



Material Safety Data Sheet

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SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: 3M(TM) HEAVY DUTY MULTI-SURFACE MARK REMOVER Ready-to-Use (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: 10/03/2005

Supersedes Date: 12/27/2004

Document Group: 19-7421-1

Product Use:

Specific Use: MARK REMOVER

SECTION 2: INGREDIENTS

<u>Ingredient</u>	<u>C.A.S. No.</u>	<u>% by Wt</u>
WATER	7732-18-5	> 95
1-METHOXY-2-PROPANOL	107-98-2	1 - 5
ETHANOLAMINE	141-43-5	1 - 5
HYDROXYALKYL AMINE OXIDES	68478-65-9	< 0.5
ISOPROPYL ALCOHOL	67-63-0	< 0.5
2-methoxy-1-propanol	1589-47-5	< 0.5

SECTION 3: HAZARDS IDENTIFICATION

3.1 EMERGENCY OVERVIEW

Specific Physical Form: Liquid

Odor, Color, Grade: Colorless to light yellow color, citrus scent.

General Physical Form: Liquid

Immediate health, physical, and environmental hazards: Combustible liquid and vapor. Closed containers exposed to heat from fire may build pressure and explode. Vapors may travel long distances along the ground or floor to an ignition source and flash back. May cause target organ effects. Contains a chemical or chemicals which can cause birth defects or other reproductive harm.

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.

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.

Contains a chemical or chemicals which can cause birth defects or other reproductive harm.

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 160 °F [*Test Method:* Tagliabue Closed Cup]

OSHA Flammability Classification: Class IIIA 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. Closed containers exposed to heat from fire may build pressure and explode. Vapors may travel long distances along the ground or floor to an ignition source and flash back.

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. 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. Collect as much of the spilled material as possible. Clean up residue with water. Place in a closed container approved for transportation by appropriate authorities. 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

Keep out of the reach of children. Avoid breathing of vapors, mists or spray. Avoid prolonged or repeated 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.

NOTE: The above precautionary information presumes that this ready-to-use product has been diluted and dispensed from a TWIST 'n FILL(TM) Chemical Dispenser.

7.2 STORAGE

Store under normal warehouse conditions.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 ENGINEERING CONTROLS

Use in a well-ventilated area.

8.2 PERSONAL PROTECTIVE EQUIPMENT (PPE)

8.2.1 Eye/Face Protection

Avoid eye contact with vapors, mists, or spray.

The following eye protection(s) are recommended: Safety Glasses with side shields.

8.2.2 Skin Protection

Avoid prolonged or repeated skin contact.

If prolonged or repeated skin contact is expected, 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, Neoprene, Nitrile Rubber.

8.2.3 Respiratory Protection

Avoid breathing of vapors, mists or spray. Under normal use conditions, airborne exposures are not expected to be significant enough to require respiratory protection.

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:

Colorless to light yellow color, citrus scent.

General Physical Form:

Liquid

Flash Point	160 °F [Test Method: Tagliabue Closed Cup]
Boiling point	> 200 °F
Specific Gravity	1 [Ref Std: WATER=1]
pH	9.5 - 10.5
Solubility in Water	Complete
Evaporation rate	Approximately 1 [Ref Std: WATER=1]
Volatile Organic Compounds	3 - 7 % [Test Method: calculated per CARB title 2]
VOC Less H2O & Exempt Solvents	700 - 1000 g/l [Test Method: calculated per CARB title 2]
Viscosity	< 50 centipoise

SECTION 10: STABILITY AND REACTIVITY

Stability: Stable.

Materials and Conditions to Avoid: None known

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

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: Discharge spent solutions and small quantities (less than 5 gal.(19 L)) to a wastewater treatment system. As a disposal alternative, dispose of waste product in a facility permitted to accept chemical waste.

EPA Hazardous Waste Number (RCRA): Not regulated

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

SECTION 14: TRANSPORT INFORMATION

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

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.

All the components of this product are listed on China's Inventory of Chemical Substances.

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

The components of this product are listed on the Canadian Domestic Substances List.

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 16: NFPA hazard classification for health was modified.

Section 16: HMIS hazard classification for health was modified.

Copyright was modified.

Section 4: First aid for eye contact - medical assistance - was modified.

Section 3: Immediate physical hazard(s) 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: Unusual fire and explosion hazard information was modified.

Section 7: Handling information was modified.

Section 7: Storage information was modified.

Section 8: Respiratory protection information 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 4: First aid for ingestion (swallowing) - decontamination - was modified.

Section 4: First aid for ingestion (swallowing) - medical assistance - was modified.

Section 3: Immediate other hazard(s) was modified.

Section 2: Ingredient table was modified.

Section 3: Other health effects information was modified.

Section 8: Exposure guidelines ingredient information was modified.

Section 9: Property description for optional properties was modified.

Section 1: Initial issue message was modified.

Section 12: Ecotoxicological phrase was modified.

Section 12: Chemical Fate phrase was modified.

Section 8: Skin protection comment was added.

Section 8: Eye/face protection information was added.

Section 4: First aid for skin contact - termination of exposure - was added.

Section 4: First aid for skin contact - handling - was added.

Section 8: Eye/face protection text was added.

Section 15: Inventories information was added.

Section 8: Eye/face protection information - punctuation - was added.

Section 3: Other health effects information (reproductive hazards) was added.

Section 9: Density information was deleted.

Section 9: Vapor density value was deleted.

Section 9: Vapor pressure value was deleted.

Section 5: Flammable limits (UE) information was deleted.

Section 5: Flammable limits (LEL) information was deleted.

Section 5: Autoignition temperature information was deleted.

Section 9: Melting point information was deleted.

Section 9: Flammable limits (LEL) information was deleted.

Section 9: Flammable limits (UEL) information was deleted.

Section 9: Autoignition temperature information was deleted.

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