



Safety Data Sheet

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This Safety Data Sheet has been prepared in accordance with the Notification of Ministry of Industry, System of Hazardous Classification and Communication B.E.2555.

SECTION 1: Identification

1.1. Product identifier

Floral Disinfectant Toilet Cleaner

Company: 3M Thailand Ltd.

Address: 12th Floor, Serm-Mitr Tower 159 Asoke Road (Sukhumvit 21) Bangkok 10110 Thailand

Product Identification Numbers

XN-0020-2214-5

1.2. Recommended use and restrictions on use

Recommended use

Toilet Cleaner and Disinfectant

1.3. Supplier's details

ADDRESS: 3M Thailand Limited, Sukhumvit 21, Wattana, Bangkok 10110, Thailand

Telephone: 66(0)22608577

E Mail: 3MThailand@mmm.com

Website: <http://www.3M.com/TH>

1.4. Emergency telephone number

66-2-2608577

SECTION 2: Hazard identification

2.1. Classification of the substance or mixture

Serious Eye Damage/Irritation: Category 1.

Carcinogenicity: Category 2.

Acute Aquatic Toxicity: Category 1.

Chronic Aquatic Toxicity: Category 2.

2.2. Label elements

Signal word

Danger

Symbols

Floral Disinfectant Toilet Cleaner

Corrosion | Health Hazard | Environment |

Pictograms



Hazard Statements

H318	Causes serious eye damage.
H351	Suspected of causing cancer.
H400	Very toxic to aquatic life.
H411	Toxic to aquatic life with long lasting effects.

Precautionary statements

General:

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

Prevention:

P280A	Wear eye/face protection.
P281	Use personal protective equipment as required.
P273	Avoid release to the environment.

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.

Storage:

P405	Store locked up.
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Disposal:

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

None known

SECTION 3: Composition/information on ingredients

This material is a mixture.

Ingredient	C.A.S. No.	% by Wt
WATER	7732-18-5	60 - 90
ETHOXYLATED ALCOHOL	Trade Secret	3 - 7
COCOAMIDOPROPYLBETAINE	61789-40-0	1 - 5
DIETHANOLAMINE	111-42-2	1 - 5
QUATERNARY AMMONIUM COMPOUND	68424-85-1	1 - 5
FRAGRANCE	Mixture	< 1

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation:

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

Skin Contact:

Wash with soap and water. If signs/symptoms develop, get medical attention.

Eye Contact:

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

See Section 11.1. Information on toxicological effects.

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

Not applicable

SECTION 5: Fire-fighting measures

5.1. Suitable extinguishing media

Material will not burn. Use a fire fighting agent suitable for the surrounding fire.

5.2. Special hazards arising from the substance or mixture

None inherent in this product.

5.3. 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

Ventilate the area with fresh air. 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 dikes 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.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

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Avoid eye contact. Keep out of reach of children. Do not handle until all safety precautions have been read and understood. Do not breathe dust/fume/gas/mist/vapors/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. Keep away from reactive metals (eg. Aluminum, zinc etc.) to avoid the formation of hydrogen gas that could create an explosion hazard. Use personal protective equipment (gloves, respirators, etc.) as required.

7.2. Conditions for safe storage including any incompatibilities

No special storage requirements. 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	C.A.S. No.	Agency	Limit type	Additional Comments
DIETHANOLAMINE	111-42-2	ACGIH	TWA(inhalable fraction and vapor):1 mg/m3	SKIN

ACGIH : American Conference of Governmental Industrial Hygienists

AIHA : American Industrial Hygiene Association

CMRG : Chemical Manufacturer's Recommended Guidelines

Thailand OELs : Thailand. Ministry of Interior, Re: Notification Health and Safety in the Work Environment on chemical B.E.2520

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/vapors/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.

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

Nitrile Rubber

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

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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
Appearance/Odor	Characteristic odor; Pink color
Odor threshold	<i>No Data Available</i>
pH	8 - 10
Melting point/Freezing point	<i>No Data Available</i>
Boiling point/Initial boiling point/Boiling range	<i>No Data Available</i>
Flash Point	No flash point [<i>Test Method</i> : Closed Cup]
Evaporation rate	<i>No Data Available</i>
Flammability (solid, gas)	Not Applicable
Flammable Limits(LEL)	<i>No Data Available</i>
Flammable Limits(UEL)	<i>No Data Available</i>
Vapor Density	<i>No Data Available</i>
Relative Density	0.98 - 1.02 [<i>Ref Std</i> : WATER=1]
Water solubility	Complete
Solubility- non-water	<i>No Data Available</i>
Partition coefficient: n-octanol/ water	<i>No Data Available</i>
Autoignition temperature	<i>No Data Available</i>
Decomposition temperature	<i>No Data Available</i>
Viscosity	<i>No Data Available</i>

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 polymerization will not occur.

10.4. Conditions to avoid

Heat

10.5. Incompatible materials

Reactive metals

10.6. Hazardous decomposition products

<u>Substance</u>	<u>Condition</u>
Chlorine	Heat
Carbon monoxide	Heat
Carbon dioxide	Heat
Irritant Vapors or Gases	Heat
Ammonia	Heat

SECTION 11: Toxicological information

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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 labeling, 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 diarrhea.

May cause additional health effects (see below).

Additional Health Effects:

Single exposure may cause target organ effects:

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

Prolonged or repeated exposure may cause target organ effects:

Hematopoietic Effects: Signs/symptoms may include generalized weakness, fatigue and alterations in numbers of circulating blood cells.

Carcinogenicity:

Contains a chemical or chemicals which can cause cancer.

Toxicological Data

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

Acute Toxicity

Name	Route	Species	Value
Overall product	Ingestion		No data available; calculated ATE > 5,000 mg/kg
ETHOXYLATED ALCOHOL	Dermal	Rat	LD50 5,000 mg/kg
ETHOXYLATED ALCOHOL	Ingestion	Rat	LD50 1,200 mg/kg
DIETHANOLAMINE	Dermal	Rabbit	LD50 8,180 mg/kg
DIETHANOLAMINE	Ingestion	Rat	LD50 1,410 mg/kg
QUATERNARY AMMONIUM COMPOUND	Dermal	Rabbit	LD50 645 mg/kg
QUATERNARY AMMONIUM COMPOUND	Ingestion	Rat	LD50 366 mg/kg
COCOAMIDOPROPYLBETAINE	Dermal	Rat	LD50 > 2,000 mg/kg
COCOAMIDOPROPYLBETAINE	Ingestion	Rat	LD50 > 1,500 mg/kg

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ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
DIETHANOLAMINE	Rabbit	Mild irritant
COCOAMIDOPROPYLBETAINE	Rabbit	Mild irritant

Serious Eye Damage/Irritation

Name	Species	Value
ETHOXYLATED ALCOHOL	Not available	Corrosive
DIETHANOLAMINE	Rabbit	Severe irritant
COCOAMIDOPROPYLBETAINE	Rabbit	Corrosive

Skin Sensitization

Name	Species	Value
DIETHANOLAMINE	Human and animal	Not sensitizing
COCOAMIDOPROPYLBETAINE	Multiple animal species	Some positive data exist, but the data are not sufficient for classification

Respiratory Sensitization

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

Germ Cell Mutagenicity

Name	Route	Value
DIETHANOLAMINE	In Vitro	Not mutagenic
COCOAMIDOPROPYLBETAINE	In Vitro	Not mutagenic
COCOAMIDOPROPYLBETAINE	In vivo	Not mutagenic

Carcinogenicity

Name	Route	Species	Value
DIETHANOLAMINE	Dermal	Mouse	Carcinogenic

Reproductive Toxicity**Reproductive and/or Developmental Effects**

Name	Route	Value	Species	Test Result	Exposure Duration
DIETHANOLAMINE	Ingestion	Some positive male reproductive data exist, but the data are not sufficient for classification	Rat	NOAEL 97 mg/kg/day	13 weeks
DIETHANOLAMINE	Dermal	Some positive developmental data exist, but the data are not sufficient for classification	Rabbit	NOAEL 100 mg/kg/day	during organogenesis
DIETHANOLAMINE	Ingestion	Some positive developmental data exist, but the data are not sufficient for classification	Rat	NOAEL 50 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
DIETHANOLAMINE	Inhalation	respiratory irritation	Some positive data exist, but the		NOAEL not	

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			data are not sufficient for classification		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 classification	Rat	LOAEL 200 mg/kg	not applicable
DIETHANOLAMINE	Ingestion	liver	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 1,600 mg/kg	not applicable
COCOAMIDOPROPYLB ETAINE	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification		NOAEL Not available	

Specific Target Organ Toxicity - repeated exposure

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
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	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 500 mg/kg/day	13 weeks
DIETHANOLAMINE	Inhalation	liver kidney and/or bladder	Some positive data exist, but the data are not sufficient for classification	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 classification	Rat	NOAEL 57 mg/kg/day	13 weeks
DIETHANOLAMINE	Ingestion	kidney and/or bladder	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL not available	13 weeks
DIETHANOLAMINE	Ingestion	liver	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 436 mg/kg/day	13 weeks
COCOAMIDOPROPYLB ETAINE	Ingestion	heart endocrine system hematopoietic system liver nervous system eyes kidney and/or bladder	All data are negative	Rat	NOAEL 1,000 mg/kg/day	92 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 labeling, 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

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Chronic aquatic hazard:

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

No product test data available

Material	Cas #	Organism	Type	Exposure	Test Endpoint	Test Result
COCOAMIDO PROPYLBET AINE	61789-40-0	Zebra Fish	Experimental	96 hours	Lethal Concentration 50%	2 mg/l
COCOAMIDO PROPYLBET AINE	61789-40-0	Green algae	Experimental	96 hours	Effect Concentration 50%	0.55 mg/l
COCOAMIDO PROPYLBET AINE	61789-40-0	Water flea	Experimental	24 hours	Effect Concentration 50%	1.1 mg/l
COCOAMIDO PROPYLBET AINE	61789-40-0	Water flea	Experimental	21 days	No obs Effect Conc	0.9 mg/l
COCOAMIDO PROPYLBET AINE	61789-40-0	Green algae	Experimental	72 hours	No obs Effect Conc	0.09 mg/l
QUATERNAR Y AMMONIUM COMPOUND	68424-85-1	Green Algae	Experimental	72 hours	Effect Concentration 50%	0.04 mg/l
QUATERNAR Y AMMONIUM COMPOUND	68424-85-1	Water flea	Experimental	48 hours	Effect Concentration 50%	0.037 mg/l
QUATERNAR Y AMMONIUM COMPOUND	68424-85-1	Rainbow Trout	Experimental	96 hours	Lethal Concentration 50%	0.064 mg/l
QUATERNAR Y AMMONIUM COMPOUND	68424-85-1	Water flea	Experimental	21 days	No obs Effect Conc	0.00415 mg/l
ETHOXYLAT ED ALCOHOL	Trade Secret	Green algae	Experimental	72 hours	Effect Concentration 50%	0.85 mg/l
ETHOXYLAT ED ALCOHOL	Trade Secret	Water flea	Experimental	48 hours	Effect Concentration 50%	0.302 mg/l
ETHOXYLAT ED ALCOHOL	Trade Secret	Fathead Minnow	Experimental	96 hours	Lethal Concentration 50%	0.48 mg/l
ETHOXYLAT ED ALCOHOL	Trade Secret	Diatom	Experimental	72 hours	Effect Concentration 50%	1 mg/l
ETHOXYLAT ED ALCOHOL	Trade Secret	Green Algae	Experimental	72 hours	No obs Effect Conc	0.5 mg/l
ETHOXYLAT ED ALCOHOL	Trade Secret	Water flea	Experimental	21 days	No obs Effect Conc	0.083 mg/l
ETHOXYLAT	Trade Secret	Diatom	Experimental	72 hours	No obs Effect	0.32 mg/l

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ED ALCOHOL					Conc	
DIETHANOL AMINE	111-42-2	Green algae	Experimental	96 hours	Effect Concentration 50%	2.1 mg/l
DIETHANOL AMINE	111-42-2	Water flea	Experimental	48 hours	Effect Concentration 50%	2.15 mg/l
DIETHANOL AMINE	111-42-2	Fathead Minnow	Experimental	96 hours	Lethal Concentration 50%	100 mg/l
DIETHANOL AMINE	111-42-2	Green algae	Experimental	72 hours	Effect Concentration 10%	2.5 mg/l
DIETHANOL AMINE	111-42-2	Water flea	Experimental	21 days	No obs Effect Conc	0.78 mg/l

12.2. Persistence and degradability

Material	CAS No.	Test Type	Duration	Study Type	Test Result	Protocol
DIETHANOL AMINE	111-42-2	Experimental Biodegradation	10 days	Biological Oxygen Demand	72 % weight	OECD 301D - Closed Bottle Test
COCOAMIDO PROPYLBET AINE	61789-40-0	Experimental Biodegradation	28 days	Dissolv. Organic Carbon Deplet	100 % weight	OECD 301E - Modified OECD Scre
ETHOXYLATED ALCOHOL	Trade Secret	Experimental Biodegradation	28 days	Carbon dioxide evolution	64 % weight	Other methods
QUATERNARY AMMONIUM COMPOUND	68424-85-1	Experimental Biodegradation	10 days	Biological Oxygen Demand	97 % weight	OECD 301C - MITI (I)

12.3. Bioaccumulative potential

Material	CAS No.	Test Type	Duration	Study Type	Test Result	Protocol
DIETHANOL AMINE	111-42-2	Experimental Bioconcentration		Log of Octanol/H ₂ O part. coeff	-2.18	
COCOAMIDO PROPYLBET AINE	61789-40-0	Estimated Bioconcentration		Log of Octanol/H ₂ O part. coeff	0.69	Other methods
ETHOXYLATED ALCOHOL	Trade Secret	Experimental BCF-Carp	72 hours	Bioaccumulation Factor	310	Other methods
QUATERNARY AMMONIUM COMPOUND	68424-85-1	Experimental BCF - Bluegill	60 days	Bioaccumulation Factor	33	Bioconcentration: Flow-through

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. As a disposal alternative, incinerate in a permitted waste incineration facility. Proper destruction may require the use of additional fuel during incineration processes. Empty drums/barrels/containers used for transporting and handling hazardous chemicals (chemical substances/mixtures/preparations classified as Hazardous as per applicable regulations) shall be considered, stored, treated & disposed of as hazardous wastes unless otherwise defined by applicable waste regulations. Consult with the respective regulating authorities to determine the available treatment and disposal facilities.

SECTION 14: Transport Information

UN No.: UN3082

UN Proper Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.

Transport hazard class (IMO): Not applicable

Transport hazard class (IATA): Not applicable

Packing Group: Not applicable

Environmental Hazards:

Not applicable

Special precautions for user

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.

SECTION 16: Other information

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 Thailand SDSs are available at <http://www.3M.com/TH>