



Material Safety Data Sheet

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SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: 3M(TM) GLASS CLEANER CONCENTRATE (Product No. 1, Twist 'n Fill(tm) System)
MANUFACTURER: 3M
DIVISION: Commercial Care Division

ADDRESS: 3M Center
St. Paul, MN 55144-1000

EMERGENCY PHONE: 1-800-364-3577 or (651) 737-6501 (24 hours)

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Product Use:

Specific Use: Non-streaking cleaner for windows, glass and mirrors as well as stainless steel, chrome, aluminum, ceramic and plastic.

SECTION 2: INGREDIENTS

| <u>Ingredient</u> | <u>C.A.S. No.</u> | <u>% by Wt</u> |
|------------------------------|-------------------|----------------|
| 1-PROPOXY-2-PROPANOL | 1569-01-3 | 60 - 90 |
| WATER | 7732-18-5 | 10 - 30 |
| ALKYL ETHOXY CARBOXYLIC ACID | 220622-96-8 | 1 - 5 |
| ETHANOLAMINE | 141-43-5 | 0.1 - 1 |
| FRAGRANCE MATERIAL | Mixture | 0.8 |

SECTION 3: HAZARDS IDENTIFICATION

3.1 EMERGENCY OVERVIEW

Specific Physical Form: Liquid

Odor, Color, Grade: Clear, dark blue color with apple fragrance

General Physical Form: Liquid

Immediate health, physical, and environmental hazards: Combustible liquid and vapor. May cause target organ effects.

3.2 POTENTIAL HEALTH EFFECTS

Eye Contact:

Moderate Eye Irritation: Signs/symptoms may include redness, swelling, pain, tearing, and blurred or hazy vision.

Skin Contact:

Moderate Skin Irritation: Signs/symptoms may include localized redness, swelling, itching, and dryness.

May be harmful if absorbed through skin.

Inhalation:

Respiratory Tract Irritation: Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain.

May be absorbed following inhalation and cause target organ effects.

Ingestion:

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

May be absorbed following ingestion and cause target organ effects.

Target Organ Effects:

Central Nervous System (CNS) Depression: Signs/symptoms may include headache, dizziness, drowsiness, incoordination, nausea, slowed reaction time, slurred speech, giddiness, and unconsciousness.

Prolonged or repeated exposure may cause:

Liver Effects: Signs/symptoms may include loss of appetite, weight loss, fatigue, weakness, abdominal tenderness and jaundice.

Kidney/Bladder Effects: Signs/symptoms may include changes in urine production, abdominal or lower back pain, increased protein in urine, increased blood urea nitrogen (BUN), blood in urine, and painful urination.

3.3 POTENTIAL ENVIRONMENTAL EFFECTS

A 3M Product Environmental Data Sheet (PED) is available.

SECTION 4: FIRST AID MEASURES

4.1 FIRST AID PROCEDURES

The following first aid recommendations are based on an assumption that appropriate personal and industrial hygiene practices are followed.

Eye Contact: Flush eyes with large amounts of water. If signs/symptoms persist, get medical attention.

Skin Contact: Remove contaminated clothing and shoes. Immediately flush skin with large amounts of water. Get medical attention. Wash contaminated clothing and clean shoes before reuse.

Inhalation: Remove person to fresh air. If signs/symptoms develop, get medical attention.

If Swallowed: Do not induce vomiting unless instructed to do so by medical personnel. Give victim two glasses of water. Never give anything by mouth to an unconscious person. Get medical attention.

SECTION 5: FIRE FIGHTING MEASURES

5.1 FLAMMABLE PROPERTIES

| | |
|-----------------------------------|---|
| Flash Point | 118 °F [Details: Does not sustain combustion, ASTM D-4206.] |
| Flammable Limits - LEL | No Data Available |
| Flammable Limits - UEL | No Data Available |
| OSHA Flammability Classification: | Class II Combustible Liquid |

5.2 EXTINGUISHING MEDIA

Use fire extinguishers with class B extinguishing agents (e.g., dry chemical, carbon dioxide).

5.3 PROTECTION OF FIRE FIGHTERS

Special Fire Fighting Procedures: Wear full protective equipment (Bunker Gear) and a self-contained breathing apparatus (SCBA).

Unusual Fire and Explosion Hazards: Combustible liquid and vapor. This product does not sustain combustion per testing with ASTM D-4206.

Note: See STABILITY AND REACTIVITY (SECTION 10) for hazardous combustion and thermal decomposition information.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Accidental Release Measures: Refer to other sections of this MSDS for information regarding physical and health hazards, respiratory protection, ventilation, and personal protective equipment. Call 3M-HELPS line (1-800-364-3577) for more information on handling and managing the spill. Evacuate unprotected and untrained personnel from hazard area. The spill should be cleaned up by qualified personnel. Remove all ignition sources such as flames, smoking materials, and electrical spark sources. Use only non-sparking tools. Ventilate the area with fresh air. Contain spill. For larger spills, cover drains and build dikes to prevent entry into sewer systems or bodies of water. 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 toxic, corrosivity or flammability hazard. Collect as much of the spilled material as possible using non-sparking tools. Clean up residue with water. Clean up residue with detergent and water. Collect the resulting residue containing solution. Place in a metal container approved for transportation by appropriate authorities. Seal the container. Dispose of collected material as soon as possible.

In the event of a release of this material, the user should determine if the release qualifies as reportable according to local, state, and federal regulations.

SECTION 7: HANDLING AND STORAGE

7.1 HANDLING

Keep out of the reach of children. This product is not intended to be used without prior dilution as specified on the product label. Avoid breathing of vapors, mists or spray. Avoid skin contact. Avoid eye contact with vapors, mists, or spray. Do not eat, drink or smoke when using this product. Wash exposed areas thoroughly with soap and water. Keep away from heat, sparks, open flame, pilot lights and other sources of ignition. No smoking while handling this material. Avoid contact with oxidizing agents.

7.2 STORAGE

Keep container in well-ventilated area. Store away from heat. Store out of direct sunlight. Store away from acids. Store away from oxidizing agents.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 ENGINEERING CONTROLS

Use in a well-ventilated area.

NOTE: When used as directed and diluted and dispensed with a TWIST 'n FILL(TM) Chemical Dispenser, special ventilation is not required.

8.2 PERSONAL PROTECTIVE EQUIPMENT (PPE)

8.2.1 Eye/Face Protection

Avoid eye contact with vapors, mists, or spray. NOTE: When used as directed and diluted and dispensed with a TWIST 'n FILL(TM) Chemical Dispenser, eye contact with the concentrate is not expected to occur.

If the product is not used with the Twist 'n Fill system or if there is an accidental release, the following eye protection is recommended: Indirect Vented Goggles.

8.2.2 Skin Protection

Avoid skin contact. NOTE: When used as directed and diluted and dispensed with a TWIST 'n FILL(TM) Chemical Dispenser, skin contact with the concentrate is not expected to occur.

If the product is not used with the Twist 'n Fill system or if there is an accidental release, select and use gloves and/or protective clothing to prevent skin contact based on the results of an exposure assessment. Consult with your glove and/or protective clothing manufacturer for selection of appropriate compatible materials. Gloves made from the following materials are recommended: Butyl Rubber, Fluoroelastomer (Viton), Neoprene.

8.2.3 Respiratory Protection

Avoid breathing of vapors, mists or spray. NOTE: When used as directed and diluted and dispensed with a TWIST 'n FILL(TM) Chemical Dispenser, respiratory protection is not required.

If the product is not used with the Twist 'n Fill system or if there is an accidental release, select one of the following NIOSH approved respirators based on airborne concentration of contaminants and in accordance with OSHA regulations: Half facepiece or fullface air-purifying respirator with organic vapor cartridges. Consult the current 3M Respiratory Selection Guide for additional information or call 1-800-243-4630 for 3M technical assistance.

8.2.4 Prevention of Swallowing

Do not eat, drink or smoke when using this product. Wash exposed areas thoroughly with soap and water.

8.3 EXPOSURE GUIDELINES

| <u>Ingredient</u> | <u>Authority</u> | <u>Type</u> | <u>Limit</u> | <u>Additional Information</u> |
|-------------------|------------------|-------------|--------------|-------------------------------|
| ETHANOLAMINE | ACGIH | TWA | 3 ppm | |
| ETHANOLAMINE | ACGIH | STEL | 6 ppm | |
| ETHANOLAMINE | OSHA | TWA | 3 ppm | Table Z-1A |
| ETHANOLAMINE | OSHA | STEL | 6 ppm | Table Z-1A |

SOURCE OF EXPOSURE LIMIT DATA:

ACGIH: American Conference of Governmental Industrial Hygienists

CMRG: Chemical Manufacturer Recommended Guideline

OSHA: Occupational Safety and Health Administration

AIHA: American Industrial Hygiene Association Workplace Environmental Exposure Level (WEEL)

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

| | |
|---|---|
| Specific Physical Form: | Liquid |
| Odor, Color, Grade: | Clear, dark blue color with apple fragrance |
| General Physical Form: | Liquid |
| Flash Point | 118 °F [<i>Details:</i> Does not sustain combustion, ASTM D-4206.] |
| Flammable Limits - LEL | <i>No Data Available</i> |
| Flammable Limits - UEL | <i>No Data Available</i> |
| Boiling point | Approximately 300 °F |
| Density | <i>No Data Available</i> |
| Vapor Pressure | < 27 psia [<i>@ 131 °F</i>] |
| Specific Gravity | Approximately 0.9 [<i>Ref Std: WATER=1</i>] |
| pH | 9.5 - 10.5 |
| Solubility in Water | Complete |
| Hazardous Air Pollutants | <i>Not Applicable</i> |
| Volatile Organic Compounds | 60 - 100 % [<i>Test Method:</i> calculated per CARB title 2] |
| Percent volatile | 70 - 100 % |
| VOC Less H2O & Exempt Solvents | 600 - 1200 g/l [<i>Test Method:</i> calculated per CARB title 2] |
| Viscosity | < 50 centipoise |

SECTION 10: STABILITY AND REACTIVITY

Stability: Stable.

Materials and Conditions to Avoid: Strong oxidizing agents

Hazardous Polymerization: Hazardous polymerization will not occur.

Hazardous Decomposition or By-Products

| <u>Substance</u> | <u>Condition</u> |
|------------------|-------------------|
| Aldehydes | During Combustion |
| Carbon monoxide | During Combustion |
| Carbon dioxide | During Combustion |

SECTION 11: TOXICOLOGICAL INFORMATION

Please contact the address listed on the first page of the MSDS for Toxicological Information on this material and/or its components.

SECTION 12: ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL INFORMATION

A 3M Product Environmental Data Sheet (PED) is available.

CHEMICAL FATE INFORMATION

A 3M Product Environmental Data Sheet (PED) is available.

SECTION 13: DISPOSAL CONSIDERATIONS

Waste Disposal Method: Incinerate in a permitted hazardous waste incinerator. As a disposal alternative, dispose of waste product in a permitted hazardous waste facility.

EPA Hazardous Waste Number (RCRA): D001 (Ignitable)

Since regulations vary, consult applicable regulations or authorities before disposal.

SECTION 14: TRANSPORT INFORMATION

| ID Number | UPC | ID Number | UPC |
|----------------|-------------------|----------------|-------------------|
| 70-0711-6342-5 | 000-48011-34892-6 | 70-0711-6368-0 | 0-48011-23357-4 |
| 70-0711-6369-8 | 000-48011-23915-6 | 70-0711-6462-1 | 000-48011-35009-7 |
| 70-0711-9214-3 | 500-48011-23357-9 | | |

Not regulated per U.S. DOT, IATA or IMO.

These transportation classifications are provided as a customer service. As the shipper YOU remain responsible for complying with all applicable laws and regulations, including proper transportation classification and packaging. 3M's transportation classifications are based on product formulation, packaging, 3M policies and 3M's understanding of applicable current regulations. 3M does not guarantee the accuracy of this classification information. This information applies only to transportation classification and not the packaging, labeling, or marking requirements. The original 3M package is certified for U.S. ground shipment only. If you are shipping by air or ocean, the package may not meet applicable regulatory requirements.

SECTION 15: REGULATORY INFORMATION

US FEDERAL REGULATIONS

311/312 Hazard Categories:

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

STATE REGULATIONS

CHEMICAL INVENTORIES

The components of this product are in compliance with the chemical notification requirements of TSCA.

INTERNATIONAL REGULATIONS

This MSDS 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 Reactivity: 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: 2 Flammability: 2 Reactivity: 0 Protection: X - See PPE section.

Hazardous Material Identification System (HMIS®) 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® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint and Coatings Association (NPCA).

Revision Changes:

Section 1: Product use information was modified.
Section 16: NFPA hazard classification heading was modified.
Section 16: HMIS hazard classification heading was modified.
Section 16: NFPA hazard classification for health was modified.
Section 16: HMIS hazard classification for health was modified.
Section 3: Potential environmental effects heading was modified.
Section 3: Other potential health effects heading was modified.
Copyright was modified.
Section 8: Exposure guidelines data source legend was modified.
Section 4: First aid for eye contact - decontamination - was modified.
Section 4: First aid for eye contact - medical assistance - was modified.
Section 3: Potential effects from eye contact was modified.
Section 3: Potential effects from skin contact information was modified.
Section 3: Potential effects from inhalation information was modified.
Section 3: Potential effects from ingestion information was modified.
Section 5: Fire fighting procedures information was modified.
Section 6: Release measures information was modified.
Section 7: Handling information was modified.
Section 7: Storage information was modified.
Section 8: Engineering controls information was modified.
Section 8: Eye/face protection phrase was modified.
Section 8: Skin protection phrase was modified.
Section 8: Respiratory protection information was modified.
Section 15: 311/312 hazard categories heading was modified.
Section 4: First aid for skin contact - decontamination - was modified.
Section 4: First aid for skin contact - medical assistance - was modified.
Section 4: First aid for inhalation - termination of exposure - was modified.
Section 4: First aid for inhalation - medical assistance - was modified.
Section 10: Hazardous polymerization heading was modified.
Section 14: ID Number(s) and/or UPC(s) was modified.
Section 14: Transportation legal text was modified.
Section 2: Ingredient table was modified.
Section 3: Other health effects information was modified.
Section 16: HMIS explanation was modified.

Section 16: NFPA explanation was modified.
Section 15: Inventories information was modified.
Section 12: Ecotoxicological information heading was modified.
Section 12: Chemical fate information heading was modified.
Section 9: Property description for optional properties was modified.
Section 16: NFPA hazard classification for special hazards was modified.
Section 12: Ecotoxicological phrase was modified.
Section 12: Chemical Fate phrase was modified.
Section 8: Eye/face protection comment was added.
Section 8: Skin protection comment was added.
Section 8: Respiratory protection comment was added.
Section 3: Immediate physical hazard(s) was added.
Section 2: Ingredient phrase was added.
Section 3: Immediate skin hazard(s) was deleted.
Section 3: Immediate eye hazard(s) was deleted.
Section 8: Eye/face protection information was deleted.
Section 8: Skin protection - recommended gloves information was deleted.
Section 8: Respiratory protection - recommended respirators information was deleted.
Section 8: Eye/face protection text was deleted.
Section 8: Skin protection - recommended gloves text was deleted.
Section 8: Respiratory protection - recommended respirators was deleted.
Section 9: Vapor density value was deleted.
Section 5: Autoignition temperature information was deleted.
Section 9: Melting point information was deleted.
Section 8: Respiratory protection - recommended respirators guide was deleted.
Section 8: Skin protection - protective clothing text was deleted.
Section 9: Autoignition temperature information was deleted.
Section 8: Respiratory protection - recommended respirators punctuation was deleted.
Section 8: Eye/face protection information - punctuation - was deleted.
Section 8: Skin protection - recommended gloves - punctuation was deleted.

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