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
4% CHG Surgical Scrub

Product Identification Numbers
IA-4201-0033-0 IA-4201-0034-8

1.2. Recommended use and restrictions on use

Recommended use
Disinfectant, Scrubbing patient/nurses/doctors before surgery

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
Serious Eye Damage/Irritation: Category 1.
Reproductive Toxicity: Category 2.
Specific Target Organ Toxicity (repeated exposure): Category 2.
Acute Aquatic Toxicity: Category 1.
Chronic Aquatic Toxicity: Category 2.

2.2. Label elements
Signal Word
Danger

Symbols
Corrosion |Health Hazard |Environment |

Pictograms



HAZARD STATEMENTS:

H318	Causes serious eye damage.
H361	Suspected of damaging fertility or the unborn child.
H373	May cause damage to organs through prolonged or repeated exposure: sensory organs.
H400	Very toxic to aquatic life.
H411	Toxic to aquatic life with long lasting effects.

PRECAUTIONARY STATEMENTS

Prevention:

P273	Avoid release to the environment.
P280B	Wear protective gloves and eye/face protection.

Response:

P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310	Immediately call a POISON CENTER or doctor/physician.
P391	Collect spillage.

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
ETHOXYLATED C12-C14 ALCOHOLS	68439-50-9	5 - 10
Propan-2-ol	67-63-0	1 - 5
Ethanol, 2,2'-iminobis-, N-coco alkyl derivs.	61791-31-9	1 - 5
Propane-1,2-diol	57-55-6	1 - 5
D-gluconic acid, compound with N,N''-bis(4-chlorophenyl)-3,12-diimino-2,4,11,13-tetraazatetradecanediamidine (2:1)	18472-51-0	1 - 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
Wash with soap and water. If you feel unwell, get medical attention.

Eye contact
Immediately flush with large amounts of water for at least 15 minutes. Remove contact lenses if easy to do. Continue rinsing. Immediately 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

Serious damage to the eyes (corneal cloudiness, severe pain, tearing, ulcerations, and significantly impaired or loss of vision). Target organ effects following prolonged or repeated exposure. See Section 11 for additional details.

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

Substance	Condition
Aldehydes.	During combustion.
Carbon monoxide.	During combustion.
Carbon dioxide.	During combustion.
Irritant vapours or gases.	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. Use PPE - Exposure Assessment

Use personal protective equipment based on the results of an exposure assessment. Refer to Section 8 for PPE recommendations. If anticipated exposure resulting from an accidental release exceeds the protective capabilities of the PPE listed in Section 8, or are unknown, select PPE that offers an appropriate level of protection. Consider the physical and chemical hazards of the material when doing so. Examples of PPE ensembles for emergency response could include wearing bunker gear for a release of flammable material; wearing chemical protective clothing if the spilled material is a corrosive, a sensitizer, a significant dermal irritant, or can be absorbed through the skin; or donning a positive pressure supplied-air respirator for chemicals with inhalation hazards. For information regarding physical and health hazards, refer to sections 2 and 11 of the SDS.

6.2. Environmental precautions
Avoid release to the environment. 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 handle until all safety precautions have been read and understood. Do not breathe dust/fume/gas/mist/vapours/spray. Do not get in eyes, on skin, or on clothing. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Avoid release to the environment. Avoid contact with oxidising agents (eg. chlorine, chromic acid etc.) Use personal protective equipment (eg. gloves, respirators…) as required.

7.2. Conditions for safe storage including any incompatibilities

Store away from heat. Store away from acids. 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
Propane-1,2-diol	57-55-6	AIHA	TWA(as aerosol):10 mg/m3	
Propan-2-ol	67-63-0	ACGIH	TWA:200 ppm;STEL:400 ppm	A4: Not class. as human carcin

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

No protective gloves required. 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

Respiratory protection

An exposure assessment may be needed to decide if a respirator is required. If a respirator is needed, use respirators as part of a full respiratory protection program. Based on the results of the exposure assessment, select from the following respirator type(s) to reduce inhalation exposure:
Half facepiece or full facepiece air-purifying respirator suitable for organic vapours 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.
Color	Light Pink
Odor	Fruity Odor
Odour threshold	*No data available.*
pH	5.5 - 7
Melting point/Freezing point: NA	*Not applicable.*
Boiling point/Initial boiling point/Boiling range	*No data available.*
Flash point	*No data available.*
Evaporation rate	*No data available.*
Flammability	Not applicable.
Flammable Limits(LEL)	*No data available.*
Flammable Limits(UEL)	*No data available.*
Vapour pressure	*No data available.*
Relative Vapor Density	*No data available.*
Density	0.9 - 1.1 g/ml
Relative density	0.9 - 1.1 [*Ref Std:*WATER=1]
Water solubility	*No data available.*
Solubility- non-water	*No data available.*
Partition coefficient: n-octanol/water	*No data available.*
Autoignition temperature	*No data available.*
Decomposition temperature	*No data available.*
Kinematic Viscosity	1,364 - 5,455 mm²/sec
Volatile organic compounds (VOC)	*No data available.*
Percent volatile	*No data available.*
VOC less H2O & exempt solvents	*No data available.*

Particle Characteristics	*Not applicable.*

SECTION 10: Stability and reactivity

10.1 Reactivity

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

10.2 Chemical stability
Stable.

10.3 Possibility of hazardous reactions
Hazardous polymerisation will not occur.

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

10.5 Incompatible materials
Strong acids.
Strong oxidising agents.

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
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.

Eye contact
Corrosive (eye burns): Signs/symptoms may include cloudy appearance of the cornea, chemical burns, severe pain, tearing, ulcerations, significantly impaired vision or complete loss of vision.

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

Additional Health Effects:

Prolonged or repeated exposure may cause target organ effects:
Ocular effects: Signs/symptoms may include blurred or significantly impaired vision.

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
ETHOXYLATED C12-C14 ALCOHOLS	Dermal	Professional judgement	LD50 estimated to be > 5,000 mg/kg
ETHOXYLATED C12-C14 ALCOHOLS	Ingestion	Rat	LD50 > 2,000 mg/kg
Propane-1,2-diol	Dermal	Rabbit	LD50 20,800 mg/kg
Propane-1,2-diol	Ingestion	Rat	LD50 22,000 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
Propan-2-ol	Dermal	Rabbit	LD50 12,870 mg/kg
Propan-2-ol	Inhalation-Vapor (4 hours)	Rat	LC50 72.6 mg/l
Propan-2-ol	Ingestion	Rat	LD50 4,710 mg/kg
Ethanol, 2,2'-iminobis-, N-coco alkyl derivs.	Ingestion	Rat	LD50 1,300 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
Overall product	Human	No significant irritation
ETHOXYLATED C12-C14 ALCOHOLS	Rabbit	Irritant
Propane-1,2-diol	Rabbit	No significant irritation
D-gluconic acid, compound with N,N"-bis(4-chlorophenyl)-3,12-diimino-2,4,11,13-tetraazatetradecanediamidine (2:1)	Rabbit	No significant irritation
Propan-2-ol	Multiple animal species	No significant irritation
Ethanol, 2,2'-iminobis-, N-coco alkyl derivs.	Rabbit	Corrosive

Serious Eye Damage/Irritation

Name	Species	Value
ETHOXYLATED C12-C14 ALCOHOLS	Rabbit	Corrosive
Propane-1,2-diol	Rabbit	No significant irritation
D-gluconic acid, compound with N,N"-bis(4-chlorophenyl)-3,12-diimino-2,4,11,13-tetraazatetradecanediamidine (2:1)	Rabbit	Corrosive
Propan-2-ol	Rabbit	Severe irritant
Ethanol, 2,2'-iminobis-, N-coco alkyl derivs.	Rabbit	Corrosive

Sensitization:

Skin Sensitisation

Name	Species	Value
Overall product	Guinea pig	Not classified
ETHOXYLATED C12-C14 ALCOHOLS	Guinea pig	Not classified

Propane-1,2-diol	Human	Not classified
D-gluconic acid, compound with N,N"-bis(4-chlorophenyl)-3,12-diimino-2,4,11,13-tetraazatetradecanediamidine (2:1)	Human and animal	Some positive data exist, but the data are not sufficient for classification
Propan-2-ol	Guinea pig	Not classified
Ethanol, 2,2'-iminobis-, N-coco alkyl derivs.	similar compoun ds	Not classified

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
ETHOXYLATED C12-C14 ALCOHOLS	In Vitro	Not mutagenic
Propane-1,2-diol	In Vitro	Not mutagenic
Propane-1,2-diol	In vivo	Not mutagenic
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
Propan-2-ol	In Vitro	Not mutagenic
Propan-2-ol	In vivo	Not mutagenic
Ethanol, 2,2'-iminobis-, N-coco alkyl derivs.	In Vitro	Not mutagenic

Carcinogenicity

Name	Route	Species	Value
Propane-1,2-diol	Dermal	Mouse	Not carcinogenic
Propane-1,2-diol	Ingestion	Multiple animal species	Not carcinogenic
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
Propan-2-ol	Inhalation	Rat	Some positive data exist, but the data are not sufficient for classification

Reproductive Toxicity

Reproductive and/or Developmental Effects

Name	Route	Value	Species	Test result	Exposure Duration
ETHOXYLATED C12-C14 ALCOHOLS	Ingestion	Not classified for female reproduction	Rat	NOAEL 1,000 mg/kg/day	premating into lactation
ETHOXYLATED C12-C14 ALCOHOLS	Ingestion	Not classified for male reproduction	Rat	NOAEL 1,000 mg/kg/day	29 days
ETHOXYLATED C12-C14 ALCOHOLS	Ingestion	Not classified for development	Rat	NOAEL 1,000 mg/kg/day	premating into lactation
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
D-gluconic acid, compound with N,N"-bis(4-chlorophenyl)-3,12-diimino-	Ingestion	Not classified for development	Rat	NOAEL 30 mg/kg/day	during gestation

2,4,11,13-tetraazatetradecanediamidine (2:1)					
Propan-2-ol	Ingestion	Not classified for female reproduction	Rat	NOAEL 1,000 mg/kg/day	2 generation
Propan-2-ol	Ingestion	Not classified for male reproduction	Rat	NOAEL 500 mg/kg/day	2 generation
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
Ethanol, 2,2'-iminobis-, N-coco alkyl derivs.	Ingestion	Toxic to female reproduction	Rat	NOAEL 30 mg/kg/day	2 generation
Ethanol, 2,2'-iminobis-, N-coco alkyl derivs.	Ingestion	Toxic to male reproduction	Rat	NOAEL 30 mg/kg/day	2 generation
Ethanol, 2,2'-iminobis-, N-coco alkyl derivs.	Ingestion	Toxic to development	Rat	NOAEL 10 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
ETHOXYLATED C12-C14 ALCOHOLS	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	similar health hazards	NOAEL Not available	
Propane-1,2-diol	Ingestion	central nervous system depression	Not classified	Human and animal	NOAEL Not available	
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	
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
Ethanol, 2,2'-iminobis-, N-coco alkyl derivs.	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
ETHOXYLATED C12-C14 ALCOHOLS	Ingestion	heart	Not classified	Rat	NOAEL 1,000 mg/kg/day	29 days
ETHOXYLATED C12-C14 ALCOHOLS	Ingestion	endocrine system	Not classified	Rat	NOAEL 1,000 mg/kg/day	29 days
ETHOXYLATED C12-C14 ALCOHOLS	Ingestion	gastrointestinal tract	Not classified	Rat	NOAEL 1,000 mg/kg/day	29 days
ETHOXYLATED C12-C14 ALCOHOLS	Ingestion	bone, teeth, nails, and/or hair	Not classified	Rat	NOAEL 1,000 mg/kg/day	29 days
ETHOXYLATED C12-C14 ALCOHOLS	Ingestion	hematopoietic system	Not classified	Rat	NOAEL 1,000 mg/kg/day	29 days

ETHOXYLATED C12-C14 ALCOHOLS	Ingestion	liver	Not classified	Rat	NOAEL 1,000 mg/kg/day	29 days
ETHOXYLATED C12-C14 ALCOHOLS	Ingestion	immune system	Not classified	Rat	NOAEL 1,000 mg/kg/day	29 days
ETHOXYLATED C12-C14 ALCOHOLS	Ingestion	muscles	Not classified	Rat	NOAEL 1,000 mg/kg/day	29 days
ETHOXYLATED C12-C14 ALCOHOLS	Ingestion	nervous system	Not classified	Rat	NOAEL 1,000 mg/kg/day	29 days
ETHOXYLATED C12-C14 ALCOHOLS	Ingestion	eyes	Not classified	Rat	NOAEL 1,000 mg/kg/day	29 days
ETHOXYLATED C12-C14 ALCOHOLS	Ingestion	kidney and/or bladder	Not classified	Rat	NOAEL 1,000 mg/kg/day	29 days
ETHOXYLATED C12-C14 ALCOHOLS	Ingestion	respiratory system	Not classified	Rat	NOAEL 1,000 mg/kg/day	29 days
ETHOXYLATED C12-C14 ALCOHOLS	Ingestion	vascular system	Not classified	Rat	NOAEL 1,000 mg/kg/day	29 days
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
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	Not classified	Rat	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	kidney and/or bladder	Not classified	Rat	NOAEL 71 mg/kg/day	2 years
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
Ethanol, 2,2'-iminobis-, N-coco alkyl derivs.	Ingestion	eyes	May cause damage to organs though prolonged or repeated exposure	Rat	NOAEL 10 mg/kg/day	2 generation
Ethanol, 2,2'-iminobis-, N-coco alkyl derivs.	Ingestion	endocrine system	Not classified	Rat	NOAEL 125 mg/kg/day	90 days
Ethanol, 2,2'-iminobis-, N-coco alkyl derivs.	Ingestion	hematopoietic system	Not classified	Rat	NOAEL 125 mg/kg/day	90 days
Ethanol, 2,2'-iminobis-, N-	Ingestion	liver	Not classified	Rat	NOAEL 125	90 days

coco alkyl derivs.					mg/kg/day	
Ethanol, 2,2'-iminobis-, N-coco alkyl derivs.	Ingestion	immune system	Not classified	Rat	NOAEL 125 mg/kg/day	90 days
Ethanol, 2,2'-iminobis-, N-coco alkyl derivs.	Ingestion	kidney and/or bladder	Not classified	Rat	NOAEL 125 mg/kg/day	90 days
Ethanol, 2,2'-iminobis-, N-coco alkyl derivs.	Ingestion	gastrointestinal tract	Not classified	Rat	NOAEL 10 mg/kg/day	90 days
Ethanol, 2,2'-iminobis-, N-coco alkyl derivs.	Ingestion	heart	Not classified	Rat	NOAEL 125 mg/kg/day	90 days
Ethanol, 2,2'-iminobis-, N-coco alkyl derivs.	Ingestion	skin	Not classified	Rat	NOAEL 125 mg/kg/day	90 days
Ethanol, 2,2'-iminobis-, N-coco alkyl derivs.	Ingestion	bone, teeth, nails, and/or hair	Not classified	Rat	NOAEL 125 mg/kg/day	90 days
Ethanol, 2,2'-iminobis-, N-coco alkyl derivs.	Ingestion	nervous system	Not classified	Rat	NOAEL 125 mg/kg/day	90 days
Ethanol, 2,2'-iminobis-, N-coco alkyl derivs.	Ingestion	respiratory system	Not classified	Rat	NOAEL 125 mg/kg/day	90 days
Ethanol, 2,2'-iminobis-, N-coco alkyl derivs.	Ingestion	vascular system	Not classified	Rat	NOAEL 125 mg/kg/day	90 days

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 1: Very toxic to aquatic life.

Chronic aquatic hazard:
GHS Chronic 2: Toxic to aquatic life with long lasting effects.

No product test data available.

Material	CAS Nbr	Organism	Type	Exposure	Test endpoint	Test result
ETHOXYLATED C12-C14 ALCOHOLS	68439-50-9	Fathead minnow	Experimental	96 hours	LC50	0.423 mg/l
ETHOXYLATED C12-C14 ALCOHOLS	68439-50-9	Green algae	Experimental	72 hours	ErC50	0.044 mg/l
ETHOXYLATED C12-C14 ALCOHOLS	68439-50-9	Water flea	Experimental	48 hours	EC50	0.125 mg/l
ETHOXYLATED C12-C14 ALCOHOLS	68439-50-9	Green algae	Experimental	72 hours	NOEC	0.037 mg/l
ETHOXYLATED C12-C14 ALCOHOLS	68439-50-9	Wheat	Experimental	19 days	NOEC	>=100 mg/kg (Dry Weight)
ETHOXYLATED	68439-50-9	Bacteria	Experimental	5 hours	EC50	>2 mg/l

C12-C14 ALCOHOLS						
D-gluconic acid, compound with N,N"-bis(4-chlorophenyl)-3,12-diimino-2,4,11,13-tetraazatetradecane diamidine (2:1)	18472-51-0	Green algae	Experimental	72 hours	ErC50	0.0187 mg/l
D-gluconic acid, compound with N,N"-bis(4-chlorophenyl)-3,12-diimino-2,4,11,13-tetraazatetradecane diamidine (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-tetraazatetradecane diamidine (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-tetraazatetradecane diamidine (2:1)	18472-51-0	Green algae	Experimental	72 hours	ErC10	0.0135 mg/l
D-gluconic acid, compound with N,N"-bis(4-chlorophenyl)-3,12-diimino-2,4,11,13-tetraazatetradecane diamidine (2:1)	18472-51-0	Midge	Experimental	28 days	NOEC	4.33 mg/kg (Dry Weight)
D-gluconic acid, compound with N,N"-bis(4-chlorophenyl)-3,12-diimino-2,4,11,13-tetraazatetradecane diamidine (2:1)	18472-51-0	Rainbow trout	Experimental	28 days	NOEC	0.0124 mg/l
D-gluconic acid, compound with N,N"-bis(4-chlorophenyl)-3,12-diimino-2,4,11,13-tetraazatetradecane diamidine (2:1)	18472-51-0	Water flea	Experimental	21 days	NOEC	0.021 mg/l
D-gluconic acid, compound with N,N"-bis(4-chlorophenyl)-3,12-diimino-2,4,11,13-tetraazatetradecane diamidine (2:1)	18472-51-0	Activated sludge	Experimental	3 hours	EC50	25 mg/l
D-gluconic acid, compound with N,N"-bis(4-	18472-51-0	Rape	Experimental	21 days	EC50	526 mg/kg (Dry Weight)

chlorophenyl)-3,12-diimino-2,4,11,13-tetraazatetradecane diamidine (2:1)						
D-gluconic acid, compound with N,N"-bis(4-chlorophenyl)-3,12-diimino-2,4,11,13-tetraazatetradecane diamidine (2:1)	18472-51-0	Redworm	Experimental	14 days	LC50	>1,000 mg/kg (Dry Weight)
D-gluconic acid, compound with N,N"-bis(4-chlorophenyl)-3,12-diimino-2,4,11,13-tetraazatetradecane diamidine (2:1)	18472-51-0	Soil microbes	Experimental	28 days	EC50	>1,000 mg/kg (Dry Weight)
Propan-2-ol	67-63-0	Bacteria	Experimental	16 hours	LOEC	1,050 mg/l
Propan-2-ol	67-63-0	Green algae	Experimental	72 hours	EC50	>1,000 mg/l
Propan-2-ol	67-63-0	Invertebrate	Experimental	24 hours	LC50	>10,000 mg/l
Propan-2-ol	67-63-0	Medaka	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
Ethanol, 2,2'-iminobis-, N-coco alkyl derivs.	61791-31-9	Green algae	Experimental	72 hours	EC50	0.1 mg/l
Ethanol, 2,2'-iminobis-, N-coco alkyl derivs.	61791-31-9	Water flea	Experimental	48 hours	LC50	0.38 mg/l
Ethanol, 2,2'-iminobis-, N-coco alkyl derivs.	61791-31-9	Zebra Fish	Experimental	96 hours	LC50	0.1 mg/l
Ethanol, 2,2'-iminobis-, N-coco alkyl derivs.	61791-31-9	Fathead minnow	Experimental	30 days	NOEC	0.05 mg/l
Ethanol, 2,2'-iminobis-, N-coco alkyl derivs.	61791-31-9	Green algae	Experimental	72 hours	EC10	0.001 mg/l
Ethanol, 2,2'-iminobis-, N-coco alkyl derivs.	61791-31-9	Water flea	Experimental	21 days	NOEC	0.058 mg/l
Propane-1,2-diol	57-55-6	Amphipod	Experimental	10 days	LC50	6,983 mg/kg (Dry Weight)
Propane-1,2-diol	57-55-6	Green algae	Experimental	96 hours	EC50	19,000 mg/l
Propane-1,2-diol	57-55-6	Mysid Shrimp	Experimental	96 hours	LC50	18,800 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	Water flea	Experimental	48 hours	EC50	18,340 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
Propane-1,2-diol	57-55-6	Bacteria	Experimental	18 hours	NOEC	>20,000 mg/l

12.2. Persistence and degradability

Material	CAS Nbr	Test type	Duration	Study Type	Test result	Protocol
ETHOXYLATED C12-C14 ALCOHOLS	68439-50-9	Experimental Biodegradation	28 days	BOD	95 %BOD/ThOD	OECD 301F - Manometric respirometry
D-gluconic acid, compound with	18472-51-0	Experimental Biodegradation	60 days	CO2 evolution	2.3 %CO2 evolution/THCO2	similar to OECD 301B

N,N"-bis(4-chlorophenyl)-3,12-diimino-2,4,11,13-tetraazatetradecane diamidine (2:1)					evolution	
D-gluconic acid, compound with N,N"-bis(4-chlorophenyl)-3,12-diimino-2,4,11,13-tetraazatetradecane diamidine (2:1)	18472-51-0	Experimental Biodegradation		Half-life (t 1/2)	>1000 days (t 1/2)	
D-gluconic acid, compound with N,N"-bis(4-chlorophenyl)-3,12-diimino-2,4,11,13-tetraazatetradecane diamidine (2:1)	18472-51-0	Experimental Photolysis		Photolytic half-life(in water)	69.1 days (t 1/2)	
D-gluconic acid, compound with N,N"-bis(4-chlorophenyl)-3,12-diimino-2,4,11,13-tetraazatetradecane diamidine (2:1)	18472-51-0	Experimental Hydrolysis		Hydrolytic half-life (pH 7)	>1 years (t 1/2)	OECD 111 Hydrolysis func of pH
Propan-2-ol	67-63-0	Experimental Biodegradation	14 days	BOD	86 %BOD/ThOD	OECD 301C - MITI test (I)
Ethanol, 2,2'-iminobis-, N-coco alkyl derivs.	61791-31-9	Experimental Biodegradation	28 days	BOD	61 %BOD/ThOD	OECD 301D - Closed bottle test
Propane-1,2-diol	57-55-6	Experimental Biodegradation	28 days	BOD	90 %BOD/ThOD	OECD 301C - MITI test (I)
Propane-1,2-diol	57-55-6	Experimental Biodegradation	64 days	Dissolv. Organic Carbon Deplet	95.8 %removal of DOC	OECD 306(Misc)-Biodegrad. Seaw

12.3 : Bioaccumulative potential

Material	CAS Nbr	Test type	Duration	Study Type	Test result	Protocol
ETHOXYLATED C12-C14 ALCOHOLS	68439-50-9	Experimental BCF - Fish	72 hours	Bioaccumulation factor	310	
ETHOXYLATED C12-C14 ALCOHOLS	68439-50-9	Experimental Bioconcentration		Log Kow	5.24	OECD 123 log Kow slow stir
D-gluconic acid, compound with N,N"-bis(4-chlorophenyl)-3,12-diimino-2,4,11,13-tetraazatetradecane diamidine (2:1)	18472-51-0	Experimental Bioconcentration		Log Kow	-1.81	OECD 107 log Kow shke flsk mtd
Propan-2-ol	67-63-0	Experimental Bioconcentration		Log Kow	0.05	
Ethanol, 2,2'-iminobis-, N-coco alkyl derivs.	61791-31-9	Modeled Bioconcentration		Bioaccumulation factor	≤9	Catalogic™
Propane-1,2-diol	57-55-6	Experimental Bioconcentration		Log Kow	-1.07	EC A.8 Partition Coefficient

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

Air Transport (IATA)Regulations

UN No UN3082
Proper Shipping Name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (contains Chlorhexidine gluconate)
Hazard Classs/Division 9
Subsidiary Risk Not applicable
Other Dangerous Goods Descriptions: None assigned.

Packing Group: III

Marine Transport (IMDG)
UN No UN3082
Proper Shipping Name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (contains Chlorhexidine gluconate)
Hazard Classs/Division 9
Subsidiary Risk Not applicable
Other Dangerous Goods Descriptions: None assigned.

Packing Group: III
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
Propan-2-ol

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 as per MSIHC Rules, 1989.

SECTION 16: Other information

NFPA Hazard Classification

Health: 3 **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 modified.
Company Telephone information was modified.
Section 1: Emergency telephone information was modified.
Label: GHS Classification information was modified.
Label: GHS Precautionary - Disposal information was deleted.
Label: GHS Precautionary - Prevention information was modified.
Label: GHS Precautionary - Response information was modified.
Label: GHS Target Organ Hazard Statement information was added.
Label: Graphic information was modified.
Label: Signal Word information was modified.
Label: Symbol information was modified.
Section 2: Ingredient table information was modified.
Section 04: First Aid - Symptoms and Effects (GHS) information was added.
Section 4: First aid for skin contact information information was modified.
Section 04: Information on toxicological effects information was deleted.
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: Occupational exposure limit table information was modified.
Section 8: Personal Protection - Skin/body information information was deleted.
Section 8: Personal Protection - Skin/hand information information was modified.
Section 8: Respiratory protection - recommended respirators information information was modified.
Section 8: Skin protection - protective clothing information information was deleted.
Section 8: Skin protection - recommended gloves information information was modified.
Section 8: Skin protection - recommended gloves text information was added.
Section 8: Skin protection - recommended gloves text information was deleted.
Section 09: Color information was added.
Section 9: Flammability (solid, gas) information information was deleted.
Section 09: Flammability information information was added.
Section 09: Kinematic Viscosity information information was added.
Section 09: Odor information was added.
Sections 3 and 9: Odour, colour, grade information information was deleted.
Section 09: Particle Characteristics N/A information was added.
Section 09: Percent Volatile information was added.
Section 9: Relative density information information was modified.
Section 09: Vapor Density Value information was added.
Section 9: Vapour density value information was deleted.
Section 9: Viscosity information information was deleted.
Section 09: VOC Less H2O & Exempt Solvents information was added.

Section 09: Volatile Organic Compounds information was added.
Section 11: Acute Toxicity table information was modified.
Section 11: Cancer Hazards information information was deleted.
Section 11: Carcinogenicity Table information was modified.
Section 11: Germ Cell Mutagenicity Table information was modified.
Section 11: Health Effects - Skin information information was modified.
Section 11: Prolonged or repeated exposure may cause standard phrases information was added.
Section 11: Reproductive Hazards information information was added.
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:Bioccumulative potential information information was modified.
Section 13: Standard Phrase Category Waste GHS information was modified.
Section 14: Air Transport - Other Dangerous Goods Descriptions heading information was added.
Section 14: IATA transport hazard classes information was modified.
Section 14: IMO transport hazard classes information was modified.
Section 14: Marine Transport - Other Dangerous Goods Descriptions heading information was added.
Section 14: Other Dangerous Goods Descriptions (IATA) information was added.
Section 14: Other Dangerous Goods Descriptions (IMO) information was added.
Section 14: Packing group (IATA) information was modified.
Section 14: Proper Shipping Name (IATA) information was modified.
Section 14: Proper Shipping Name (IMO) information was modified.
Section 14: Proper Shipping Name n.o.s. ingredients information was added.
Section 14: Transportation Information information was deleted.
Section 14: UN Number (IATA) information was modified.
Section 14: UN Number (IMO) information was modified.
Sectio 16: UK disclaimer information was deleted.

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