



Material Safety Data Sheet

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SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: 3M(TM) HEAVY DUTY MULTI-SURFACE MARK REMOVER Concentrate (Twist 'n Fill(TM) Product No. 2)
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)

Issue Date: 12/23/2004
Supersedes Date: Initial Issue

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Product Use:
 Specific Use: MARK REMOVER

SECTION 2: INGREDIENTS

<u>Ingredient</u>	<u>C.A.S. No.</u>	<u>% by Wt</u>
1-METHOXY-2-PROPANOL	107-98-2	40 - 70
WATER	7732-18-5	10 - 30
ETHANOLAMINE	141-43-5	10 - 30
HYDROXYALKYL AMINE OXIDES	68478-65-9	3 - 7
ISOPROPYL ALCOHOL	67-63-0	1 - 5
DODECYLBENZENESULFONIC ACID	27176-87-0	1 - 5
ETHYLENE GLYCOL ETHYLHEXYL ETHER	1559-35-9	0.5 - 1.5

SECTION 3: HAZARDS IDENTIFICATION

3.1 EMERGENCY OVERVIEW

Specific Physical Form: Liquid

Odor, Color, Grade: Clear to light yellow color, citrus fragrance

General Physical Form: Liquid

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

3.2 POTENTIAL HEALTH EFFECTS

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.

Skin Contact:

Corrosive (Skin Burns): Signs/symptoms may include localized redness, swelling, itching, intense pain, blistering, ulceration, and tissue destruction.

Inhalation:

Upper 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 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.

Target Organ Effects:

Prolonged or repeated exposure may cause:

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

Kidney Effects: Signs/symptoms may include reduced or absent urine production, increased serum creatinine, lower back pain, increased protein in urine, and increased blood urea nitrogen (BUN).

Single exposure, above recommended guidelines, may cause:

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

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: Immediately flush eyes with large amounts of water for at least 15 minutes. Get immediate medical attention.

Skin Contact: Remove contaminated clothing and shoes. Immediately flush skin with large amounts of water for at least 15 minutes. Get immediate medical attention. Wash contaminated clothing and clean shoes before reuse.

Inhalation: If signs/symptoms develop, remove person to fresh air. If signs/symptoms persist, 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 immediate medical attention.

SECTION 5: FIRE FIGHTING MEASURES

5.1 FLAMMABLE PROPERTIES

Autoignition temperature	No Data Available
Flash Point	105 °F [Test Method: Tagliabue Closed Cup]
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.

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

SECTION 6: ACCIDENTAL RELEASE MEASURES

Accidental Release Measures: Observe precautions from other sections. 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. 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. Cover, but do not seal for 48 hours. 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

This product is not intended to be used without prior dilution as specified on the product label. Avoid eye contact with vapors, mists, or spray. Avoid skin contact. Avoid breathing of 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. Avoid contact with oxidizing agents. Keep out of the reach of children.

7.2 STORAGE

Store away from acids. Store away from oxidizing agents. Store away from heat. Store out of direct sunlight.

SECTION 8: EXPOSURE CONTROL AND PERSONAL PROTECTION

8.1 ENGINEERING CONTROLS

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

8.2 PERSONAL PROTECTIVE EQUIPMENT (PPE)

8.2.1 Eye/Face Protection

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. Avoid eye contact with vapors, mists, or spray.

The following eye protection(s) are 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.

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 material(s) are recommended: Butyl Rubber, Fluoroelastomer (Viton), Neoprene, Nitrile Rubber, Polyvinyl Chloride.

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.

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>
1-METHOXY-2-PROPANOL	ACGIH	TWA	100 ppm	
1-METHOXY-2-PROPANOL	ACGIH	STEL	150 ppm	
1-METHOXY-2-PROPANOL	OSHA	TWA	100 ppm	Table Z-1A
1-METHOXY-2-PROPANOL	OSHA	STEL	150 ppm	Table Z-1A
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
ISOPROPYL ALCOHOL	ACGIH	TWA	200 ppm	Table A4
ISOPROPYL ALCOHOL	ACGIH	STEL	400 ppm	Table A4
ISOPROPYL ALCOHOL	OSHA	TWA	400 ppm	Table Z-1A
ISOPROPYL ALCOHOL	OSHA	STEL	500 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 to light yellow color, citrus fragrance
General Physical Form:	Liquid
Autoignition temperature	<i>No Data Available</i>
Flash Point	105 °F [<i>Test Method:</i> Tagliabue Closed Cup]
Flammable Limits - LEL	<i>No Data Available</i>
Flammable Limits - UEL	<i>No Data Available</i>
Boiling point	> 95 °F
Density	<i>No Data Available</i>
Vapor Density	<i>No Data Available</i>
Vapor Pressure	< 27 psia [<i>@ 131 °F</i>]
Specific Gravity	1 [<i>Ref Std:</i> WATER=1]
pH	10.5 - 11.5
Melting point	<i>Not Applicable</i>
Solubility in Water	Complete
Evaporation rate	<i>No Data Available</i>
Volatile Organic Compounds	51 - 100 % [<i>Test Method:</i> calculated per CARB title 2]
Percent volatile	61 - 100 %
VOC Less H₂O & Exempt Solvents	665 - 1000 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; Strong acids

Hazardous Polymerization: Hazardous polymerization will not occur.

Hazardous Decomposition or By-Products

<u>Substance</u>	<u>Condition</u>
Carbon monoxide	During Combustion
Carbon dioxide	During Combustion
Irritant Vapors or Gases	During Combustion
Oxides of Nitrogen	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

Not determined.

CHEMICAL FATE INFORMATION

Not determined.

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(s):

70-0712-8516-0, 70-0712-8518-6

Please contact the emergency numbers listed on the first page of the MSDS for Transportation Information for this material.

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

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

<u>Ingredient</u>	<u>C.A.S. No</u>	<u>% by Wt</u>
ETHYLENE GLYCOL ETHYLHEXYL	1559-35-9	0.5 - 1.5
ETHER (GLYCOL ETHERS)		

STATE REGULATIONS

CHEMICAL INVENTORIES

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

All applicable chemical ingredients in this material are listed on the European Inventory of Existing Chemical Substances (EINECS), or are exempt polymers whose monomers are listed on EINECS.

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: 3 Flammability: 2 Reactivity: 0 Special Hazards: None
Acid/Base: Alkaline

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: 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).

No revision information is available.

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