



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

3M Ultimate Dresser

Product Identification Numbers

IA-2601-0038-2 IA-2601-0409-5

1.2. Recommended use and restrictions on use

Recommended use

Automotive., Dresser for plastic/vinyl parts

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

Skin Sensitizer: Category 1A.
Carcinogenicity: Category 2.
Reproductive Toxicity: Category 2.
Acute Aquatic Toxicity: Category 3.
Chronic Aquatic Toxicity: Category 3.

2.2. Label elements

Signal Word

Warning

Symbols

Exclamation mark | Health Hazard |

Pictograms**HAZARD STATEMENTS:**

H317 May cause an allergic skin reaction.
 H351 Suspected of causing cancer.
 H361 Suspected of damaging fertility or the unborn child.
 H412 Harmful to aquatic life with long lasting effects.

PRECAUTIONARY STATEMENTS**General:**

P101 If medical advice is needed, have product container or label at hand.
 P102 Keep out of reach of children.

Prevention:

P280E Wear protective gloves.

Response:

P333 + P313 If skin irritation or rash occurs: Get medical advice/attention.

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	60 - 90
Glycerol	56-81-5	1 - 15
POLY(dimethylsiloxane)	63148-62-9	5 - 15
Poly(oxy-1,2-ethanediyl), .alpha.-decyl-.omega.-hydroxy-	26183-52-8	0.1 - 2
2,2',2''-Nitrilotriethanol	102-71-6	0.1 - 1.5
Diethanolamine	111-42-2	< 0.5
BENZALDEHYDE	100-52-7	< 0.5
5-chloro-2-methyl-4-isothiazoline-3-one	26172-55-4	< 0.1
2-methyl-2H-isothiazol-3-one	2682-20-4	< 0.01

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

If exposed, flush eyes with large amounts of water. Remove contact lenses if easy to do. Continue rinsing. If signs/symptoms develop, get medical attention.

If swallowed

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

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

Allergic skin reaction (redness, swelling, blistering, and itching).

4.3. Indication of any immediate medical attention and special treatment required

Not applicable

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

<u>Substance</u>	<u>Condition</u>
Hydrocarbons.	During combustion.
Formaldehyde	During combustion.
Carbon monoxide.	During combustion.
Carbon dioxide.	During combustion.
Irritant vapours or gases.	During combustion.
Oxides of nitrogen.	During combustion.

5.3. Special protective actions for fire-fighters

Wear full protective clothing, including helmet, self-contained, positive pressure or pressure demand breathing apparatus, bunker coat and pants, bands around arms, waist and legs, face mask, and protective covering for exposed areas of the head.

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 water. Seal the container. Dispose of collected material as soon as possible in accordance with applicable local/regional/national/international regulations.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Keep out of reach of children. Do not handle until all safety precautions have been read and understood. Avoid breathing 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. Contaminated work clothing should not be allowed out of the workplace. Avoid release to the environment. Wash contaminated clothing before reuse. Avoid contact with oxidising agents (eg. chlorine, chromic acid etc.) Use personal protective equipment (eg. gloves, respirators...) as required.

7.2. Conditions for safe storage including any incompatibilities

Store away from heat. Store away from oxidising agents.

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
BENZALDEHYDE	100-52-7	AIHA	TWA:8.7 mg/m3(2 ppm);STEL(15 minutes):17.4 mg/m3(4 ppm)	Dermal Sensitizer
2,2',2''-Nitrilotriethanol	102-71-6	ACGIH	TWA:5 mg/m3	
Diethanolamine	111-42-2	ACGIH	TWA(inhalable fraction and vapor):1 mg/m3	A3: Confirmed animal carcin., Danger of cutaneous absorption

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:

Full face shield.

Indirect vented goggles.

Skin/hand protection

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

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

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 and particulates, including oily mists

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	Pink, White
Odor	Cherry
Odour threshold	<i>No data available.</i>
pH	7.5 - 8.5 Units not available or not applicable.
Melting point/Freezing point: NA	<i>Not applicable.</i>
Boiling point/Initial boiling point/Boiling range	<i>Not applicable.</i>
Flash point	<i>Not applicable.</i>
Evaporation rate	<i>No data available.</i>
Flammability	Not applicable.
Flammable Limits(LEL)	<i>Not applicable.</i>
Flammable Limits(UEL)	<i>Not applicable.</i>
Vapour pressure	<i>Not applicable.</i>
Vapor Density and/or Relative Vapor Density	<i>Not applicable.</i>
Density	0.95 - 1.05 g/cm ³ [@ 25 °C]
Relative density	<i>Not applicable.</i>
Water solubility	Complete
Solubility- non-water	<i>No data available.</i>
Partition coefficient: n-octanol/water	<i>No data available.</i>
Autoignition temperature	<i>Not applicable.</i>
Decomposition temperature	<i>No data available.</i>
Kinematic Viscosity	<i>No data available.</i>
Volatile organic compounds (VOC)	<i>No data available.</i>
Percent volatile	<i>No data available.</i>
VOC less H₂O & exempt solvents	<i>No data available.</i>

Particle Characteristics	Not applicable.
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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

Strong oxidising agents.

10.6 Hazardous decomposition products

<u>Substance</u>	<u>Condition</u>
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None known.	
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Refer to section 5.2 for hazardous decomposition products during combustion.

SECTION 11: Toxicological information

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

11.1 Information on Toxicological effects

Signs and Symptoms of Exposure

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

Inhalation

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

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. May cause additional health effects (see below).

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:**Reproductive/Developmental Toxicity:**

Contains a chemical or chemicals which can cause birth defects or other reproductive harm.

Carcinogenicity:

Contains a chemical or chemicals which can cause cancer.

Toxicological Data

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

Acute Toxicity

Name	Route	Species	Value
Overall product	Dermal		No data available; calculated ATE >5,000 mg/kg
Overall product	Ingestion		No data available; calculated ATE >5,000 mg/kg
POLY(dimethylsiloxane)	Dermal	Rabbit	LD50 > 19,400 mg/kg
POLY(dimethylsiloxane)	Ingestion	Rat	LD50 > 17,000 mg/kg
Glycerol	Dermal	Rabbit	LD50 estimated to be > 5,000 mg/kg
Glycerol	Ingestion	Rat	LD50 > 5,000 mg/kg
2,2',2''-Nitrilotriethanol	Dermal	Rabbit	LD50 > 2,000 mg/kg
2,2',2''-Nitrilotriethanol	Ingestion	Rat	LD50 9,000 mg/kg
BENZALDEHYDE	Dermal	Rabbit	LD50 >2000, <5000 mg/kg
BENZALDEHYDE	Inhalation-Dust/Mist (4 hours)	Rat	LC50 >1, <5 mg/l
BENZALDEHYDE	Ingestion	Rat	LD50 1,430 mg/kg
Diethanolamine	Dermal	Rabbit	LD50 8,180 mg/kg
Diethanolamine	Ingestion	Rat	LD50 1,410 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-Dust/Mist (4 hours)	Rat	LC50 0.171 mg/l
5-chloro-2-methyl-4-isothiazoline-3-one	Ingestion	Rat	LD50 40 mg/kg
2-methyl-2H-isothiazol-3-one	Dermal	Rat	LD50 242 mg/kg
2-methyl-2H-isothiazol-3-one	Inhalation-Dust/Mist (4 hours)	Rat	LC50 0.11 mg/l
2-methyl-2H-isothiazol-3-one	Ingestion	Rat	LD50 120 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
POLY(dimethylsiloxane)	Rabbit	No significant irritation
Glycerol	Rabbit	No significant irritation
2,2',2''-Nitrilotriethanol	Rabbit	Minimal irritation
BENZALDEHYDE	Multiple animal species	Irritant
Diethanolamine	Rabbit	Irritant
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
POLY(dimethylsiloxane)	Rabbit	No significant irritation
Glycerol	Rabbit	No significant irritation
2,2',2''-Nitrilotriethanol	Rabbit	Mild irritant

BENZALDEHYDE	Rabbit	Moderate irritant
Diethanolamine	Rabbit	Corrosive
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
2,2',2''-Nitrilotriethanol	Human	Not classified
BENZALDEHYDE	Human	Some positive data exist, but the data are not sufficient for classification
Diethanolamine	Human and animal	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
2,2',2''-Nitrilotriethanol	In Vitro	Not mutagenic
2,2',2''-Nitrilotriethanol	In vivo	Not mutagenic
BENZALDEHYDE	In vivo	Not mutagenic
BENZALDEHYDE	In Vitro	Some positive data exist, but the data are not sufficient for classification
Diethanolamine	In Vitro	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
2,2',2''-Nitrilotriethanol	Dermal	Multiple animal species	Not carcinogenic
2,2',2''-Nitrilotriethanol	Ingestion	Mouse	Some positive data exist, but the data are not sufficient for classification

BENZALDEHYDE	Ingestion	Mouse	Some positive data exist, but the data are not sufficient for classification
Diethanolamine	Dermal	Mouse	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
2,2',2''-Nitrilotriethanol	Ingestion	Not classified for development	Mouse	NOAEL 1,125 mg/kg/day	during organogenesis
BENZALDEHYDE	Ingestion	Not classified for female reproduction	Rat	NOAEL 5 mg/kg/day	1 generation
Diethanolamine	Ingestion	Not classified for male reproduction	Rat	NOAEL 128 mg/kg/day	1 generation
Diethanolamine	Dermal	Not classified for development	Rabbit	NOAEL 100 mg/kg/day	during organogenesis
Diethanolamine	Inhalation	Not classified for development	Rat	NOAEL 0.05 mg/l	during organogenesis
Diethanolamine	Ingestion	Toxic to female reproduction	Rat	NOAEL 38 mg/kg/day	1 generation
Diethanolamine	Ingestion	Toxic to development	Rat	NOAEL 38 mg/kg/day	1 generation
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
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
BENZALDEHYDE	Inhalation	respiratory irritation	May cause respiratory irritation	Human and animal	NOAEL not available	
Diethanolamine	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification		NOAEL not available	
Diethanolamine	Ingestion	kidney and/or bladder	May cause damage to organs	Rat	NOAEL 200 mg/kg	not applicable
Diethanolamine	Ingestion	central nervous system depression	Some positive data exist, but the data are not sufficient for	Rat	LOAEL 200 mg/kg	not applicable

			classification			
Diethanolamine	Ingestion	liver	Not classified	Rat	NOAEL 1,600 mg/kg	not applicable
5-chloro-2-methyl-4-isothiazoline-3-one	Inhalation	respiratory irritation	May cause respiratory irritation	similar health hazards	NOAEL Not available	
2-methyl-2H-isothiazol-3-one	Inhalation	respiratory irritation	May cause respiratory irritation	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
2,2',2''-Nitrilotriethanol	Dermal	kidney and/or bladder	Not classified	Multiple animal species	NOAEL 2,000 mg/kg/day	2 years
2,2',2''-Nitrilotriethanol	Dermal	liver	Not classified	Mouse	NOAEL 4,000 mg/kg/day	13 weeks
2,2',2''-Nitrilotriethanol	Ingestion	kidney and/or bladder	Some positive data exist, but the data are not sufficient for classification	Rat	LOAEL 1,000 mg/kg/day	2 years
2,2',2''-Nitrilotriethanol	Ingestion	liver	Not classified	Guinea pig	NOAEL 1,600 mg/kg/day	24 weeks
BENZALDEHYDE	Inhalation	hematopoietic system liver nervous system respiratory system heart endocrine system gastrointestinal tract kidney and/or bladder	Not classified	Rat	NOAEL 4.34 mg/l	14 days
BENZALDEHYDE	Ingestion	liver nervous system kidney and/or bladder	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 400 mg/kg/day	13 weeks
BENZALDEHYDE	Ingestion	gastrointestinal tract heart endocrine system bone, teeth, nails, and/or hair hematopoietic system immune system eyes respiratory system	Not classified	Rat	NOAEL 800 mg/kg/day	13 weeks
Diethanolamine	Dermal	hematopoietic system	May cause damage to organs though prolonged or repeated exposure	Rat	LOAEL 32 mg/kg/day	13 weeks
Diethanolamine	Dermal	kidney and/or bladder	Some positive data exist, but the data are not sufficient for classification	Rat	LOAEL 8 mg/kg/day	2 years
Diethanolamine	Dermal	liver	Not classified	Rat	NOAEL 500 mg/kg/day	13 weeks
Diethanolamine	Inhalation	liver kidney and/or bladder	Not classified	Rat	NOAEL 0.03 mg/l	13 weeks
Diethanolamine	Ingestion	hematopoietic system	May cause damage to organs though prolonged or repeated exposure	Rat	NOAEL 14 mg/kg/day	13 weeks
Diethanolamine	Ingestion	nervous system	Some positive data exist, but the data are not sufficient for	Rat	NOAEL 57 mg/kg/day	13 weeks

			classification			
Diethanolamine	Ingestion	kidney and/or bladder	Not classified	Rat	NOAEL not available	13 weeks
Diethanolamine	Ingestion	liver	Not classified	Rat	NOAEL 436 mg/kg/day	13 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:

GHS Chronic 3: Harmful to aquatic life with long lasting effects.

No product test data available.

Material	CAS Nbr	Organism	Type	Exposure	Test endpoint	Test result
Glycerol	56-81-5	Bacteria	Experimental	16 hours	NOEC	10,000 mg/l
Glycerol	56-81-5	Rainbow trout	Experimental	96 hours	LC50	54,000 mg/l
Glycerol	56-81-5	Water flea	Experimental	48 hours	LC50	1,955 mg/l
POLY(dimethylsiloxane)	63148-62-9	N/A	Data not available or insufficient for classification	N/A	N/A	N/A
Poly(oxy-1,2-ethanediyl), .alpha.-decyl-.omega.-hydroxy-	26183-52-8	N/A	Data not available or insufficient for classification	N/A	N/A	N/A
2,2',2''-Nitrilotriethanol	102-71-6	Activated sludge	Experimental	3 hours	IC50	>1,000 mg/l
2,2',2''-Nitrilotriethanol	102-71-6	Fathead minnow	Experimental	96 hours	LC50	11,800 mg/l
2,2',2''-Nitrilotriethanol	102-71-6	Green algae	Experimental	72 hours	ErC50	512 mg/l
2,2',2''-Nitrilotriethanol	102-71-6	Water flea	Experimental	48 hours	EC50	609.98 mg/l
2,2',2''-Nitrilotriethanol	102-71-6	Green algae	Experimental	72 hours	ErC10	26 mg/l
2,2',2''-Nitrilotriethanol	102-71-6	Water flea	Experimental	21 days	NOEC	16 mg/l
BENZALDEHYDE	100-52-7	Algae or other aquatic plants	Experimental	72 hours	EC50	32 mg/l
BENZALDEHYDE	100-52-7	Bluegill	Experimental	96 hours	LC50	1.07 mg/l
BENZALDEHYDE	100-52-7	Mysid Shrimp	Experimental	48 hours	LC50	1.3 mg/l
BENZALDEHYDE	100-52-7	Water flea	Experimental	48 hours	LC50	9 mg/l

BENZALDEHYD E	100-52-7	Algae or other aquatic plants	Experimental	72 hours	NOEC	2 mg/l
BENZALDEHYD E	100-52-7	Fathead minnow	Experimental	7 days	NOEC	0.12 mg/l
BENZALDEHYD E	100-52-7	Activated sludge	Experimental	3 hours	IC50	740
BENZALDEHYD E	100-52-7	Lettuce	Experimental	14 days	EC50	448 mg/kg (Dry Weight)
Diethanolamine	111-42-2	Fathead minnow	Experimental	96 hours	LC50	100 mg/l
Diethanolamine	111-42-2	Green algae	Experimental	72 hours	EC50	9.5 mg/l
Diethanolamine	111-42-2	Water flea	Experimental	48 hours	LC50	2.15 mg/l
Diethanolamine	111-42-2	Green algae	Experimental	72 hours	NOEC	0.6 mg/l
Diethanolamine	111-42-2	Water flea	Experimental	21 days	NOEC	0.78 mg/l
5-chloro-2-methyl-4-isothiazoline-3-one	26172-55-4	Diatom	Experimental	72 hours	EbC50	0.021 mg/l
5-chloro-2-methyl-4-isothiazoline-3-one	26172-55-4	Green algae	Experimental	96 hours	ErC50	0.018 mg/l
5-chloro-2-methyl-4-isothiazoline-3-one	26172-55-4	Mysid Shrimp	Experimental	96 hours	EC50	0.33 mg/l
5-chloro-2-methyl-4-isothiazoline-3-one	26172-55-4	Rainbow trout	Experimental	96 hours	LC50	0.19 mg/l
5-chloro-2-methyl-4-isothiazoline-3-one	26172-55-4	Sheepshead Minnow	Experimental	96 hours	LC50	0.36 mg/l
5-chloro-2-methyl-4-isothiazoline-3-one	26172-55-4	Water flea	Experimental	48 hours	EC50	0.18 mg/l
5-chloro-2-methyl-4-isothiazoline-3-one	26172-55-4	Diatom	Experimental	72 hours	NOEL	0.01 mg/l
5-chloro-2-methyl-4-isothiazoline-3-one	26172-55-4	Fathead minnow	Experimental	36 days	NOEC	0.02 mg/l
5-chloro-2-methyl-4-isothiazoline-3-one	26172-55-4	Water flea	Experimental	21 days	NOEC	0.172 mg/l
5-chloro-2-methyl-4-isothiazoline-3-one	26172-55-4	Bird	Experimental	8 days	LC50	100 ppm diet
2-methyl-2H-isothiazol-3-one	2682-20-4	Diatom	Experimental	72 hours	ErC50	0.099 mg/l
2-methyl-2H-isothiazol-3-one	2682-20-4	Green algae	Experimental	96 hours	ErC50	0.23 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	Sheepshead Minnow	Experimental	96 hours	LC50	25.1 mg/l
2-methyl-2H-isothiazol-3-one	2682-20-4	Water flea	Experimental	48 hours	LC50	0.934 mg/l
2-methyl-2H-isothiazol-3-one	2682-20-4	Blackworm	Experimental	28 days	NOEC	25 mg/kg (Dry Weight)
2-methyl-2H-isothiazol-3-one	2682-20-4	Diatom	Experimental	72 hours	ErC10	0.04 mg/l
2-methyl-2H-isothiazol-3-one	2682-20-4	Fathead minnow	Experimental	33 days	NOEC	2.1 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	Activated sludge	Experimental	3 hours	EC50	41 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/ThOD	OECD 301C - MITI test (I)
POLY(dimethylsiloxane)	63148-62-9	Data not available-insufficient	N/A	N/A	N/A	N/A
Poly(oxy-1,2-ethanediyl), .alpha.-decyl-.omega.-hydroxy-	26183-52-8	Data not available-insufficient	N/A	N/A	N/A	N/A
2,2',2"-Nitrilotriethanol	102-71-6	Experimental Biodegradation	19 days	Dissolv. Organic Carbon Deplet	96 %removal of DOC	similar to OECD 301E
BENZALDEHYDE	100-52-7	Experimental Biodegradation	14 days	BOD	66 %BOD/ThOD	OECD 301C - MITI test (I)
Diethanolamine	111-42-2	Experimental Biodegradation	10 days	BOD	72 %BOD/ThOD	OECD 301D - Closed bottle test
Diethanolamine	111-42-2	Experimental Biodegradation	9 days	Dissolv. Organic Carbon Deplet	98 %removal of DOC	OECD 302C - Modified MITI (II)
5-chloro-2-methyl-4-isothiazoline-3-one	26172-55-4	Experimental Aquatic Inherent Biodegrad.	2 days	BOD	97 %BOD/COD	OECD 302B Zahn-Wellens/EVPA
5-chloro-2-methyl-4-isothiazoline-3-one	26172-55-4	Experimental Biodegradation	28 days	CO2 evolution	62 %CO2 evolution/THCO2 evolution	similar to OECD 301B
5-chloro-2-methyl-4-isothiazoline-3-one	26172-55-4	Experimental Hydrolysis		Hydrolytic half-life basic pH	13 days (t 1/2)	OECD 111 Hydrolysis func of pH
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
2-methyl-2H-isothiazol-3-one	2682-20-4	Experimental Hydrolysis		Hydrolytic half-life (pH 7)	>1 years (t 1/2)	OECD 111 Hydrolysis func of pH

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	
POLY(dimethylsiloxane)	63148-62-9	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Poly(oxy-1,2-ethanediyl), .alpha.-decyl-.omega.-hydroxy-	26183-52-8	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
2,2',2"-Nitrilotriethanol	102-71-6	Experimental BCF - Fish	42 days	Bioaccumulation factor	<3.9	similar to OECD 305
BENZALDEHYDE	100-52-7	Experimental Bioconcentration		Log Kow	1.4	OECD 117 log Kow HPLC method
Diethanolamine	111-42-2	Experimental Bioconcentration		Log Kow	-2.18	OECD 107 log Kow shke flask mtd
5-chloro-2-methyl-4-isothiazoline-3-one	26172-55-4	Experimental Bioconcentration		Log Kow	0.45	
2-methyl-2H-isothiazol-3-one	2682-20-4	Analogous Compound BCF - Fish	56 days	Bioaccumulation factor	5.75	
2-methyl-2H-isothiazol-3-one	2682-20-4	Experimental Bioconcentration		Log Kow	-0.486	OECD 107 log Kow shke flask mtd

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.

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.

SECTION 14: Transport Information

Not hazardous for transportation.

Air Transport (IATA) Regulations

UN No Not applicable

Proper Shipping Name Not applicable (contains Kathon)

Hazard Class/Division Not applicable

Subsidiary Risk Not applicable

Packing Group: Not applicable

Marine Transport (IMDG)

UN No Not applicable

Proper Shipping Name Not applicable (contains Kathon)

Hazard Class/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

Hazardous Waste (Management, Handling & Transboundary) Rules, 2008

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

None.

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 2: Ingredient table information was modified.
Section 8: Occupational exposure limit table information was modified.
Section 8: Respiratory protection - recommended respirators information information was modified.
Section 11: Acute Toxicity table information was modified.
Section 11: Carcinogenicity Table information was modified.
Section 11: Germ Cell Mutagenicity Table information was modified.
Section 11: Reproductive Toxicity Table information was modified.
Section 11: Serious Eye Damage/Irritation Table information was modified.
Section 11: Skin Corrosion/Irritation Table information was modified.
Section 11: Skin Sensitization Table information was modified.
Section 11: Target Organs - Repeated Table information was 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: Bioaccumulative potential information information was modified.

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3M India SDSs are available at <http://solutions.3mindia.co.in>