



## 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

3M Heavy Duty 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-0020-2485-1      XN-0020-2610-4      XN-0020-3709-3

#### 1.2. Recommended use and restrictions on use

##### Recommended use

Toilet cleaner.

#### 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

Corrosive to metal: Category 1.

Acute Toxicity (oral): Category 4.

Serious Eye Damage/Irritation: Category 1.

Skin Corrosion/Irritation: Category 1.

Acute Aquatic Toxicity: Category 3.

#### 2.2. Label elements

##### Signal word

Danger

## 3M Heavy Duty Disinfectant Toilet Cleaner

### Symbols

Corrosion | Exclamation mark |

### Pictograms



### Hazard Statements

H290 May be corrosive to metals.  
H302 Harmful if swallowed.  
H314 Causes severe skin burns and eye damage.  
H402 Harmful to aquatic life.

### Precautionary statements

#### General:

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

#### Prevention:

P234 Keep only in original container.  
P260 Do not breathe dust/fume/gas/mist/vapors/spray.  
P280D Wear protective gloves, protective clothing, and eye/face protection.

#### Response:

P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.  
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.  
P301 + P330 + P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

#### Storage:

P405 Store locked up.

#### Disposal:

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

### 2.3. Other hazards

May cause chemical gastrointestinal burns. May cause chemical respiratory tract burns.

## SECTION 3: Composition/information on ingredients

This material is a mixture.

Ingredient	C.A.S. No.	% by Wt
Water	7732-18-5	80 - 90
Hydrogen Chloride	7647-01-0	10 - 20
Alcohols, C10-16, Ethoxylated	68002-97-1	< 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:**

Immediately flush with large amounts of water for at least 15 minutes. Remove contaminated clothing. Get immediate medical attention. Wash clothing before reuse.

**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. Do not induce vomiting. Get immediate 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

Non-combustible. Use a fire fighting agent suitable for surrounding fire. 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

Carbon monoxide  
Carbon dioxide  
Irritant Vapors or Gases

Condition

During Combustion  
During Combustion  
During Combustion

### 5.3. Special protective actions for fire-fighters

No special protective actions for fire-fighters are anticipated.

## SECTION 6: Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

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

## 3M Heavy Duty Disinfectant Toilet Cleaner

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 metal container approved for use in transportation by appropriate authorities. The container must be lined with polyethylene plastic or contain a plastic drum liner made of polyethylene. Clean up residue with an appropriate solvent selected by a qualified and authorized person. Ventilate the area with fresh air. Read and follow safety precautions on the solvent label and SDS. Cover, but do not seal for 48 hours. Dispose of collected material as soon as possible.

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

Keep out of reach of children. 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. Wash contaminated clothing before reuse. Keep away from reactive metals (eg. Aluminum, zinc etc.) to avoid the formation of hydrogen gas that could create an explosion hazard.

### 7.2. Conditions for safe storage including any incompatibilities

Keep only in original container. Store in a corrosive resistant container with a resistant inner liner. Store away from strong bases.

## 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
Hydrogen Chloride	7647-01-0	Thailand OELs	CEIL:7 mg/m <sup>3</sup> (5 ppm)	
Hydrogen Chloride	7647-01-0	ACGIH	CEIL:2 ppm	

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

## 3M Heavy Duty Disinfectant Toilet Cleaner

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:

Full facepiece air-purifying respirator suitable for acid gases

Half facepiece or full facepiece air-purifying respirator suitable for organic vapors and particulates

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

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

Physical state	Liquid
Appearance/Odor	Mint scented blue liquid.
Odor threshold	No Data Available
pH	1 - 2
Melting point/Freezing point	No Data Available
Boiling point/Initial boiling point/Boiling range	100 °C [Test Method: Estimated]
Flash Point	No flash point [Test Method: Closed Cup]
Evaporation rate	No Data Available
Flammability (solid, gas)	Not Applicable
Flammable Limits(LEL)	Not Applicable
Flammable Limits(UEL)	Not Applicable
Vapor Pressure	$\leq 2,333.1$ Pa [@ 20 °C ]
Vapor Density	No Data Available
Density	1.065 - 1.08 g/ml
Relative Density	1.065 - 1.08 [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
Viscosity	No Data Available

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

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

### 10.2. Chemical stability

Stable.

### 10.3. Possibility of hazardous reactions

Hazardous polymerization will not occur.

**10.4. Conditions to avoid**

None known.

**10.5. Incompatible materials**

Strong bases  
Aluminum  
Alkali and alkaline earth metals

**10.6. Hazardous decomposition products**

<u>Substance</u>	<u>Condition</u>
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 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:**

Corrosive (Skin Burns): Signs/symptoms may include localized redness, swelling, itching, intense pain, blistering, ulceration, and tissue destruction.

**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:**

Harmful if swallowed. Gastrointestinal Corrosion: Signs/symptoms may include severe mouth, throat and abdominal pain; nausea; vomiting; and diarrhea; blood in the feces and/or vomitus may also be seen.

**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 300 - 2,000 mg/kg
Hydrogen Chloride	Dermal	Rabbit	LD50 > 5,010 mg/kg
Hydrogen Chloride	Inhalation-	Rat	LC50 1 mg/l

**3M Heavy Duty Disinfectant Toilet Cleaner**

	Dust/Mist (4 hours)		
Hydrogen Chloride	Ingestion	Rat	LD50 238 mg/kg
Alcohols, C10-16, Ethoxylated	Ingestion	Rat	LD50 1,350 mg/kg

ATE = acute toxicity estimate

**Skin Corrosion/Irritation**

Name	Species	Value
Hydrogen Chloride	Human	Corrosive
Alcohols, C10-16, Ethoxylated	Rabbit	Mild irritant

**Serious Eye Damage/Irritation**

Name	Species	Value
Hydrogen Chloride	Rabbit	Corrosive
Alcohols, C10-16, Ethoxylated	Rabbit	Corrosive

**Skin Sensitization**

Name	Species	Value
Hydrogen Chloride	Human and animal	Not sensitizing
Alcohols, C10-16, Ethoxylated	Human	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
Hydrogen Chloride	In Vitro	Some positive data exist, but the data are not sufficient for classification

**Carcinogenicity**

Name	Route	Species	Value
Hydrogen Chloride	Not Specified	Human and animal	Some positive data exist, but the data are not sufficient for classification

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

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

**Target Organ(s)****Specific Target Organ Toxicity - single exposure**

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
Hydrogen Chloride	Inhalation	respiratory irritation	May cause respiratory irritation		NOAEL Not available	

**Specific Target Organ Toxicity - repeated exposure**

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

**Aspiration Hazard**

**3M Heavy Duty Disinfectant Toilet Cleaner**

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****Acute aquatic hazard:**

GHS Acute 3: Harmful to aquatic life.

**Chronic aquatic hazard:**

Not chronically toxic to aquatic life by GHS criteria.

No product test data available

Material	Cas #	Organism	Type	Exposure	Test Endpoint	Test Result
Hydrogen Chloride	7647-01-0		Data not available or insufficient for classification			
Alcohols, C10-16, Ethoxylated	68002-97-1	Diatom	Experimental	72 hours	Effect Concentration 50%	1 mg/l
Alcohols, C10-16, Ethoxylated	68002-97-1	Water flea	Experimental	48 hours	Effect Concentration 50%	0.302 mg/l
Alcohols, C10-16, Ethoxylated	68002-97-1	Green Algae	Experimental	72 hours	Effect Concentration 50%	0.85 mg/l
Alcohols, C10-16, Ethoxylated	68002-97-1	Fathead Minnow	Experimental	96 hours	Lethal Concentration 50%	0.48 mg/l
Alcohols, C10-16, Ethoxylated	68002-97-1	Green algae	Experimental	72 hours	No obs Effect Conc	0.5 mg/l
Alcohols, C10-16, Ethoxylated	68002-97-1	Diatom	Experimental	72 hours	No obs Effect Conc	0.32 mg/l
Alcohols, C10-16, Ethoxylated	68002-97-1	Water flea	Experimental	21 days		0.083 mg/l

**12.2. Persistence and degradability**

Material	CAS No.	Test Type	Duration	Study Type	Test Result	Protocol
Alcohols, C10-16, Ethoxylated	68002-97-1	Experimental Biodegradation	28 days	Biological Oxygen Demand	69-86 % weight	OECD 301D - Closed Bottle Test
Hydrogen Chloride	7647-01-0	Data not available or	N/A	N/A	N/A	N/A



**3M Heavy Duty Disinfectant Toilet Cleaner**

		insufficient for classification				
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**12.3. Bioaccumulative potential**

Material	CAS No.	Test Type	Duration	Study Type	Test Result	Protocol
Alcohols, C10-16, Ethoxylated	68002-97-1	Experimental BCF-Carp	72 hours	Bioaccumulation Factor	310	Other methods
Hydrogen Chloride	7647-01-0	Data not available or insufficient for classification	N/A	N/A	N/A	N/A

**12.4. Mobility in soil**

Please contact manufacturer for more details

**12.5 Other adverse effects****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**

UN No.: UN1789

UN Proper Shipping Name: HYDROCHLORIC ACID SOLUTION

Transport hazard class (IMO): Corrosives

Transport hazard class (IATA): Corrosives

Packing Group: II

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

**3M Heavy Duty Disinfectant Toilet Cleaner**

(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>**