Safety Data Sheet

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SECTION 1: Identification

1.1. Product identifier
3M Rapid Multi-Enzyme Cleaner 70503

Product Identification Numbers
XH-0038-5021-7, XH-0038-5023-3, XH-0038-6215-4

1.2. Recommended use and restrictions on use

Recommended use
Professional cleaning, Automated and manual cleaning of medical and dental instruments

1.3. Supplier's details

MANUFACTURER:	3M
DIVISION:	3M People's Republic of China Critical & Chronic Care Solutions Division
ADDRESS:	3M Center, St. Paul, MN 55144-1000, USA
Telephone:	1-888-3M HELPS (1-888-364-3577)

1.4. Emergency telephone number
1-800-364-3577 or (651) 737-6501 (24 hours)

SECTION 2: Hazard identification

2.1. Hazard classification
Flammable Liquid: Category 4.
Serious Eye Damage/Irritation: Category 2A.
Respiratory Sensitizer: Category 1.
Skin Sensitizer: Category 1A.
Reproductive Toxicity: Category 1B.

2.2. Label elements
Signal word
Danger

Symbols
Health Hazard |

Pictograms

Hazard Statements
Combustible liquid.

Causes serious eye irritation.
May cause allergy or asthma symptoms or breathing difficulties if inhaled.
May cause an allergic skin reaction.
May damage fertility or the unborn child.

Precautionary Statements
General:
Keep out of reach of children.

Prevention:
Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
Avoid breathing dust/fume/gas/mist/vapors/spray.
In case of inadequate ventilation wear respiratory protection.
Wear protective gloves and eye/face protection.
Wash thoroughly after handling.
Contaminated work clothing must not be allowed out of the workplace.

Response:
IF INHALED: If breathing is difficult, remove person to fresh air and keep comfortable for breathing.
If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
If eye irritation persists: Get medical advice/attention.
IF ON SKIN: Wash with plenty of soap and water.
If skin irritation or rash occurs: Get medical advice/attention.
Wash contaminated clothing before reuse.
IF exposed or concerned: Get medical advice/attention.
In case of fire: Use a fire fighting agent suitable for flammable liquids such as dry chemical or carbon dioxide to extinguish.

Storage:
Store in a well-ventilated place. Keep cool.
Store locked up.

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

14% of the mixture consists of ingredients of unknown acute oral toxicity.

SECTION 3: Composition/information on ingredients

Ingredient	C.A.S. No.	% by Wt

WATER	7732-18-5	50 - 70
SODIUM XYLENE SULFONATE	1300-72-7	1 - 30 Trade Secret *
PROPYLENE GLYCOL	57-55-6	< 10 Trade Secret *
SODIUM SULFATE	7757-82-6	< 10
Protease	Trade Secret*	< 10 Trade Secret *
Solvent	Trade Secret*	< 10
Stabilizer	Trade Secret*	< 10
CALCIUM CHLORIDE DIHYDRATE	10035-04-8	< 1 Trade Secret *

*The specific chemical identity and/or exact percentage (concentration) of this composition has been withheld as a trade secret.

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:
Immediately flush with large amounts of water. Remove contact lenses if easy to do. Continue rinsing. 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
In case of fire: Use a fire fighting agent suitable for flammable liquids such as dry chemical or carbon dioxide to extinguish.

5.2. Special hazards arising from the substance or mixture
Closed containers exposed to heat from fire may build pressure and explode.

5.3. Special protective actions for fire-fighters
Water may not effectively extinguish fire; however, it should be used to keep fire-exposed containers and surfaces cool and prevent explosive rupture.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures
Evacuate area. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Use only non-sparking tools. 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. Warning! A motor could be an ignition source and could cause flammable gases or vapors in the spill area to burn or explode. 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. Cover spill area with a fire-extinguishing foam designed for use on solvents, such as alcohols and acetone, that can dissolve in water. An AR - AFFF type foam is recommended. 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 using non-sparking tools. 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
Avoid skin contact with hot material. Do not use in a confined area with minimal air exchange. Keep out of reach of children. Do not handle until all safety precautions have been read and understood. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. 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. Contaminated work clothing should not be allowed out of the workplace. Avoid release to the environment. Wash contaminated clothing before reuse. Avoid contact with oxidizing agents (eg. chlorine, chromic acid etc.) 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
Store in a well-ventilated place. Keep cool. Store away from heat. Store away from acids. Store away from strong bases. Store away from oxidizing 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	C.A.S. No.	Agency	Limit type	Additional Comments
PROPYLENE GLYCOL	57-55-6	AIHA	TWA(as aerosol):10 mg/m3	
Protease	Trade Secret	ACGIH	CEIL(as pure cystalline enzyme):0.00006 mg/m3	
Stabilizer	Trade Secret	OSHA	TWA(as total dust):15 mg/m3;TWA(respirable fraction):5 mg/m3	
Solvent	Trade Secret	OSHA	TWA:600 mg/m3(100 ppm)	SKIN
Solvent	Trade Secret	ACGIH	TWA:100 ppm;STEL:150 ppm	SKIN

ACGIH : American Conference of Governmental Industrial Hygienists
AIHA : American Industrial Hygiene Association
CMRG : Chemical Manufacturer's Recommended Guidelines
OSHA : United States Department of Labor - Occupational Safety and Health Administration

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:
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
Half facepiece or full facepiece supplied-air respirator

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

Thermal hazards
Wear heat insulating gloves when handling hot material to prevent thermal burns.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

General Physical Form:	Liquid
Odor, Color, Grade:	Clear green or light blue in color
Odor threshold	*No Data Available*
pH	7.5 - 9
Melting point	*Not Applicable*
Boiling Point	*No Data Available*
Flash Point	>=70 ºC
Evaporation rate	*No Data Available*
Flammability (solid, gas)	Not Applicable
Flammable Limits(LEL)	*No Data Available*

Flammable Limits(UEL)	*No Data Available*
Vapor Pressure	*Not Applicable*
Vapor Density	*Not Applicable*
Density	0.95 - 1.1 g/ml
Specific Gravity	0.95 - 1.1
Solubility in Water	Complete
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*
Molecular weight	*No Data Available*
Percent volatile	*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 polymerization will not occur.

10.4. Conditions to avoid
Heat
High shear and high temperature conditions

10.5. Incompatible materials
Reactive metals
Strong acids
Strong bases
Strong oxidizing agents

10.6. Hazardous decomposition products

Substance	Condition
Aldehydes	Not Specified
Hydrocarbons	Not Specified
Carbon monoxide	Not Specified
Carbon dioxide	Not Specified
Oxides of Sulfur	Not Specified

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.

Allergic Respiratory Reaction: Signs/symptoms may include difficulty breathing, wheezing, cough, and tightness of chest.

Skin Contact:
Mild Skin Irritation: Signs/symptoms may include localized redness, swelling, itching, and dryness. Allergic Skin Reaction (non-photo induced): Signs/symptoms may include redness, swelling, blistering, and itching.

Eye Contact:
Severe Eye Irritation: Signs/symptoms may include significant redness, swelling, pain, tearing, cloudy appearance of the cornea, and impaired vision.

Ingestion:
Gastrointestinal Irritation: Signs/symptoms may include abdominal pain, stomach upset, nausea, vomiting and diarrhea.

Additional Health Effects:

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
SODIUM XYLENE SULFONATE	Dermal		LD50 estimated to be > 5,000 mg/kg
SODIUM XYLENE SULFONATE	Ingestion	Rat	LD50 > 5,000 mg/kg
Solvent	Dermal	Rabbit	LD50 > 19,000 mg/kg
Solvent	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 50 mg/l
Solvent	Ingestion	Rat	LD50 5,180 mg/kg
PROPYLENE GLYCOL	Dermal	Rabbit	LD50 20,800 mg/kg
PROPYLENE GLYCOL	Ingestion	Rat	LD50 22,000 mg/kg
Stabilizer	Dermal	Rabbit	LD50 estimated to be > 5,000 mg/kg
Stabilizer	Ingestion	Rat	LD50 > 5,000 mg/kg
Protease	Dermal		estimated to be > 5,000 mg/kg
Protease	Inhalation-Dust/Mist		estimated to be > 12.5 mg/l
Protease	Ingestion		estimated to be > 5,000 mg/kg
SODIUM SULFATE	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 2.4 mg/l
SODIUM SULFATE	Ingestion	Rat	LD50 > 10,000 mg/kg
SODIUM SULFATE	Dermal	similar health hazards	LD50 estimated to be > 5,000 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
Solvent	Human and animal	No significant irritation
PROPYLENE GLYCOL	Rabbit	No significant irritation
Stabilizer	Rabbit	No significant irritation
SODIUM SULFATE	Rabbit	No significant irritation

Serious Eye Damage/Irritation

Name	Species	Value
Solvent	Rabbit	Mild irritant
PROPYLENE GLYCOL	Rabbit	No significant irritation
Stabilizer	Rabbit	No significant irritation
SODIUM SULFATE	Rabbit	No significant irritation

Skin Sensitization

Name	Species	Value
Solvent	Human	Not classified
PROPYLENE GLYCOL	Human	Not classified
Stabilizer	Guinea pig	Not classified
SODIUM SULFATE	Guinea pig	Not classified

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
Solvent	In Vitro	Not mutagenic
PROPYLENE GLYCOL	In Vitro	Not mutagenic
PROPYLENE GLYCOL	In vivo	Not mutagenic
SODIUM SULFATE	In Vitro	Not mutagenic

Carcinogenicity

Name	Route	Species	Value
PROPYLENE GLYCOL	Dermal	Mouse	Not carcinogenic
PROPYLENE GLYCOL	Ingestion	Multiple animal species	Not carcinogenic
Stabilizer	Ingestion	Mouse	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
Solvent	Inhalation	Not classified for development	Multiple animal species	NOAEL 1.82 mg/l	during organogenesis
PROPYLENE GLYCOL	Ingestion	Not classified for female reproduction	Mouse	NOAEL 10,100 mg/kg/day	2 generation
PROPYLENE GLYCOL	Ingestion	Not classified for male reproduction	Mouse	NOAEL 10,100 mg/kg/day	2 generation
PROPYLENE GLYCOL	Ingestion	Not classified for development	Multiple	NOAEL 1,230	during

			animal species	mg/kg/day	organogenesis
Stabilizer	Ingestion	Not classified for female reproduction	Rat	NOAEL 2,000 mg/kg/day	2 generation
Stabilizer	Ingestion	Not classified for male reproduction	Rat	NOAEL 2,000 mg/kg/day	2 generation
Stabilizer	Ingestion	Not classified for development	Rat	NOAEL 2,000 mg/kg/day	2 generation
SODIUM SULFATE	Dermal	Not classified for female reproduction	Rabbit	NOAEL 5,328 mg/kg/day	65 days
SODIUM SULFATE	Ingestion	Not classified for female reproduction	Rat	NOAEL 1,000 mg/kg/day	premating into lactation
SODIUM SULFATE	Dermal	Not classified for male reproduction	Rabbit	NOAEL 5,328 mg/kg/day	65 days
SODIUM SULFATE	Ingestion	Not classified for male reproduction	Rat	NOAEL 1,000 mg/kg/day	4 weeks
SODIUM SULFATE	Ingestion	Not classified for development	Rat	NOAEL 1,000 mg/kg/day	premating into lactation

Target Organ(s)

Specific Target Organ Toxicity - single exposure

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
Solvent	Dermal	central nervous system depression	Not classified	Rabbit	NOAEL 2,850 mg/kg	
Solvent	Inhalation	central nervous system depression	Not classified	Rat	LOAEL 3.07 mg/l	7 hours
Solvent	Ingestion	central nervous system depression	Not classified	Rat	LOAEL 5,000 mg/kg	
PROPYLENE GLYCOL	Ingestion	central nervous system depression	Not classified	Human and animal	NOAEL Not available	
SODIUM SULFATE	Inhalation	respiratory irritation	Not classified	Human and animal	Irritation Not available	

Specific Target Organ Toxicity - repeated exposure

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
Solvent	Dermal	kidney and/or bladder | heart | endocrine system | hematopoietic system | liver | respiratory system	Not classified	Rabbit	NOAEL 9,500 mg/kg/day	90 days
Solvent	Inhalation	heart | hematopoietic system | liver | immune system | nervous system | eyes | kidney and/or bladder	Not classified	Rat	NOAEL 1.21 mg/l	90 days
Solvent	Ingestion	liver | heart | endocrine system | bone, teeth, nails, and/or hair | hematopoietic system | immune system | nervous system | kidney and/or bladder | respiratory system	Not classified	Rat	NOAEL 1,000 mg/kg/day	28 days
PROPYLENE GLYCOL	Ingestion	hematopoietic system	Not classified	Multiple animal species	NOAEL 1,370 mg/kg/day	117 days

PROPYLENE GLYCOL	Ingestion	kidney and/or bladder	Not classified	Dog	NOAEL 5,000 mg/kg/day	104 weeks
Stabilizer	Inhalation	respiratory system | heart | liver | kidney and/or bladder	Not classified	Rat	NOAEL 3.91 mg/l	14 days
Stabilizer	Ingestion	endocrine system | hematopoietic system | liver | kidney and/or bladder	Not classified	Rat	NOAEL 10,000 mg/kg/day	2 years
SODIUM SULFATE	Dermal	heart | skin | endocrine system | hematopoietic system | liver | immune system | nervous system | kidney and/or bladder | respiratory system	Not classified	Rabbit	NOAEL 5,328 mg/kg/day	65 days
SODIUM SULFATE	Ingestion	hematopoietic system | eyes | kidney and/or bladder	Not classified	Rat	NOAEL 2,000 mg/kg/day	4 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

Ecotoxicological information

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

Chemical fate information

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

SECTION 13: Disposal considerations

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

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

EPA Hazardous Waste Number (RCRA): Not regulated

SECTION 14: Transport Information

For Transport Information, please visit http://3M.com/Transportinfo or call 1-800-364-3577 or 651-737-6501.

SECTION 15: Regulatory information

15.1. US Federal Regulations
Contact 3M for more information.

EPCRA 311/312 Hazard Classifications:

Physical Hazards
Flammable (gases, aerosols, liquids, or solids)

Health Hazards
Reproductive toxicity
Respiratory or Skin Sensitization
Serious eye damage or eye irritation

15.2. State Regulations
Contact 3M for more information.

15.3. Chemical Inventories
The components of this material are in compliance with the China "Measures on Environmental Management of New Chemical Substance". Certain restrictions may apply. Contact the selling division for additional information.

Contact 3M for more information.

15.4. International Regulations
Contact 3M for more information.

This SDS has been prepared to meet the U.S. OSHA Hazard Communication Standard, 29 CFR 1910.1200.

SECTION 16: Other information

NFPA Hazard Classification
Health: 2 **Flammability:** 2 **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.

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