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

1.2. Recommended use and restrictions on use
Recommended use
Hard Surface Cleaner. Non-streaking, heavy-duty cleaner for windows, glass, mirrors and other mirrored surfaces.

1.3. Supplier's details

MANUFACTURER:	3M
DIVISION:	Commercial 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
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.

2.3. Hazards not otherwise classified
None.

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 *
ETHANOLAMINE	141-43-5	< 0.05 Trade Secret *
ALCOHOLS, C10-16, ETHOXYLATED	68002-97-1	< 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
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. 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.

6.3. Methods and material for containment and cleaning up
Contain spill. Working from around the edges of the spill inward, cover with bentonite, vermiculite, or commercially available inorganic absorbent material. Mix in sufficient absorbent until it appears dry. Remember, adding an absorbent material does not remove a physical, health, or environmental hazard. Collect as much of the spilled material as possible. Place in a closed container approved for transportation by appropriate authorities. Clean up residue with water. Seal the container. Dispose of collected material as soon as possible.

SECTION 7: Handling and storage

7.1. Precautions for safe handling
For industrial or professional use only. 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 mist/spray. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. 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

Ingredient	C.A.S. No.	Agency	Limit type	Additional Comments
ETHANOLAMINE	141-43-5	OSHA	TWA:6 mg/m3(3 ppm)	
ETHANOLAMINE	141-43-5	ACGIH	TWA:3 ppm;STEL:6 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 mist/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

General Physical Form:	Liquid
Specific Physical Form:	Liquid

Odor, Color, Grade:	Clear, blue to blue violet liquid with floral fragrance
Odor threshold	*No Data Available*
pH	Approximately 7 - 9
Boiling Point	> 212 ºF
Flash Point	No flash point
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*
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 1,000 mg/kg
ETHANOLAMINE	Ingestion	Rat	LD50 1,720 mg/kg
ALCOHOLS, C10-16, ETHOXYLATED	Ingestion	Rat	LD50 1,350 mg/kg
Fragrance added	Dermal	Rabbit	LD50 > 5,000 mg/kg
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

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

Skin Sensitization

Name	Species	Value
ETHANOLAMINE	Guinea pig	Some positive data exist, but the data are not sufficient for classification
ALCOHOLS, C10-16, ETHOXYLATED	Human	Some positive data exist, but the data are not sufficient for classification

Respiratory Sensitization

Name	Species	Value

Germ Cell Mutagenicity

Name	Route	Value

1-PROPOXY-2-PROPANOL	In Vitro	Not mutagenic
ETHANOLAMINE	In Vitro	Not mutagenic
ETHANOLAMINE	In vivo	Not mutagenic

Carcinogenicity

Name	Route	Species	Value

Reproductive Toxicity

Reproductive and/or Developmental Effects

Name	Route	Value	Species	Test Result	Exposure Duration
1-PROPOXY-2-PROPANOL	Inhalation	Some positive developmental data exist, but the data are not sufficient for classification	Rat	NOAEL 3.6 mg/l	during organogenesis
ETHANOLAMINE	Dermal	Not toxic to development	Rat	NOAEL 225 mg/kg/day	during organogenesis
ETHANOLAMINE	Ingestion	Not toxic to development	Rat	NOAEL 616 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	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 9.5 mg/l	11 days
ETHANOLAMINE	Inhalation	liver | kidney and/or bladder | respiratory system	Some positive data exist, but the data are not sufficient for classification	Multiple animal species	NOAEL 0.656 mg/l	5 weeks
ETHANOLAMINE	Ingestion	hematopoietic system | liver | kidney and/or bladder | respiratory system	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL Not available	

Aspiration Hazard

Name	Value

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.

311/312 Hazard Categories:

Fire Hazard - No Pressure Hazard - No Reactivity Hazard - No Immediate Hazard - Yes Delayed Hazard - No

15.2. State Regulations
Contact 3M for more information.

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.

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® III) 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® III ratings are to be used with a fully implemented HMIS® III program. HMIS® is a registered mark of the American Coatings Association (ACA).

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