodium xylene sulfonate	Dermal		LD50 estimated to be > 5,000 mg/kg
Sodium xylene sulfonate	Ingestion	Rat	LD50 > 5,000 mg/kg
Ethylene glycol	Ingestion	Human	LD50 1,600 mg/kg
Ethylene glycol	Inhalation-Dust/Mist (4 hours)	Other	LC50 estimated to be 5 - 12.5 mg/l
Ethylene glycol	Dermal	Rabbit	9,530 mg/kg
Borax decahydrate	Dermal	Rabbit	LD50 > 10,000 mg/kg
Borax decahydrate	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 2 mg/l
Borax decahydrate	Ingestion	Rat	LD50 4,500 mg/kg
Propane-1,2-diol	Dermal	Rabbit	LD50 20,800 mg/kg
Propane-1,2-diol	Ingestion	Rat	LD50 22,000 mg/kg
Alkoxylated alcohol 2	Dermal	Rabbit	LD50 4,600 mg/kg
Alkoxylated alcohol 2	Ingestion	Rat	LD50 2,500 mg/kg
Subtilisin	Dermal		estimated to be > 5,000 mg/kg
Subtilisin	Inhalation-Dust/Mist		estimated to be > 12.5 mg/l
Subtilisin	Ingestion		estimated to be > 5,000 mg/kg
.ALPHA.-AMYLASE	Dermal		estimated to be > 5,000 mg/kg
.ALPHA.-AMYLASE	Inhalation-Dust/Mist		estimated to be > 12.5 mg/l
.ALPHA.-AMYLASE	Ingestion		estimated to be > 5,000 mg/kg
5-chloro-2-methyl-4-isothiazoline-3-one	Dermal	Rabbit	LD50 87 mg/kg
5-chloro-2-methyl-4-isothiazoline-3-one	Inhalation-	Rat	LC50 0.33 mg/l

	Dust/Mist (4 hours)		
5-chloro-2-methyl-4-isothiazoline-3-one	Ingestion	Rat	LD50 40 mg/kg
2-methyl-2H-isothiazol-3-one	Dermal	Rabbit	LD50 87 mg/kg
2-methyl-2H-isothiazol-3-one	Inhalation-Dust/Mist (4 hours)	Rat	LC50 0.33 mg/l
2-methyl-2H-isothiazol-3-one	Ingestion	Rat	LD50 40 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
Glycerol	Rabbit	No significant irritation
Ethylene glycol	Rabbit	Minimal irritation
Propane-1,2-diol	Rabbit	No significant irritation
5-chloro-2-methyl-4-isothiazoline-3-one	Rabbit	Corrosive
2-methyl-2H-isothiazol-3-one	Rabbit	Corrosive

Serious Eye Damage/Irritation

Name	Species	Value
Glycerol	Rabbit	No significant irritation
Ethylene glycol	Rabbit	Mild irritant
Propane-1,2-diol	Rabbit	No significant irritation
5-chloro-2-methyl-4-isothiazoline-3-one	Rabbit	Corrosive
2-methyl-2H-isothiazol-3-one	Rabbit	Corrosive

Sensitization:

Skin Sensitisation

Name	Species	Value
Glycerol	Guinea pig	Not classified
Ethylene glycol	Human	Not classified
Propane-1,2-diol	Human	Not classified
5-chloro-2-methyl-4-isothiazoline-3-one	Human and animal	Sensitising
2-methyl-2H-isothiazol-3-one	Human and animal	Sensitising

Photosensitisation

Name	Species	Value
5-chloro-2-methyl-4-isothiazoline-3-one	Human and animal	Not sensitizing
2-methyl-2H-isothiazol-3-one	Human and animal	Not sensitizing

Respiratory Sensitisation

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

Germ Cell Mutagenicity

Name	Route	Value
Ethylene glycol	In Vitro	Not mutagenic
Ethylene glycol	In vivo	Not mutagenic

Propane-1,2-diol	In Vitro	Not mutagenic
Propane-1,2-diol	In vivo	Not mutagenic
5-chloro-2-methyl-4-isothiazoline-3-one	In vivo	Not mutagenic
5-chloro-2-methyl-4-isothiazoline-3-one	In Vitro	Some positive data exist, but the data are not sufficient for classification
2-methyl-2H-isothiazol-3-one	In vivo	Not mutagenic
2-methyl-2H-isothiazol-3-one	In Vitro	Some positive data exist, but the data are not sufficient for classification

Carcinogenicity

Name	Route	Species	Value
Glycerol	Ingestion	Mouse	Some positive data exist, but the data are not sufficient for classification
Ethylene glycol	Ingestion	Multiple animal species	Not carcinogenic
Propane-1,2-diol	Dermal	Mouse	Not carcinogenic
Propane-1,2-diol	Ingestion	Multiple animal species	Not carcinogenic
5-chloro-2-methyl-4-isothiazoline-3-one	Dermal	Mouse	Not carcinogenic
5-chloro-2-methyl-4-isothiazoline-3-one	Ingestion	Rat	Not carcinogenic
2-methyl-2H-isothiazol-3-one	Dermal	Mouse	Not carcinogenic
2-methyl-2H-isothiazol-3-one	Ingestion	Rat	Not carcinogenic

Reproductive Toxicity

Reproductive and/or Developmental Effects

Name	Route	Value	Species	Test result	Exposure Duration
Glycerol	Ingestion	Not classified for female reproduction	Rat	NOAEL 2,000 mg/kg/day	2 generation
Glycerol	Ingestion	Not classified for male reproduction	Rat	NOAEL 2,000 mg/kg/day	2 generation
Glycerol	Ingestion	Not classified for development	Rat	NOAEL 2,000 mg/kg/day	2 generation
Ethylene glycol	Dermal	Not classified for development	Mouse	NOAEL 3,549 mg/kg/day	during organogenesis
Ethylene glycol	Ingestion	Not classified for development	Mouse	LOAEL 750 mg/kg/day	during organogenesis
Ethylene glycol	Inhalation	Not classified for development	Mouse	NOAEL 1,000 mg/kg/day	during organogenesis
Propane-1,2-diol	Ingestion	Not classified for female reproduction	Mouse	NOAEL 10,100 mg/kg/day	2 generation
Propane-1,2-diol	Ingestion	Not classified for male reproduction	Mouse	NOAEL 10,100 mg/kg/day	2 generation
Propane-1,2-diol	Ingestion	Not classified for development	Multiple animal species	NOAEL 1,230 mg/kg/day	during organogenesis
5-chloro-2-methyl-4-isothiazoline-3-one	Ingestion	Not classified for female reproduction	Rat	NOAEL 10 mg/kg/day	2 generation
5-chloro-2-methyl-4-isothiazoline-3-one	Ingestion	Not classified for male reproduction	Rat	NOAEL 10 mg/kg/day	2 generation
5-chloro-2-methyl-4-isothiazoline-3-one	Ingestion	Not classified for development	Rat	NOAEL 15 mg/kg/day	during organogenesis
2-methyl-2H-isothiazol-3-one	Ingestion	Not classified for female reproduction	Rat	NOAEL 10 mg/kg/day	2 generation
2-methyl-2H-isothiazol-3-one	Ingestion	Not classified for male reproduction	Rat	NOAEL 10 mg/kg/day	2 generation

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2-methyl-2H-isothiazol-3-one	Ingestion	Not classified for development	Rat	NOAEL 15 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
Ethylene glycol	Ingestion	heart | nervous system | kidney and/or bladder | respiratory system	Causes damage to organs	Human	NOAEL Not available	poisoning and/or abuse
Ethylene glycol	Ingestion	central nervous system depression	May cause drowsiness or dizziness	Human	NOAEL Not available	poisoning and/or abuse
Ethylene glycol	Ingestion	liver	Not classified	Human	NOAEL Not available	poisoning and/or abuse
Propane-1,2-diol	Ingestion	central nervous system depression	Not classified	Human and animal	NOAEL Not available	
5-chloro-2-methyl-4-isothiazoline-3-one	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	similar health hazards	NOAEL Not available	
2-methyl-2H-isothiazol-3-one	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
Glycerol	Inhalation	respiratory system | heart | liver | kidney and/or bladder	Not classified	Rat	NOAEL 3.91 mg/l	14 days
Glycerol	Ingestion	endocrine system | hematopoietic system | liver | kidney and/or bladder	Not classified	Rat	NOAEL 10,000 mg/kg/day	2 years
Ethylene glycol	Ingestion	kidney and/or bladder	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 200 mg/kg/day	2 years
Ethylene glycol	Ingestion	vascular system	Not classified	Rat	NOAEL 200 mg/kg/day	2 years
Ethylene glycol	Ingestion	heart | hematopoietic system | liver | immune system | muscles	Not classified	Rat	NOAEL 1,000 mg/kg/day	2 years
Ethylene glycol	Ingestion	respiratory system	Not classified	Mouse	NOAEL 12,000 mg/kg/day	2 years
Ethylene glycol	Ingestion	skin | endocrine system | bone, teeth, nails, and/or hair | nervous system | eyes	Not classified	Multiple animal species	NOAEL 1,000 mg/kg/day	2 years
Propane-1,2-diol	Ingestion	hematopoietic system	Not classified	Multiple animal species	NOAEL 1,370 mg/kg/day	117 days
Propane-1,2-diol	Ingestion	kidney and/or bladder	Not classified	Dog	NOAEL 5,000 mg/kg/day	104 weeks

Aspiration Hazard

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

Please contact the address or phone number listed on the first page of the SDS for additional toxicological information on this material and/or its components.

SECTION 12: Ecological information

The information below may not be consistent with the material classification in Section 2 if specific ingredient classifications are mandated by a competent authority. Additional information leading to material classification in Section 2 is available upon request. In addition, environmental fate and effects data on ingredients may not be reflected in this section because an ingredient is present below the threshold for labelling, an ingredient is not expected to be available for exposure, or the data is considered not relevant to the material as a whole.

12.1. Toxicity

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

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

No product test data available.

Material	CAS Nbr	Organism	Type	Exposure	Test endpoint	Test result
Glycerol	56-81-5	Water flea	Experimental	48 hours	LC50	1,955 mg/l
Glycerol	56-81-5	Rainbow trout	Experimental	96 hours	LC50	54,000 mg/l
Sodium xylene sulfonate	1300-72-7	Water flea	Experimental	48 hours	EC50	>400 mg/l
Sodium xylene sulfonate	1300-72-7	Fathead minnow	Experimental	96 hours	LC50	>400 mg/l
Sodium xylene sulfonate	1300-72-7	Green Algae	Experimental	96 hours	EC50	230 mg/l
Sodium xylene sulfonate	1300-72-7	Green Algae	Experimental	96 hours	NOEC	31 mg/l
.beta.-Alanine, N-(2-carboxyethyl)-N-(2-ethylhexyl)-, monosodium salt	94441-92-6		Data not available or insufficient for classification			
Ethylene glycol	107-21-1	Green algae	Experimental	72 hours	EC50	>1,000 mg/l
Ethylene glycol	107-21-1	Fathead minnow	Experimental	96 hours	LC50	8,050 mg/l
Ethylene glycol	107-21-1	Water flea	Experimental	48 hours	EC50	>1,100 mg/l
Ethylene glycol	107-21-1	Green Algae	Experimental	72 hours	NOEC	1,000 mg/l
Ethylene glycol	107-21-1	Water flea	Experimental	21 days	NOEC	100 mg/l
Borax decahydrate	1303-96-4	Zebra Fish	Estimated	96 hours	LC50	493.8 mg/l
Borax decahydrate	1303-96-4	Green Algae	Estimated	72 hours	EC50	1,848.47 mg/l
Borax decahydrate	1303-96-4	Water flea	Estimated	48 hours	EC50	4,973.9 mg/l
Borax decahydrate	1303-96-4	Water flea	Estimated	21 days	NOEC	624.4 mg/l
Borax	1303-96-4	Zebra Fish	Estimated	34 days	NOEC	197.55 mg/l

decahydrate						
Borax decahydrate	1303-96-4	Green Algae	Estimated	72 hours	Effect Concentration 10%	1,234.7 mg/l
Propane-1,2-diol	57-55-6	Green Algae	Experimental	96 hours	EC50	19,000 mg/l
Propane-1,2-diol	57-55-6	Crustacea other	Experimental	96 hours	LC50	18,800 mg/l
Propane-1,2-diol	57-55-6	Water flea	Experimental	48 hours	EC50	18,340 mg/l
Propane-1,2-diol	57-55-6	Rainbow trout	Experimental	96 hours	LC50	40,613 mg/l
Propane-1,2-diol	57-55-6	Green algae	Experimental	96 hours	NOEC	15,000 mg/l
Propane-1,2-diol	57-55-6	Water flea	Experimental	7 days	NOEC	13,020 mg/l
Alkoxylated alcohol 2	Trade Secret		Data not available or insufficient for classification			
Subtilisin	9014-01-1		Data not available or insufficient for classification			
.ALPHA.-AMYLASE	9000-90-2		Data not available or insufficient for classification			
2-methyl-2H-isothiazol-3-one	2682-20-4	Water flea	Experimental	48 hours	EC50	0.934 mg/l
2-methyl-2H-isothiazol-3-one	2682-20-4	Mysid Shrimp	Experimental	96 hours	LC50	1.81 mg/l
2-methyl-2H-isothiazol-3-one	2682-20-4	Rainbow trout	Experimental	96 hours	LC50	4.77 mg/l
2-methyl-2H-isothiazol-3-one	2682-20-4	Green Algae	Experimental	96 hours	EC50	0.23 mg/l
2-methyl-2H-isothiazol-3-one	2682-20-4	Green Algae	Experimental	96 hours	NOEC	0.12 mg/l
2-methyl-2H-isothiazol-3-one	2682-20-4	Water flea	Experimental	21 days	NOEC	0.044 mg/l
2-methyl-2H-isothiazol-3-one	2682-20-4	Fathead minnow	Experimental	33 days	NOEC	2.1 mg/l
5-chloro-2-methyl-4-isothiazoline-3-one	26172-55-4	Water flea	Laboratory	48 hours	EC50	0.18 mg/l
5-chloro-2-	26172-55-4	Rainbow trout	Laboratory	96 hours	LC50	0.19 mg/l

methyl-4-isothiazoline-3-one						
5-chloro-2-methyl-4-isothiazoline-3-one	26172-55-4	Mysid Shrimp	Laboratory	96 hours	EC50	0.33 mg/l
5-chloro-2-methyl-4-isothiazoline-3-one	26172-55-4	Green Algae	Laboratory	96 hours	EC50	0.062 mg/l
5-chloro-2-methyl-4-isothiazoline-3-one	26172-55-4	Diatom	Laboratory	72 hours	EC50	0.021 mg/l
5-chloro-2-methyl-4-isothiazoline-3-one	26172-55-4	Sheepshead Minnow	Laboratory	96 hours	LC50	0.36 mg/l
5-chloro-2-methyl-4-isothiazoline-3-one	26172-55-4	Fathead minnow	Laboratory	36 days	NOEC	0.02 mg/l
5-chloro-2-methyl-4-isothiazoline-3-one	26172-55-4	Diatom	Laboratory	72 hours	No obs Effect Level	0.01 mg/l

12.2. Persistence and degradability

Material	CAS Nbr	Test type	Duration	Study Type	Test result	Protocol
Glycerol	56-81-5	Experimental Biodegradation	14 days	BOD	63 % BOD/ThBOD	OECD 301C - MITI test (I)
Sodium xylene sulfonate	1300-72-7	Experimental Biodegradation	28 days	CO2 evolution	84 % weight	OECD 301B - Modified sturm or CO2
.beta.-Alanine, N-(2-carboxyethyl)-N-(2-ethylhexyl)-, monosodium salt	94441-92-6	Data not available-insufficient			N/A	
Ethylene glycol	107-21-1	Experimental Biodegradation	14 days	BOD	90 % BOD/ThBOD	OECD 301C - MITI test (I)
Borax decahydrate	1303-96-4	Data not available-insufficient			N/A	
Propane-1,2-diol	57-55-6	Experimental Biodegradation	28 days	BOD	90 % BOD/ThBOD	OECD 301C - MITI test (I)
Alkoxylated alcohol 2	Trade Secret	Data not available-insufficient			N/A	
Subtilisin	9014-01-1	Experimental Biodegradation	28 days	BOD	65-80 % weight	OECD 301D - Closed bottle test
.ALPHA.-	9000-90-2	Experimental	28 days	Dissolv.	99 % weight	OECD 301E - Modified

AMYLASE		Biodegradation		Organic Carbon Deplet		OECD Scre
2-methyl-2H-isothiazol-3-one	2682-20-4	Experimental Biodegradation	29 days	CO2 evolution	50 %CO2 evolution/THCO2 evolution	OECD 301B - Modified sturm or CO2
5-chloro-2-methyl-4-isothiazoline-3-one	26172-55-4	Experimental Biodegradation	28 days	CO2 evolution	62 %CO2 evolution/THCO2 evolution	OECD 301B - Modified sturm or CO2

12.3 : Bioaccumulative potential

Material	CAS Nbr	Test type	Duration	Study Type	Test result	Protocol
Glycerol	56-81-5	Experimental Bioconcentration		Log Kow	-1.76	Other methods
Sodium xylene sulfonate	1300-72-7	Estimated BCF-Carp	42 days	Bioaccumulation factor	=<2.3	OECD 305E - Bioaccumulation flow-through fish test
.beta.-Alanine, N-(2-carboxyethyl)-N-(2-ethylhexyl)-, monosodium salt	94441-92-6	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Ethylene glycol	107-21-1	Experimental Bioconcentration		Log Kow	-1.36	Other methods
Borax decahydrate	1303-96-4	Experimental Bioconcentration		Log Kow	-1.53	Other methods
Propane-1,2-diol	57-55-6	Experimental Bioconcentration		Log Kow	-0.92	Other methods
Alkoxylated alcohol 2	Trade Secret	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Subtilisin	9014-01-1	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
.ALPHA.-AMYLASE	9000-90-2	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
2-methyl-2H-isothiazol-3-one	2682-20-4	Experimental Bioconcentration		Log Kow	-0.486	Other methods
5-chloro-2-methyl-4-isothiazoline-3-one	26172-55-4	Experimental Bioconcentration		Log Kow	0.45	Other methods

12.4. Mobility in soil
Please contact manufacturer for more details

12.5 Other Adverse effects
No information available.

SECTION 13: Disposal considerations

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

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. Empty drums/barrels/containers used for transporting and handling hazardous chemicals (chemical substances/mixtures/preparations classified as Hazardous as per applicable regulations) shall be considered, stored, treated & disposed of as hazardous wastes unless otherwise defined by applicable waste regulations. Consult with the respective regulating authorities to determine the available treatment and disposal facilities.

SECTION 14: Transport Information

Not hazardous for transportation.

Air Transport (IATA)Regulations
UN No Not applicable
Proper Shipping Name Not applicable
Hazard Classs/Division Not applicable
Subsidiary Risk Not applicable
Packing Group: Not applicable

Marine Transport (IMDG)
UN No Not applicable
Proper Shipping Name Not applicable
Hazard Classs/Division Not applicable
Subsidiary Risk Not applicable
Packing Group: Not applicable
Environmental Hazards: Not applicable

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.

Applicable Environmental, Health and Safety Regulations
The Manufacture, Storage and Import of Hazardous Chemical Rules, 1989
The Bio Medical Waste (Management & Handling) Rules, 1998
Hazardous Chemicals (Classification, Packaging and Labelling Draft Rules), 2011

The following ingredients are listed as hazardous on Part II of Schedule I of the India Manufacture, Storage and Import of Hazardous Chemicals (MSIHC) rules
Ethylene glycol

The following ingredients are classified as hazardous based on the criteria listed under Part I of Schedule I of the India Manufacture, Storage and Import of Hazardous Chemicals (MSIHC) rules:

The Product is classified as Non- Hazardous.

SECTION 16: Other information

NFPA Hazard Classification

Health: 2 **Flammability:** 1 **Instability:** 0 **Special Hazards:** None

National Fire Protection Association (NFPA) hazard ratings are designed for use by emergency response personnel to address the hazards that are presented by short-term, acute exposure to a material under conditions of fire, spill, or similar emergencies. Hazard ratings are primarily based on the inherent physical and toxic properties of the material but also include the toxic properties of combustion or decomposition products that are known to be generated in significant quantities.

Revision information:
Section 14: Packing group (IMO) information was added.
Company Telephone information was modified.
Section 1: Emergency telephone information was modified.
Label: GHS Precautionary - Prevention information was modified.
Label: GHS Precautionary - Response information was modified.
Label: GHS Precautionary - Storage information was added.
Section 6: Accidental release clean-up information information was modified.
Section 7: Precautions safe handling information information was modified.
Section 8: Occupational exposure limit table information was modified.
Section 8: Personal Protection - Skin/body information information was modified.
Section 8: Respiratory protection - recommended respirators information information was modified.
Section 09: Color information was added.
Section 09: Odor information was added.
Sections 3 and 9: Odour, colour, grade information information was deleted.
Section 11: Acute Toxicity table information was modified.
Section 11: Reproductive Toxicity 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: Component ecotoxicity information 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: Environmental hazards information was added.
Section 14: IMO Subsidiary Risk information was added.
Section 14: IMO transport hazard classes information was added.
Section 14: Proper Shipping Name (IMO) information was added.
Section 14: UN Number (IMO) information was added.
Section 15: Applicable Environmental, Health and Safety Regulations information was modified.
Sectio 16: UK disclaimer 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 India SDSs are available at http://solutions.3mindia.co.in