Safety Data Sheet

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SECTION 1: Identification

1.1. Product identifier
3M™ Heavy Duty Glass Cleaner Ready-to-Use (Product No. 20, Twist 'n Fill™ System)

Product Identification Numbers
LN-D100-1258-2, 61-0000-6313-3
7010328495

1.2. Recommended use and restrictions on use

Recommended use
Non-streaking, heavy-duty cleaner for windows, glass, mirrors and other mirrored surfaces., 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
Not classified as hazardous according to OSHA Hazard Communication Standard, 29 CFR 1910.1200.

2.2. Label elements
Signal word
Not applicable.

Symbols
Not applicable.

Pictograms
Not applicable.

SECTION 3: Composition/information on ingredients

Ingredient	C.A.S. No.	% by Wt
WATER	7732-18-5	> 95 Trade Secret *
1-PROPOXY-2-PROPANOL	1569-01-3	1 - 5 Trade Secret *
ALKYL ETHOXY CARBOXYLIC ACID	220622-96-8	< 0.1 Trade Secret *
ALCOHOLS, C10-16, ETHOXYLATED	68002-97-1	< 0.05 Trade Secret *
ETHANOLAMINE	141-43-5	< 0.05 Trade Secret *
Fragrance added	Mixture	< 0.05 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:
Wash with soap and water. If signs/symptoms develop, get medical attention.

Eye Contact:
Flush with large amounts of water. Remove contact lenses if easy to do. Continue rinsing. If signs/symptoms persist, 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
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.

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 in accordance with applicable local/regional/national/international regulations.

SECTION 7: Handling and storage

7.1. Precautions for safe handling
For industrial/occupational use only. Not for consumer sale or use. NOTE: The above precautionary information presumes that this ready-to-use product has been diluted and dispensed from a chemical dispensing system. Keep out of reach of children. Avoid breathing dust/fume/gas/mist/vapors/spray. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Avoid release to the environment. Avoid contact with oxidizing agents (eg. chlorine, chromic acid etc.)

7.2. Conditions for safe storage including any incompatibilities
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
ETHANOLAMINE	141-43-5	ACGIH	TWA:3 ppm;STEL:6 ppm	
ETHANOLAMINE	141-43-5	OSHA	TWA:6 mg/m3(3 ppm)	

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

Under normal use conditions, eye exposure is not expected to be significant enough to require eye protection.

Skin/hand protection
Under normal use conditions, skin exposure is not expected to be significant enough to require skin protection.

Respiratory protection

Respiratory protection is not required.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance	
Physical state	Liquid
Color	Blue, Blue-Violet
Specific Physical Form:	Liquid
Odor	Moderate Floral
Odor threshold	*No Data Available*
pH	Approximately 7 - 9
Melting point	*Not Applicable*
Boiling Point	> 212 ºF
Flash Point	No flash point
Evaporation rate	*Not Applicable*
Flammability (solid, gas)	Not Applicable
Flammable Limits(LEL)	*Not Applicable*
Flammable Limits(UEL)	*Not Applicable*
Vapor Pressure	*Not Applicable*
Vapor Density	*Not Applicable*
Specific Gravity	Approximately 1 [*Ref Std:*WATER=1]
Solubility in Water	Complete
Solubility- non-water	*No Data Available*
Partition coefficient: n-octanol/ water	*Not Applicable*
Autoignition temperature	*Not Applicable*
Decomposition temperature	*No Data Available*
Viscosity	< 50 centipoise
Volatile Organic Compounds	1 - 5 % weight [*Test Method:*calculated per CARB title 2]
Percent volatile	> 90 %
VOC Less H2O & Exempt Solvents	320 - 330 g/l [*Test Method:*calculated per CARB title 2]

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 oxidizing agents

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.

Skin Contact:
Contact with the skin during product use is not expected to result in significant irritation.

Eye Contact:
Contact with the eyes during product use is not expected to result in significant irritation.

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

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	Ingestion		No data available; calculated ATE >5,000 mg/kg
1-PROPOXY-2-PROPANOL	Dermal	Rabbit	LD50 2,805 mg/kg
1-PROPOXY-2-PROPANOL	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 11.8 mg/l
1-PROPOXY-2-PROPANOL	Ingestion	Rat	LD50 2,500 mg/kg
ALKYL ETHOXY CARBOXYLIC ACID	Dermal	Rabbit	LD50 > 2,000 mg/kg
ALKYL ETHOXY CARBOXYLIC ACID	Ingestion	Rat	LD50 > 2,000 mg/kg
ETHANOLAMINE	Inhalation-Vapor	official classification	LC50 estimated to be 10 - 20 mg/l
ETHANOLAMINE	Dermal	Rabbit	LD50 2,504 mg/kg
ETHANOLAMINE	Ingestion	Rat	LD50 1,089 mg/kg
ALCOHOLS, C10-16, ETHOXYLATED	Ingestion	Rat	LD50 1,350 mg/kg
Fragrance added	Dermal	Rabbit	LD50 > 5,010 mg/kg
Fragrance added	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 2.34 mg/l
Fragrance added	Ingestion	Rat	LD50 > 14,800 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
1-PROPOXY-2-PROPANOL	Rabbit	Minimal irritation
ALKYL ETHOXY CARBOXYLIC ACID	Rabbit	Irritant

ETHANOLAMINE	Rabbit	Corrosive
ALCOHOLS, C10-16, ETHOXYLATED	Rabbit	Mild irritant
Fragrance added	Rabbit	No significant irritation

Serious Eye Damage/Irritation

Name	Species	Value
1-PROPOXY-2-PROPANOL	Rabbit	Severe irritant
ALKYL ETHOXY CARBOXYLIC ACID	Rabbit	Corrosive
ETHANOLAMINE	Rabbit	Corrosive
ALCOHOLS, C10-16, ETHOXYLATED	Rabbit	Corrosive
Fragrance added	Rabbit	No significant irritation

Skin Sensitization

Name	Species	Value
ETHANOLAMINE	Guinea pig	Not classified
ALCOHOLS, C10-16, ETHOXYLATED	Human	Not classified
Fragrance added	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
1-PROPOXY-2-PROPANOL	In Vitro	Not mutagenic
ETHANOLAMINE	In Vitro	Not mutagenic
ETHANOLAMINE	In vivo	Not mutagenic
Fragrance added	In Vitro	Not mutagenic
Fragrance added	In vivo	Not mutagenic

Carcinogenicity

Name	Route	Species	Value
Fragrance added	Ingestion	Multiple animal species	Not carcinogenic

Reproductive Toxicity

Reproductive and/or Developmental Effects

Name	Route	Value	Species	Test Result	Exposure Duration
1-PROPOXY-2-PROPANOL	Inhalation	Not classified for development	Rat	NOAEL 3.6 mg/l	during organogenesis
ETHANOLAMINE	Dermal	Not classified for development	Rat	NOAEL 225 mg/kg/day	during organogenesis
ETHANOLAMINE	Ingestion	Not classified for development	Rat	NOAEL 450 mg/kg/day	during organogenesis
Fragrance added	Ingestion	Not classified for development	Rat	NOAEL 5,000 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
1-PROPOXY-2-PROPANOL	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Multiple animal species	LOAEL 10.8 mg/l	6 hours
1-PROPOXY-2-PROPANOL	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification		NOAEL Not available	
1-PROPOXY-2-PROPANOL	Ingestion	central nervous system depression	May cause drowsiness or dizziness	Rat	LOAEL 1,770 mg/kg	not applicable
ALKYL ETHOXY CARBOXYLIC ACID	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification		NOAEL Not available	
ETHANOLAMINE	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
1-PROPOXY-2-PROPANOL	Inhalation	liver | kidney and/or bladder	Not classified	Rat	NOAEL 9.5 mg/l	11 days
ETHANOLAMINE	Inhalation	hematopoietic system | liver	Not classified	Rat	NOAEL 0.1559 mg/l	28 days
ETHANOLAMINE	Inhalation	respiratory system	Not classified	Rat	LOAEL 0.0102 mg/l	28 days
ETHANOLAMINE	Inhalation	heart | endocrine system | immune system | nervous system | eyes | kidney and/or bladder	Not classified	Rat	NOAEL 0.1559 mg/l	28 days
ETHANOLAMINE	Ingestion	hematopoietic system | liver | kidney and/or bladder | respiratory system	Not classified	Rat	NOAEL Not available	
Fragrance added	Ingestion	respiratory system	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 470 mg/kg/day	105 weeks
Fragrance added	Ingestion	heart	Not classified	Rat	NOAEL 470 mg/kg/day	105 weeks
Fragrance added	Ingestion	endocrine system | liver	Not classified	Rat	NOAEL 3,040 mg/kg/day	105 weeks
Fragrance added	Ingestion	kidney and/or bladder	Not classified	Rat	NOAEL 115 mg/kg/day	105 weeks
Fragrance added	Ingestion	skin | bone, teeth, nails, and/or hair | hematopoietic system | immune system | nervous system | vascular system	Not classified	Rat	NOAEL 3,040 mg/kg/day	105 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.

Prior to disposal, consult all applicable authorities and regulations to insure proper classification. Dispose of waste product in a permitted industrial waste facility. Empty and clean product containers may be disposed as non-hazardous waste. Consult your specific regulations and service providers to determine available options and requirements.

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
Not applicable

Health Hazards
Not applicable

15.2. State Regulations
Contact 3M for more information.

California Proposition 65

Ingredient	C.A.S. No.	Listing
CADMIUM	None	Male reproductive toxin
CADMIUM AND CADMIUM COMPOUNDS	None	Carcinogen
CADMIUM	None	Developmental Toxin
MERCURY AND MERCURY COMPOUNDS	None	Developmental Toxin
CHROMIUM (HEXAVALENT COMPOUNDS)	None	Female reproductive toxin
CHROMIUM (HEXAVALENT COMPOUNDS)	None	Male reproductive toxin
CHROMIUM (HEXAVALENT COMPOUNDS)	None	Carcinogen
CHROMIUM (HEXAVALENT COMPOUNDS)	None	Developmental Toxin

15.3. Chemical Inventories
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 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

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: 1 **Flammability:** 0 **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.

HMIS Hazard Classification
Health: 1 **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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