Safety Data Sheet

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SECTION 1: Identification

1.1. Product identifier
3M™ Heavy Duty Degreaser Concentrate

Product Identification Numbers

ID Number	UPC	ID Number	UPC
70-0713-1377-2	500-48011-34782-5	70-0716-8328-1	500-48011-34782-5

7100077193, 7000027573

1.2. Recommended use and restrictions on use

Recommended use
Hard Surface Cleaner

1.3. Supplier's details

MANUFACTURER:	3M
DIVISION:	Commercial Branding and Transportation 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
Corrosive to metal: Category 1.
Serious Eye Damage/Irritation: Category 1.
Skin Corrosion/Irritation: Category 1B.
Specific Target Organ Toxicity (repeated exposure): Category 1.

2.2. Label elements
Signal word
Danger

Symbols
Corrosion | Health Hazard |

Pictograms

Hazard Statements
May be corrosive to metals.

Causes severe skin burns and eye damage.

Causes damage to organs through prolonged or repeated exposure:
respiratory system |

Precautionary Statements

Prevention:
Keep only in original container.
Do not breathe dust/fume/gas/mist/vapors/spray.
Wear protective gloves, protective clothing, and eye/face protection.
Do not eat, drink or smoke when using this product.
Wash thoroughly after handling.

Response:
IF INHALED: Remove person to fresh air and keep comfortable for breathing.
IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Immediately call a POISON CENTER or doctor/physician.
Wash contaminated clothing before reuse.
IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
Absorb spillage to prevent material damage.

Storage:
Store in a corrosive resistant container with a resistant inner liner.
Store locked up.

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

2.3. Hazards not otherwise classified
May cause chemical gastrointestinal burns.

4% of the mixture consists of ingredients of unknown acute oral toxicity.
5% of the mixture consists of ingredients of unknown acute dermal toxicity.
26% of the mixture consists of ingredients of unknown acute inhalation toxicity.

SECTION 3: Composition/information on ingredients

Ingredient	C.A.S. No.	% by Wt
WATER	7732-18-5	60 - 90 Trade Secret *
Butoxyethanol	111-76-2	5 - 10 Trade Secret *
SODIUM DODECYLBENZENE SULFONATE	25155-30-0	1 - 5 Trade Secret *
SODIUM HYDROXIDE	1310-73-2	1 - 5 Trade Secret *

Sodium Orthosilicate	1344-09-8	1 - 5 Trade Secret *
Sodium xylenesulphonate	1300-72-7	1 - 5 Trade Secret *
SODIUM GLYCOLATE	2836-32-0	0.1 - 1 Trade Secret *
SODIUM SULFATE	7757-82-6	0.1 - 1 Trade Secret *
Tetrasodium EDTA	64-02-8	0.1 - 1 Trade Secret *
C9-11 Alcohols Ethoxylated	68439-46-3	0.1 - 0.9 Trade Secret *
BENZALDEHYDE	100-52-7	0.01 - 0.05 Trade Secret *
Polymeric Colorant	Trade Secret*	0.001 - 0.015 Trade Secret *
Polymeric Colorant	Trade Secret*	0.001 - 0.01 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 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
No critical symptoms or effects. 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
Evacuate area. Ventilate the area with fresh air. For large spill, or spills in confined spaces, provide mechanical ventilation to disperse or exhaust vapors, in accordance with good industrial hygiene practice. Refer to other sections of this SDS for

information regarding physical and health hazards, respiratory protection, ventilation, and personal protective equipment.

6.2. Environmental precautions
Avoid release to the environment. For larger spills, cover drains and build dikes to prevent entry into sewer systems or bodies of water.

6.3. Methods and material for containment and cleaning up
Contain spill. For large spills, if necessary, get assistance from professional spill clean up team. For small spills, carefully neutralize spill by adding appropriate dilute acid such as vinegar. Work slowly to avoid boiling or spattering. Continue to add neutralizing agent until reaction stops. Let cool before collecting. Or use a commercially available caustic (alkaline or basic) spill clean-up kit. Follow kit directions exactly. 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 water. Cover, but do not seal for 48 hours. 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
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
Store in a well-ventilated place. Keep only in original container. Store in a corrosive resistant container with a resistant inner liner. Store away from acids. Keep/store away from clothing and other combustible materials.

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
BENZALDEHYDE	100-52-7	AIHA	TWA:8.7 mg/m3(2 ppm);STEL(15 minutes):17.4 mg/m3(4 ppm)	Dermal Sensitizer
Butoxyethanol	111-76-2	ACGIH	TWA:20 ppm	A3: Confirmed animal carcin.
Butoxyethanol	111-76-2	OSHA	TWA:240 mg/m3(50 ppm)	SKIN
SODIUM HYDROXIDE	1310-73-2	ACGIH	CEIL:2 mg/m3	
SODIUM HYDROXIDE	1310-73-2	OSHA	TWA:2 mg/m3	

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:
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
Fluoroelastomer
Nitrile Rubber

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 – Butyl rubber
Apron – Nitrile
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

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

Appearance	
Physical state	Liquid
Color	Green
Specific Physical Form:	Liquid
Odor	Characteristic Odor
Odor threshold	*No Data Available*
pH	12.5 - 13.5
Melting point	*Not Applicable*
Boiling Point	> 212 ºF
Flash Point	No flash point
Evaporation rate	*No Data Available*
Flammability (solid, gas)	Not Applicable
Flammable Limits(LEL)	*No Data Available*

Flammable Limits(UEL)	*No Data Available*
Vapor Pressure	*No Data Available*
Vapor Density	*No Data Available*
Density	*No Data Available*
Specific Gravity	1.04858 [*Ref Std:*WATER=1]
Solubility in Water	Complete
Solubility- non-water	*No Data Available*
Partition coefficient: n-octanol/ water	*No Data Available*
Autoignition temperature	*Not Applicable*
Decomposition temperature	*No Data Available*
Viscosity	< 100 centipoise
Volatile Organic Compounds	5 - 15 % weight [*Test Method:*calculated per CARB title 2]
Percent volatile	60 - 90 %
VOC Less H2O & Exempt Solvents	490 - 550 g/l

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
Not determined

10.5. Incompatible materials
Strong acids
Aluminum
Zinc

10.6. Hazardous decomposition products

Substance	Condition
Carbon monoxide	Not Specified
Carbon dioxide	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.

May cause additional health effects (see below).

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:
May be 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.

Additional Health Effects:

Prolonged or repeated exposure may cause target organ effects:
Respiratory Effects: Signs/symptoms may include cough, shortness of breath, chest tightness, wheezing, increased heart rate, bluish colored skin (cyanosis), sputum production, changes in lung function tests, and/or respiratory failure.

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

Acute Toxicity

Name	Route	Species	Value
Overall product	Dermal		No data available; calculated ATE >5,000 mg/kg
Overall product	Inhalation-Dust/Mist(4 hr)		No data available; calculated ATE >12.5 mg/l
Overall product	Ingestion		No data available; calculated ATE >2,000 - =5,000 mg/kg
Butoxyethanol	Dermal	Guinea pig	LD50 > 2,000 mg/kg
Butoxyethanol	Inhalation-Vapor (4 hours)	Guinea pig	LC50 > 2.6 mg/l
Butoxyethanol	Ingestion	Guinea pig	LD50 1,200 mg/kg
Sodium Orthosilicate	Dermal	Rabbit	LD50 > 4,640 mg/kg
Sodium xylenesulphonate	Dermal	Rabbit	LD50 > 2,000 mg/kg
SODIUM DODECYLBENZENE SULFONATE	Dermal	Rat	LD50 > 2,000 mg/kg
SODIUM DODECYLBENZENE SULFONATE	Inhalation-Dust/Mist (4 hours)	Rat	LC50 0.31 mg/l
SODIUM DODECYLBENZENE SULFONATE	Ingestion	Rat	LD50 1,260 mg/kg
Sodium Orthosilicate	Ingestion	Rat	LD50 500 mg/kg
Sodium xylenesulphonate	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 6.4 mg/l
Sodium xylenesulphonate	Ingestion	Rat	LD50 7,200 mg/kg
SODIUM GLYCOLATE	Dermal	Professional judgement	LD50 estimated to be > 5,000 mg/kg
SODIUM GLYCOLATE	Ingestion	Rat	LD50 7,110 mg/kg
Tetrasodium EDTA	Inhalation-Dust/Mist	Rat	LC50 > 1.5 mg/l

	(4 hours)		
Tetrasodium EDTA	Ingestion	Rat	LD50 1,658 mg/kg
C9-11 Alcohols Ethoxylated	Dermal	similar compounds	LD50 > 2,000 mg/kg
C9-11 Alcohols Ethoxylated	Inhalation-Dust/Mist (4 hours)	similar compounds	LC50 > 1.6 mg/l
C9-11 Alcohols Ethoxylated	Ingestion	similar compounds	LD50 3,488 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
BENZALDEHYDE	Dermal	Rabbit	LD50 >2000, <5000 mg/kg
BENZALDEHYDE	Inhalation-Dust/Mist (4 hours)	Rat	LC50 >1, <5 mg/l
BENZALDEHYDE	Ingestion	Rat	LD50 1,430 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
Overall product	In vitro data	Corrosive
Butoxyethanol	Rabbit	Irritant
SODIUM DODECYLBENZENE SULFONATE	Rabbit	Irritant
SODIUM HYDROXIDE	Rabbit	Corrosive
Sodium Orthosilicate	Rabbit	Corrosive
Sodium xylenesulphonate	Rabbit	Minimal irritation
SODIUM GLYCOLATE	Not available	Irritant
Tetrasodium EDTA	Rabbit	No significant irritation
C9-11 Alcohols Ethoxylated	similar compounds	Minimal irritation
SODIUM SULFATE	Rabbit	No significant irritation
BENZALDEHYDE	Multiple animal species	Irritant

Serious Eye Damage/Irritation

Name	Species	Value
Butoxyethanol	Rabbit	Severe irritant
SODIUM DODECYLBENZENE SULFONATE	Rabbit	Corrosive
SODIUM HYDROXIDE	Rabbit	Corrosive
Sodium Orthosilicate	In vitro data	Corrosive
Sodium xylenesulphonate	Rabbit	Moderate irritant
SODIUM GLYCOLATE	Not available	Corrosive
Tetrasodium EDTA	Rabbit	Corrosive
C9-11 Alcohols Ethoxylated	Professional judgement	Moderate irritant
SODIUM SULFATE	Rabbit	No significant irritation
BENZALDEHYDE	Rabbit	Moderate irritant

Skin Sensitization

Name	Species	Value
Butoxyethanol	Guinea pig	Not classified
SODIUM DODECYLBENZENE SULFONATE	Guinea pig	Not classified
SODIUM HYDROXIDE	Human	Not classified
Sodium Orthosilicate	Mouse	Not classified
Sodium xylenesulphonate	Guinea pig	Not classified
SODIUM GLYCOLATE	Guinea pig	Not classified
Tetrasodium EDTA	Human and animal	Not classified
C9-11 Alcohols Ethoxylated	Guinea pig	Not classified
SODIUM SULFATE	Guinea pig	Not classified
BENZALDEHYDE	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
Butoxyethanol	In Vitro	Some positive data exist, but the data are not sufficient for classification
SODIUM DODECYLBENZENE SULFONATE	In Vitro	Not mutagenic
SODIUM DODECYLBENZENE SULFONATE	In vivo	Not mutagenic
SODIUM HYDROXIDE	In Vitro	Not mutagenic
Sodium Orthosilicate	In Vitro	Not mutagenic
Sodium Orthosilicate	In vivo	Not mutagenic
Sodium xylenesulphonate	In Vitro	Not mutagenic
Tetrasodium EDTA	In Vitro	Some positive data exist, but the data are not sufficient for classification
Tetrasodium EDTA	In vivo	Some positive data exist, but the data are not sufficient for classification
C9-11 Alcohols Ethoxylated	In Vitro	Not mutagenic
SODIUM SULFATE	In Vitro	Not mutagenic
BENZALDEHYDE	In vivo	Not mutagenic
BENZALDEHYDE	In Vitro	Some positive data exist, but the data are not sufficient for classification

Carcinogenicity

Name	Route	Species	Value
Butoxyethanol	Inhalation	Multiple animal species	Some positive data exist, but the data are not sufficient for classification
SODIUM DODECYLBENZENE SULFONATE	Dermal	Mouse	Not carcinogenic
SODIUM DODECYLBENZENE SULFONATE	Ingestion	Rat	Not carcinogenic
Sodium xylenesulphonate	Dermal	Multiple animal species	Not carcinogenic
Tetrasodium EDTA	Ingestion	Multiple animal species	Not carcinogenic
BENZALDEHYDE	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
Butoxyethanol	Dermal	Not classified for development	Rat	NOAEL 1,760 mg/kg/day	during gestation
Butoxyethanol	Ingestion	Not classified for development	Rat	NOAEL 100 mg/kg/day	during organogenesis
Butoxyethanol	Inhalation	Not classified for development	Multiple animal species	NOAEL 0.48 mg/l	during organogenesis
SODIUM DODECYLBENZENE SULFONATE	Ingestion	Not classified for female reproduction	Rat	NOAEL 350 mg/kg/day	3 generation
SODIUM DODECYLBENZENE SULFONATE	Ingestion	Not classified for male reproduction	Rat	NOAEL 350 mg/kg/day	3 generation
SODIUM DODECYLBENZENE SULFONATE	Dermal	Not classified for development	Mouse	NOAEL 1,500 mg/kg/day	during organogenesis
SODIUM DODECYLBENZENE SULFONATE	Ingestion	Not classified for development	Mouse	LOAEL 300 mg/kg/day	during organogenesis
Sodium Orthosilicate	Ingestion	Not classified for development	Mouse	NOAEL 200 mg/kg/day	during gestation
Sodium xylenesulphonate	Ingestion	Not classified for development	Rabbit	NOAEL 1,000 mg/kg/day	during gestation
Tetrasodium EDTA	Ingestion	Not classified for female reproduction	Rat	NOAEL 250 mg/kg/day	4 generation
Tetrasodium EDTA	Ingestion	Not classified for male reproduction	Rat	NOAEL 250 mg/kg/day	4 generation
Tetrasodium EDTA	Ingestion	Not classified for development	Rat	LOAEL 1,000 mg/kg/day	during gestation
C9-11 Alcohols Ethoxylated	Dermal	Not classified for female reproduction	Rat	NOAEL 250 mg/kg/day	2 generation
C9-11 Alcohols Ethoxylated	Dermal	Not classified for development	Rat	NOAEL 250 mg/kg/day	2 generation
C9-11 Alcohols Ethoxylated	Dermal	Not classified for male reproduction	Rat	NOAEL 100 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
BENZALDEHYDE	Ingestion	Not classified for female reproduction	Rat	NOAEL 5 mg/kg/day	1 generation

Target Organ(s)

Specific Target Organ Toxicity - single exposure

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
Butoxyethanol	Dermal	endocrine system	Not classified	Rabbit	NOAEL 902 mg/kg	6 hours
Butoxyethanol	Dermal	liver	Not classified	Rabbit	LOAEL 72 mg/kg	not available
Butoxyethanol	Dermal	kidney and/or bladder	Not classified	Rabbit	LOAEL 451 mg/kg	6 hours
Butoxyethanol	Dermal	blood	Not classified	Multiple animal	NOAEL Not available	

				species		
Butoxyethanol	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Human	NOAEL Not available	
Butoxyethanol	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	Human	NOAEL Not available	
Butoxyethanol	Inhalation	blood	Not classified	Multiple animal species	NOAEL Not available	
Butoxyethanol	Ingestion	central nervous system depression	May cause drowsiness or dizziness	Professional judgement	NOAEL Not available	
Butoxyethanol	Ingestion	blood	Not classified	Multiple animal species	NOAEL Not available	
Butoxyethanol	Ingestion	kidney and/or bladder	Not classified	Human	NOAEL Not available	poisoning and/or abuse
SODIUM HYDROXIDE	Inhalation	respiratory irritation	May cause respiratory irritation	Human	NOAEL Not available	
Sodium Orthosilicate	Inhalation	respiratory irritation	May cause respiratory irritation	official classification	NOAEL Not available	
Sodium xylenesulphonate	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	similar health hazards	NOAEL not available	
SODIUM GLYCOLATE	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	similar health hazards	NOAEL Not available	
Tetrasodium EDTA	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	similar health hazards	NOAEL Not available	
C9-11 Alcohols Ethoxylated	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	similar health hazards	NOAEL Not available	
SODIUM SULFATE	Inhalation	respiratory irritation	Not classified	Human and animal	Irritation Not available	
BENZALDEHYDE	Inhalation	respiratory irritation	May cause respiratory irritation	Human and animal	NOAEL not available	

Specific Target Organ Toxicity - repeated exposure

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
Butoxyethanol	Dermal	blood	Not classified	Multiple animal species	NOAEL Not available	not available
Butoxyethanol	Dermal	endocrine system	Not classified	Rabbit	NOAEL 150 mg/kg/day	90 days
Butoxyethanol	Inhalation	liver	Not classified	Rat	NOAEL 2.4 mg/l	14 weeks
Butoxyethanol	Inhalation	kidney and/or bladder	Not classified	Rat	NOAEL 0.15 mg/l	14 weeks
Butoxyethanol	Inhalation	blood	Not classified	Rat	LOAEL 0.15 mg/l	6 months
Butoxyethanol	Inhalation	endocrine system	Not classified	Dog	LOAEL 1.9 mg/l	8 days
Butoxyethanol	Ingestion	blood	Not classified	Rat	LOAEL 69 mg/kg/day	13 weeks
Butoxyethanol	Ingestion	kidney and/or bladder	Not classified	Multiple animal species	NOAEL Not available	not available
SODIUM DODECYLBENZENE SULFONATE	Ingestion	kidney and/or bladder	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 40 mg/kg/day	6 months
SODIUM	Ingestion	hematopoietic	Not classified	Dog	NOAEL 150	6 months

DODECYLBENZENE SULFONATE		system | liver			mg/kg/day	
Sodium Orthosilicate	Ingestion	kidney and/or bladder	Some positive data exist, but the data are not sufficient for classification	Dog	LOAEL 2,400 mg/kg/day	4 weeks
Sodium Orthosilicate	Ingestion	endocrine system | blood	Not classified	Rat	NOAEL 804 mg/kg/day	3 months
Sodium Orthosilicate	Ingestion	heart | liver	Not classified	Rat	NOAEL 1,259 mg/kg/day	8 weeks
Sodium xylenesulphonate	Dermal	liver | heart | skin | endocrine system | gastrointestinal tract | bone, teeth, nails, and/or hair | hematopoietic system | immune system | nervous system | kidney and/or bladder | respiratory system	Not classified	Rat	NOAEL 500 mg/kg/day	14 weeks
Sodium xylenesulphonate	Ingestion	hematopoietic system	Not classified	Rat	NOAEL 763 mg/kg/day	90 days
Tetrasodium EDTA	Inhalation	respiratory system	Causes damage to organs through prolonged or repeated exposure	Rat	NOAEL 0.003 mg/l	13 weeks
Tetrasodium EDTA	Inhalation	liver | heart | skin | endocrine system | gastrointestinal tract | bone, teeth, nails, and/or hair | hematopoietic system | immune system | muscles | nervous system | eyes | kidney and/or bladder | vascular system	Not classified	Rat	NOAEL 0.015 mg/l	13 weeks
Tetrasodium EDTA	Ingestion	hematopoietic system | liver	Not classified	Rat	NOAEL 2,500 mg/kg/day	13 weeks
Tetrasodium EDTA	Ingestion	heart | gastrointestinal tract | muscles | kidney and/or bladder | respiratory system	Not classified	Rat	NOAEL 5,000 mg/kg/day	13 weeks
C9-11 Alcohols Ethoxylated	Dermal	kidney and/or bladder | heart | hematopoietic system | liver | nervous system | respiratory system	Not classified	Rat	NOAEL 125 mg/kg/day	13 weeks
SODIUM SULFATE	Dermal	heart | skin | endocrine system | gastrointestinal tract | 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
BENZALDEHYDE	Inhalation	hematopoietic system | liver | nervous system |	Not classified	Rat	NOAEL 4.34 mg/l	14 days

		respiratory system | heart | endocrine system | gastrointestinal tract | kidney and/or bladder				
BENZALDEHYDE	Ingestion	liver | nervous system | kidney and/or bladder	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 400 mg/kg/day	13 weeks
BENZALDEHYDE	Ingestion	gastrointestinal tract | heart | endocrine system | bone, teeth, nails, and/or hair | hematopoietic system | immune system | eyes | respiratory system	Not classified	Rat	NOAEL 800 mg/kg/day	13 weeks

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.

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.

EPA Hazardous Waste Number (RCRA): D002 (Corrosive)

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

EPCRA 311/312 Hazard Classifications:

Physical Hazards
Corrosive to metal

Health Hazards
Hazard Not Otherwise Classified (HNOC)
Serious eye damage or eye irritation
Skin Corrosion or Irritation
Specific target organ toxicity (single or repeated exposure)

Section 313 Toxic Chemicals subject to the reporting requirements of that section and 40 CFR part 372 (EPCRA):

Ingredient	C.A.S. No	% by Wt
Butoxyethanol (GLYCOL ETHERS)	111-76-2	Trade Secret 5 - 10

15.2. State Regulations

15.3. Chemical Inventories

The components of this material are in compliance with the provisions of Australia National Industrial Chemical Notification and Assessment Scheme (NICNAS). Certain restrictions may apply. Contact the selling division for additional information.

The components of this product are in compliance with the new substance notification requirements of CEPA.

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.

The components of this material are in compliance with the provisions of the Korean Toxic Chemical Control Law. Certain restrictions may apply. Contact the selling division for additional information.

The components of this material are in compliance with the provisions of Japan Chemical Substance Control Law. Certain restrictions may apply. Contact the selling division for additional information.

The components of this material are in compliance with the provisions of Philippines RA 6969 requirements. Certain restrictions may apply. Contact the selling division for additional information.

The components of this product are in compliance with the chemical notification requirements of TSCA. All required components of this product are listed on the active portion of the TSCA Inventory.

15.4. International Regulations

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: 3 **Flammability:** 0 **Instability:** 0 **Special Hazards:** None
Acid/Base: Alkaline **Corrosive:** Yes

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.

HMIS Hazard Classification

Health: *3 **Flammability:** 0 **Physical Hazard:** 0 **Personal Protection:** X - See PPE section.

Hazardous Material Identification System (HMIS® IV) hazard ratings are designed to inform employees of chemical hazards in the workplace. These ratings are based on the inherent properties of the material under expected conditions of normal use and are not intended for use in emergency situations. HMIS® IV ratings are to be used with a fully implemented HMIS® IV program. HMIS® is a registered mark of the American Coatings Association (ACA).

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