Material Safety Data Sheet

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SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: 3M(TM) HEAVY DUTY MULTI-SURFACE CLEANER Concentrate (Twist 'n Fill(TM) Product No. 2)
MANUFACTURER: 3M
DIVISION: Building & Commercial Services Division
ADDRESS: 3M Center
St. Paul, MN  55144-1000

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

Issue Date: 12/20/2007
Supercedes Date: 11/15/2007
Document Group: 23-4717-7

Product Use:
Specific Use: Versatile cleaner removes most spots, stains and grease from washable surfaces. Use to clean carpets, marble, aluminum, stainless steel, chrome, etc.
Intended Use: Hard Surface Cleaner

SECTION 2: INGREDIENTS

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>C.A.S. No.</th>
<th>% by Wt</th>
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</thead>
<tbody>
<tr>
<td>WATER</td>
<td>7732-18-5</td>
<td>60 - 90</td>
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<tr>
<td>Non-ionic Surfactants (NJTSRN 04499600-6659)</td>
<td>Trade Secret</td>
<td>7 - 13</td>
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<td>ETHANOLAMINE</td>
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<td>5 - 10</td>
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<tr>
<td>Surfactant (NJTSRN 04499600-6632)</td>
<td>Trade Secret</td>
<td>0.5 - 1.5</td>
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<tr>
<td>1-OCTYL-2-PYRROLIDINONE</td>
<td>2687-94-7</td>
<td>0.1 - 1</td>
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</tbody>
</table>

SECTION 3: HAZARDS IDENTIFICATION

3.1 EMERGENCY OVERVIEW

Specific Physical Form: Liquid
Odor, Color, Grade: Purple color citrus fragrance
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 chemical eye burns. May cause allergic skin reaction. May cause chemical skin burns. May cause chemical gastrointestinal 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.

Allergic Skin Reaction (non-photo induced): Signs/symptoms may include redness, swelling, blistering, and itching.

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 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.

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:** 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:** Remove person to fresh air. If signs/symptoms develop, 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.

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**SECTION 5: FIRE FIGHTING MEASURES**

### 5.1 FLAMMABLE PROPERTIES

- **Flash Point:** 163 °F  
  *Test Method: Tagliabue Closed Cup*
- **Flammable Limits - LEL:** Not Applicable
- **Flammable Limits - UEL:** Not Applicable
- **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:** 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:** 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.*

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**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. 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. Contain spill. For larger spills, cover drains and build dikes to prevent entry into sewer systems or bodies of water. Cover spill area with a fire-extinguishing foam. An aqueous film forming foam (AFFF) is recommended. 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 using non-sparking tools. Clean up residue with water. Collect the resulting residue containing solution. 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. Place in a closed container approved for transportation by appropriate authorities. 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. 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
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. 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: Full Face Shield, 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.

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 material(s) are recommended: Butyl Rubber, Neoprene, Nitrile Rubber. The following protective clothing material(s) are recommended: Apron - 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

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Authority</th>
<th>Type</th>
<th>Limit</th>
<th>Additional Information</th>
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<tbody>
<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>
</tr>
<tr>
<td>POLYETHYLENE GLYCOLS</td>
<td>AIHA</td>
<td>TWA, as aerosol</td>
<td>10 mg/m3</td>
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</tbody>
</table>

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: Purple color citrus fragrance
General Physical Form: Liquid
Flash Point: 163 ºF [Test Method: Tagliabue Closed Cup]
Flammable Limits - LEL: Not Applicable
Flammable Limits - UEL: Not Applicable
Boiling point: 212 ºF [Test Method: Estimated]

Vapor Pressure: < 33 mmHg [@ 131 ºF]
Specific Gravity: Approximately 1 [Test Method: Estimated] [Ref Std: WATER=1] 11.2 - 11.8
pH: 
Solubility in Water: Complete
Volatile Organic Compounds: 5 - 10 % [Test Method: calculated per CARB title 2]
VOC Less H2O & Exempt Solvents: 262 - 526 g/l [Test Method: 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
SUBSTANCE

Carbon monoxide
Carbon dioxide
Oxides of Nitrogen

CONDITION
Not Specified
Not Specified
Not Specified

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.

EPA Hazardous Waste Number (RCRA): Not regulated

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

SECTION 14: TRANSPORT INFORMATION

ID Number(s):
70-0713-1415-0, 70-0713-1420-0

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
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.

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: 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).

Revision Changes:
Section 1: Product name was modified.
Section 16: Web address heading was added.

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