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Material Safety Data Sheet  
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1 Product Identification  
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Tradename:  
3M(TM) TROUBLESHOOTER(TM)  
Product ID:  
FZ-0100-0465-8 FZ-0100-0466-6 61-5000-0313-4 61-5000-6131-4  
96-0000-0066-9 70-0709-9784-9 CN-1006-1045-6 CN-1006-4512-2  
XN-1015-5593-8 XN-1015-5594-6 CN-1006-2976-1 70-0709-9783-1  
Intended Use of Product:  
Cleaner;  
Division:  
COMMERCIAL CARE DIVISION

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2 Composition/Information on Ingredients  
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Ingredient Name	CAS Number	Percentage
WATER	7732-18-5	60 - 90
2-BUTOXYETHANOL	111-76-2	10 - 30
ISOBUTANE	75-28-5	5 - 10
ETHANOLAMINE	141-43-5	3 - 7
PROPANE	74-98-6	0.5 - 1.5

NOTE:

Each percentage is expressed as the ratio of the weight of the

ingredient to the weight of the controlled product.

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### 3 Hazards Identification

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#### Critical Hazards:

Aerosol container contains flammable gas under pressure.

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

Harmful by inhalation.

May be absorbed following inhalation and cause target organ effects.

See Sections 7 and 11 for further information.

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### 4 First Aid Measures

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#### Instructions for Eye Contact:

Flush eyes with large amounts of water. Get medical attention.

#### Instructions for Skin Contact:

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

#### Instructions for Inhalation:

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

#### Instructions for Ingestion:

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

#### Special Instructions:

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

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### 5 Fire Fighting Measures

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Flash point: Nil (NON-FLAMMABLE ACCORDING TO FLAME PROJECTION TEST)

Lower Explosive Limit (%): Not Available

Upper Explosive Limit (%): Not Available

Autoignition temperature: Not Available

#### Suitable Extinguishing Media:

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

#### Exposure Hazards during Fire:

Closed containers exposed to heat from fire may build pressure and explode. Vapours may travel long distances along the ground or floor to an ignition source and flash back.

#### Combustion Products from Fire:

Carbon monoxide - During Combustion;

Carbon dioxide - During Combustion;  
Irritant Vapours or Gases - During Combustion;  
Oxides of Nitrogen - During Combustion;

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).

NFPA: Health	2
NFPA: Fire	4
NFPA: Reactivity	0
NFPA: Unusual Reaction Hazard	none

Special Instructions:

Aerosol container contains flammable material under pressure.

6 Accidental Release Measures

Personal Precautions:

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.

Spill Response:

Ventilate the area with fresh air. Remove all ignition sources such as flames, smoking materials, and electrical spark sources. Use only non-sparking tools. 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. 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

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container. Dispose of collected material as soon as possible.

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## 7 Handling and Storage

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### Storage Requirements:

Do not store containers on their sides.

### Incompatible Materials:

Store away from heat; Store out of direct sunlight. Sparks and/or  
Flames; Store away from acids; Store away from oxidizing agents.

### Ventilation:

No data available.

### Fire Prevention:

Aerosol container contains flammable gas under pressure. Do not  
spray near flames or sources of ignition.

### Explosion Prevention:

Keep away from heat, sparks, open flame, pilot lights and other  
sources of ignition.

### Use Instructions:

Do not pierce or burn container, even after use. Avoid contact with  
oxidizing agents.

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## 8 Exposure Controls/Personal Protection

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### Personal Protection

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#### Eye Protection:

Avoid eye contact with vapours, mists, or spray. The following  
should be worn alone or in combination, as appropriate, to prevent  
eye contact: Indirect vented goggles;

#### Hand Protection:

Avoid skin contact.

#### Skin Protection:

Avoid skin contact.

#### Respiratory Protection:

Avoid breathing of vapours, mists or spray.

#### Ingestion (Prevention):

Do not eat, drink or smoke when using this product. Wash exposed  
areas thoroughly with soap and water. Keep out of the reach of  
children.

#### Recommended Ventilation:

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.

### Ingredient Exposure Data

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WATER (7732-18-5)  
 LD50 (rat, oral) >90 ml/kg  
 LC50 (rat, inhalation/4 hours) No data available.  
 Exposure Limits  
 No data available.

2-BUTOXYETHANOL (111-76-2)  
 LD50 (rat, oral) 470 mg/kg  
 LD50 (dermal, rabbit) 99 mg/kg  
 LC50 (rat, inhalation/4 hours) 450 ppm  
 Exposure Limits  
 ACGIH: TWA (Table A3) 25 ppm

ISOBUTANE (75-28-5)  
 LD50 (rat, oral) No data available.  
 LC50 (rat, inhalation/4 hours) No data available.  
 Exposure Limits  
 1000 ppm ACGIH: TWA

ETHANOLAMINE (141-43-5)  
 LD50 (rat, oral) 1720 mg/kg  
 LC50 (rat, inhalation/4 hours) No data available.  
 Exposure Limits  
 ACGIH: TWA 3 ppm  
 ACGIH: TWA 7.5 mg/m3  
 ACGIH: STEL 6 ppm  
 ACGIH: STEL 15 mg/m3

PROPANE (74-98-6)  
 Specific Ingredient Data  
 No data available.  
 LD50 (rat, oral) No data available.  
 LC50 (rat, inhalation/4 hours) No data available.  
 Exposure Limits  
 ACGIH: TWA 1000 ppm

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## 9 Physical and Chemical Properties

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Physical form,Color,Odour:	Liquid; Aerosol; off-white; milky;
Odour Threshold:	No data available.
pH:	11 -12
Boiling point/boiling range:	Approx100 C
Melting point/melting range:	Not applicable
Vapour pressure:	Not Available
Water Solubility:	Complete
Specific gravity:	Approx1 Water=1
Vapour density:	Not Available
Volatile organic compounds:	18 -49 % CARB
Evaporation rate:	Not Available
Viscosity:	Not Available

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Percent Volatile: 78 -100 %

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## 10 Stability and Reactivity

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### Conditions to Avoid:

Store away from heat; Store out of direct sunlight. Sparks and/or Flames;

### Materials to Avoid:

Strong oxidizing agents; Strong acids;

### Hazardous Decomposition:

Carbon monoxide - During Combustion;  
Carbon dioxide - During Combustion;  
Irritant Vapours or Gases - During Combustion;  
Oxides of Nitrogen - During Combustion;

### Stability and Reactivity:

Stable. Hazardous polymerization will not occur.

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## 11 Toxicological Information

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### Effects from Eye Contact:

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

### Effects from Skin Contact:

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

### Effects from Inhalation:

Harmful by inhalation.

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

Single overexposure, 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.

### Effects from Ingestion:

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

### Sensitization Information:

No data available.

### Carcinogenicity:

No data available.

### Mutagenicity:

No data available.

### Reproductive Effects:

No data available.

### Component Based Information:

No data available.

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Product Based Information:

No data available.

Other Effects & Information:

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).

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12 Ecological Information

Environmental Data:

Ecotoxicity Data:

Not determined.

Ecofate Data:

Not determined.

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13 Disposal Considerations

Product as Sold:

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.

Product Packaging:

No data available.

Special Instructions:

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

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14 Transportation Information

Transportation of Dangerous Goods

TDG Classification:

Consumer Commodity

International Dangerous Goods Classification

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## 15 Regulatory Information

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WHMIS Classification: A, D1A, D2B,

NOTE:

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

Product Certifications:

The product on this MSDS, or all its components, is included on the following countries' chemical inventories, as noted:

CICS - Chinese Inventory of Chemical Substances

PICCS - Philippines Inventory of Commercial Chemical Substances

EINECS - European Inventory of Existing Commercial Chemical Substances

AICS - Australian Inventory of Chemical Substances

TSCA - Toxic Substances Control Act (USA)

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## 16 Other Information

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Reason for Reissue:

The following Sections and topics have been updated or revised:  
WHMIS Classification change

The information in this Material Safety Data Sheet (MSDS) is believed to be correct as of the date issued. 3M MAKES NO WARRANTIES, EXPRESSED OR IMPLIED, STATUTORY OR OTHERWISE, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OR CONDITION OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR COURSE OF PERFORMANCE OR USAGE OF TRADE. User is responsible for determining whether the 3M product is fit for a particular purpose and suitable for user's method of use or application. Given the variety of factors that can affect the use and application of a 3M product, some of which are uniquely within the user's knowledge and control, it is essential that the user evaluate the 3M product to determine whether it is fit for a particular purpose and suitable for user's method of use or application.

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