Material Safety Data Sheet

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SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

<table>
<thead>
<tr>
<th>PRODUCT NAME:</th>
<th>3M(TM) TROUBLESHOOTER(TM)</th>
</tr>
</thead>
<tbody>
<tr>
<td>MANUFACTURER:</td>
<td>3M</td>
</tr>
<tr>
<td>DIVISION:</td>
<td>Commercial Care Division</td>
</tr>
<tr>
<td>ADDRESS:</td>
<td>3M Center</td>
</tr>
<tr>
<td></td>
<td>St. Paul, MN 55144-1000</td>
</tr>
</tbody>
</table>

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

Issue Date: 04/02/2005
Supercedes Date: 02/27/1998
Document Group: 10-2818-2

Product Use:
Specific Use: REMOVAL OF SOIL, GREASE AND FLOOR FINISH BUILD UP

SECTION 2: INGREDIENTS

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>C.A.S. No.</th>
<th>% by Wt</th>
</tr>
</thead>
<tbody>
<tr>
<td>WATER</td>
<td>7732-18-5</td>
<td>60 - 90</td>
</tr>
<tr>
<td>2-BUTOXYETHANOL</td>
<td>111-76-2</td>
<td>10 - 30</td>
</tr>
<tr>
<td>ISOBUTANE</td>
<td>75-28-5</td>
<td>5 - 10</td>
</tr>
<tr>
<td>ETHANOLAMINE</td>
<td>141-43-5</td>
<td>3 - 7</td>
</tr>
<tr>
<td>PROPANE</td>
<td>74-98-6</td>
<td>0.1 - 1.5</td>
</tr>
</tbody>
</table>

SECTION 3: HAZARDS IDENTIFICATION

3.1 EMERGENCY OVERVIEW

Specific Physical Form: Aerosol
Odor, Color, Grade: Off white, milky liquid.
General Physical Form: Liquid
Immediate health, physical, and environmental hazards: Aerosol container contains flammable gas under pressure. 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.

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:**
Mild Skin Irritation: Signs/symptoms may include localized redness, swelling, and itching.

**Inhalation:**
Cardiac Sensitization: Signs/symptoms may include irregular heartbeat (arrhythmia), faintness, chest pain, and may be fatal.

Single exposure, above recommended guidelines, may cause:
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 Irritation: Signs/symptoms may include abdominal pain, nausea, diarrhea and vomiting.

**Target Organ Effects:**
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.

Prolonged or repeated exposure, above recommended guidelines, 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).

**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.  Get medical attention.

**Skin Contact:**  Wash affected area with soap and water.  If signs/symptoms develop, get medical attention.

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

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

4.2 **NOTE TO PHYSICIANS**

Exposure may increase myocardial irritability. Do not administer sympathomimetic drugs unless absolutely necessary.

**SECTION 5: FIRE FIGHTING MEASURES**

5.1 **FLAMMABLE PROPERTIES**
Autoignition temperature: No Data Available
Flash Point: Nil [Details: NON-FLAMMABLE ACCORDING TO FLAME PROJECTION TEST]
Flammable Limits - LEL: No Data Available
Flammable Limits - UEL: No Data Available
OSHA Flammability Classification: Class IA Flammable 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: Water may not effectively extinguish fire; however, it should be used to keep fire-exposed containers and surfaces cool and prevent explosive rupture. Wear full protective equipment (Bunker Gear) and a self-contained breathing apparatus (SCBA).

Unusual Fire and Explosion Hazards: Aerosol container contains flammable material under pressure. 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. Ventilate the area. WARNING! A motor could be an ignition source and could cause flammable gases or vapors in the spill area to burn or explode. If it can be done safely, place the leaking container in an exhaust hood or well-ventilated area. Contain spilled material. Clean up residue. Place depressurized can and clean up wastes in a closed container approved for transportation by appropriate authorities. Remove all ignition sources such as flames, smoking materials, and electrical spark sources. Use only non-sparking tools. Ventilate the area with fresh air. For large spills, 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. Contain spill. Cover spill area with a fire-extinguishing foam designed for use on solvents, such as alcohols and acetone, that can dissolve in water. An AR - AFFF type foam is recommended. Dilute in a large excess of water. Carefully, and with stirring, add appropriate dilute acid such as sulfamic acid or vinegar. Confirm neutrality. For large spills, if necessary, get assistance from professional spill clean up team. For small spills, carefully neutralize spill by adding appropriate dilute acid such as vinegar. Work slowly to avoid boiling or spattering. Continue to add neutralizing agent until reaction stops. Let cool before collecting. Or use a commercially available caustic (alkaline or basic) spill clean-up kit. Follow kit directions exactly. 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 detergent and water. Collect the resulting residue containing solution. Place in a closed container approved for transportation by appropriate authorities. Cover, but do not seal for 48 hours. 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
Aerosol container contains flammable gas under pressure. Do not spray near flames or sources of ignition. Keep away from heat, sparks, open flame, pilot lights and other sources of ignition. 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. Do not pierce or burn container, even after use. Avoid contact with oxidizing agents. Keep out of the reach of children.

7.2 STORAGE
Store away from heat. Store out of direct sunlight. Store away from acids. Store away from oxidizing agents. Do not store containers on their sides.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 ENGINEERING CONTROLS
Do not use in a confined area or areas with little or no air movement. Use general dilution ventilation and/or local exhaust ventilation to control airborne exposures to below Occupational Exposure Limits and/or control mist, vapor, or spray. If ventilation is not adequate, use respiratory protection equipment.

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: Indirect Vented Goggles.

8.2.2 Skin Protection
Avoid skin contact.

8.2.3 Respiratory Protection
Avoid breathing of vapors, mists or spray.

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

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Authority</th>
<th>Type</th>
<th>Limit</th>
<th>Additional Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-BUTOXYETHANOL</td>
<td>ACGIH</td>
<td>TWA</td>
<td>20 ppm</td>
<td>Table A3</td>
</tr>
<tr>
<td>2-BUTOXYETHANOL</td>
<td>OSHA</td>
<td>TWA, Vacated</td>
<td>25 ppm</td>
<td>Skin Notation*</td>
</tr>
<tr>
<td>2-BUTOXYETHANOL</td>
<td>OSHA</td>
<td>TWA</td>
<td>50 ppm</td>
<td>Skin Notation*; Table Z-1</td>
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<tr>
<td>ETHANOLAMINE</td>
<td>ACGIH</td>
<td>TWA</td>
<td>3 ppm</td>
<td></td>
</tr>
<tr>
<td>ETHANOLAMINE</td>
<td>ACGIH</td>
<td>STEL</td>
<td>6 ppm</td>
<td></td>
</tr>
<tr>
<td>ETHANOLAMINE</td>
<td>OSHA</td>
<td>TWA</td>
<td>3 ppm</td>
<td>Table Z-1A</td>
</tr>
<tr>
<td>ETHANOLAMINE</td>
<td>OSHA</td>
<td>STEL</td>
<td>6 ppm</td>
<td>Table Z-1A</td>
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<tr>
<td>ISOBUTANE</td>
<td>ACGIH</td>
<td>TWA</td>
<td>1000 ppm</td>
<td></td>
</tr>
<tr>
<td>PROPANE</td>
<td>ACGIH</td>
<td>TWA</td>
<td>1000 ppm</td>
<td></td>
</tr>
<tr>
<td>PROPANE</td>
<td>OSHA</td>
<td>TWA</td>
<td>1000 ppm</td>
<td>Table Z-1</td>
</tr>
</tbody>
</table>

* Substance(s) refer to the potential contribution to the overall exposure by the cutaneous route including mucous membrane and eye, either by airborne or, more particularly, by direct contact with the substance. Vehicles can alter skin absorption.

VAC Vacated PEL: Vacated Permissible Exposure Limits [PEL] are enforced as the OSHA PEL in some states. Check with your local regulatory agency.

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: Aerosol
Odor, Color, Grade: Off white, milky liquid.
General Physical Form: Liquid
Autoignition temperature: No Data Available
Flash Point: Nil [Details: NON-FLAMMABLE ACCORDING TO FLAME PROJECTION TEST]
Flammable Limits - LEL: No Data Available
Flammable Limits - UEL: No Data Available
Boiling point: Approximately 212 ºF
Density: Approximately 1
Vapor Density: No Data Available
Vapor Pressure: No Data Available
Specific Gravity: Approximately 1 [Ref Std: WATER=1]
pH: 11 - 12
Melting point: Not Applicable
Solubility in Water: Complete
Evaporation rate: No Data Available
Volatile Organic Compounds: 18 - 49 % [Test Method: calculated per CARB title 2]
Percent volatile: 78 - 100 %
VOC Less H2O & Exempt Solvents: 450 - 1000 g/l [Test Method: calculated per CARB title 2]
Viscosity: No Data Available

SECTION 10: STABILITY AND REACTIVITY

Stability: Stable.

Materials and Conditions to Avoid: Heat; Sparks and/or flames; Strong oxidizing agents; Strong acids

Hazardous Polymerization: Hazardous polymerization will not occur.

Hazardous Decomposition or By-Products

<table>
<thead>
<tr>
<th>Substance</th>
<th>Condition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carbon monoxide</td>
<td>During Combustion</td>
</tr>
<tr>
<td>Carbon dioxide</td>
<td>During Combustion</td>
</tr>
<tr>
<td>Irritant Vapors or Gases</td>
<td>During Combustion</td>
</tr>
<tr>
<td>Oxides of Nitrogen</td>
<td>During Combustion</td>
</tr>
</tbody>
</table>

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 an industrial or commercial facility. As a disposal alternative, dispose of waste product in a facility permitted to accept chemical waste. Facility must be capable of handling aerosol cans. Dispose of empty product containers in a sanitary landfill.

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

SECTION 14: TRANSPORT INFORMATION

ID Number UPC ID Number UPC
61-5000-6131-4 00-48011-14001-8 FZ-0100-0465-8
FZ-0100-0466-6

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 - Yes  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):

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>C.A.S. No</th>
<th>% by Wt</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-BUTOXYETHANOL (GLYCOL ETHERS)</td>
<td>111-76-2</td>
<td>10 - 30</td>
</tr>
</tbody>
</table>

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: 2  Flammability: 4  Reactivity: 0  Special Hazards: None
Aerosol Storage Code: 1

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: 4  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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