

MATERIAL SAFETY 3M  
 DATA SHEET 3M Center  
 St. Paul, Minnesota  
 55144-1000  
 1-800-364-3577 or (651) 737-6501 (24 hours)

Copyright, 2001, Minnesota Mining and Manufacturing Company.  
 All rights reserved. Copying and/or downloading of this  
 information for the purpose of properly utilizing 3M products  
 is allowed provided that:

- 1) the information is copied in full with no changes unless  
 prior agreement is obtained from 3M, and
- 2) neither the copy nor the original is resold or otherwise  
 distributed with the intention of earning a profit thereon.

DIVISION: COMMERCIAL CARE DIVISION

TRADE NAME:

3M TROUBLESHOOTER(tm) LIQUID CLEANER

ID NUMBER/U.P.C.:

70-0710-6586-9 - - - 70-0710-6587-7 - - -

70-0710-6596-8 - - -

ISSUED: February 23, 2001

SUPERSEDES: February 06, 2001

DOCUMENT: 16-1396-7

1. INGREDIENT	C.A.S. NO.	PERCENT	
WATER.....	7732-18-5	60	- 90
ETHANOLAMINE.....	141-43-5	5	- 10
OLEAMINE OXIDE.....	14351-50-9	1	- 5
BENZYL ALCOHOL.....	100-51-6	1	- 5
ETHYL ALCOHOL.....	64-17-5	1	- 5

IN CASE OF EMERGENCY: THE NUMBERS AT THE TOP OF THIS PAGE PROVIDE 24  
 HOUR RESPONSE FROM ANY PHONE FOR ALL EMERGENCIES WITH THIS PRODUCT.

2. PHYSICAL DATA

BOILING POINT:..... > 200 F  
 VAPOR PRESSURE:..... N/D  
 VAPOR DENSITY:..... N/D  
 EVAPORATION RATE:..... N/D  
 SOLUBILITY IN WATER:..... complete  
 SPECIFIC GRAVITY:..... ca. 1 Water=1  
 PERCENT VOLATILE:..... ca. 95 %  
 pH:..... 10 - 11  
 VISCOSITY:..... > 500 centipoise  
 MELTING POINT:..... N/A

APPEARANCE AND ODOR:

Liquid, THICKENED GREEN LIQUID. MILD AMINE ODOR.

Abbreviations: N/D - Not Determined N/A - Not Applicable CA - Approximately

-----  
3. FIRE AND EXPLOSION HAZARD DATA  
-----

FLASH POINT:..... > 200 F  
FLAMMABLE LIMITS - LEL:..... N/D  
FLAMMABLE LIMITS - UEL:..... N/D  
AUTOIGNITION TEMPERATURE:..... N/D

EXTINGUISHING MEDIA:

Water spray, Carbon dioxide, Dry chemical, Foam

SPECIAL FIRE FIGHTING PROCEDURES:

Wear full protective clothing, including helmet, self-contained, positive pressure or pressure demand breathing apparatus, bunker coat and pants, bands around arms, waist and legs, face mask, and protective covering for exposed areas of the head.

UNUSUAL FIRE AND EXPLOSION HAZARDS:

No unusual fire or explosion hazards are anticipated.

NFPA HAZARD CODES: HEALTH: 2 FIRE: 1 REACTIVITY: 0  
UNUSUAL REACTION HAZARD: none

OSHA FIRE HAZARD CLASS: Class IIIB Combustible Liquid

-----  
4. REACTIVITY DATA  
-----

STABILITY: Stable

INCOMPATIBILITY - MATERIALS/CONDITIONS TO AVOID:

Strong Acids, Strong Oxidizing Agents

Not applicable.

HAZARDOUS POLYMERIZATION: Hazardous polymerization will not occur.

HAZARDOUS DECOMPOSITION PRODUCTS:

Carbon Monoxide and Carbon Dioxide, Oxides of Nitrogen, Amine Compounds, Irritant Vapors or Gases.

-----  
5. ENVIRONMENTAL INFORMATION  
-----

SPILL RESPONSE:

Observe precautions from other sections. Ventilate area. Contain spill. Cover with inorganic absorbent material. Collect spilled material. Clean up residue with water. Place in a closed container.

-----  
Abbreviations: N/D - Not Determined N/A - Not Applicable CA - Approximately

-----  
5. ENVIRONMENTAL INFORMATION (continued)  
-----

RECOMMENDED DISPOSAL:

Discharge spent solutions and small quantities (less than 5 gal.(19 L)) to a wastewater treatment system. Reduce discharge rate if foaming occurs. Incinerate large quantities in an industrial or commercial incinerator. Dispose of empty cans in a sanitary landfill.

ENVIRONMENTAL DATA:

Not determined.

REGULATORY INFORMATION:

Volatile Organic Compounds: ca. 118 gms/liter calculated per CARB title 2 section 94507.

VOC Less H2O & Exempt Solvents: ca. 725 gms/liter calculated per CARB title 2 section 94507.

Since regulations vary, consult applicable regulations or authorities before disposal. U.S. EPA Hazardous Waste Number = None (Not U.S. EPA Hazardous).

TSCA: All components used in the manufacture of this material are in compliance with the US TSCA inventory.

OTHER ENVIRONMENTAL INFORMATION:

Not determined.

EPCRA HAZARD CLASS:

FIRE HAZARD: No PRESSURE: No REACTIVITY: No ACUTE: Yes CHRONIC: Yes

-----  
6. SUGGESTED FIRST AID  
-----

EYE CONTACT:

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

SKIN CONTACT:

Flush skin with large amounts of water. If irritation persists, get medical attention.

INHALATION:

If signs/symptoms occur, remove person to fresh air. If signs/symptoms continue, call a physician.

IF SWALLOWED:

If swallowed, call a physician immediately. Only induce vomiting at the instruction of a physician. Never give anything by mouth to an unconscious person.

-----  
Abbreviations: N/D - Not Determined N/A - Not Applicable CA - Approximately

-----  
7. PRECAUTIONARY INFORMATION  
-----

EYE PROTECTION:

Avoid eye contact. Wear unvented goggles during operations in which exposure is likely.

SKIN PROTECTION:

Avoid skin contact. Wear appropriate gloves when handling this material. A pair of gloves made from the following material(s) are recommended: neoprene, nitrile rubber.

RECOMMENDED VENTILATION:

Use in a well-ventilated area. Use with adequate dilution ventilation. If exhaust ventilation is not adequate, use appropriate respiratory protection.

RESPIRATORY PROTECTION:

Avoid breathing of vapors, mists or spray. Select one of the following NIOSH approved respirators based on airborne concentration of contaminants and in accordance with OSHA regulations: half-mask organic vapor respirator, full-face organic vapor respirator.

PREVENTION OF ACCIDENTAL INGESTION:

Do not eat, drink or smoke when using this product. Wash exposed areas thoroughly with soap and water.

RECOMMENDED STORAGE:

Keep container closed when not in use. Keep out of the reach of children.

FIRE AND EXPLOSION AVOIDANCE:

Keep container tightly closed.

OTHER PRECAUTIONARY INFORMATION:

When used in a trigger-spray application, a coarse spray pattern is recommended to reduce user exposure to mist and vapor.

HMIS HAZARD RATINGS: HEALTH: 2 FLAMMABILITY: 1 REACTIVITY: 0  
PERSONAL PROTECTION: X (See precautions, section 7.)

EXPOSURE LIMITS

INGREDIENT	VALUE	UNIT	TYPE	AUTH	SKIN*
WATER.....	NONE	NONE	NONE	NONE	
ETHANOLAMINE.....	3	PPM	TWA	ACGIH	
ETHANOLAMINE.....	6	PPM	STEL	ACGIH	
ETHANOLAMINE.....	3	PPM	TWA	OSHA	
ETHANOLAMINE.....	6	PPM	STEL	OSHA	
ETHANOLAMINE.....	6	MG/M3	TWA	OSHA	
OLEAMINE OXIDE.....	NONE	NONE	NONE	NONE	
BENZYL ALCOHOL.....	10	PPM	TWA	AIHA	

-----  
Abbreviations: N/D - Not Determined N/A - Not Applicable CA - Approximately

EXPOSURE LIMITS (continued)

INGREDIENT	VALUE	UNIT	TYPE	AUTH	SKIN*
ETHYL ALCOHOL.....	1000	PPM	TWA	ACGIH	
ETHYL ALCOHOL.....	1000	PPM	TWA	OSHA	

\* SKIN NOTATION: Listed substances indicated with 'Y' under SKIN 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.

SOURCE OF EXPOSURE LIMIT DATA:

- ACGIH: American Conference of Governmental Industrial Hygienists
- AIHA: American Industrial Hygiene Assoc. Workplace Environmental Exposure Level Guideline
- OSHA: Occupational Safety and Health Administration
- NONE: None Established

8. HEALTH HAZARD DATA

EYE CONTACT:

Severe Eye Irritation: signs/symptoms can include redness, swelling, pain, tearing, cloudy appearance of the cornea, impaired vision and possible permanently impaired vision.

SKIN CONTACT:

Moderate Skin Irritation: signs/symptoms can include redness, swelling, itching, and dryness.

May be absorbed through the skin and produce effects similar to those caused by inhalation and/or ingestion.

INHALATION:

Single overexposure, above recommended guidelines, may cause:

Central Nervous System Depression: signs/symptoms can include headache, dizziness, drowsiness, incoordination, slowed reaction time, slurred speech, giddiness and unconsciousness.

Irritation (upper respiratory): signs/symptoms can include soreness of the nose and throat, coughing and sneezing.

Prolonged or repeated overexposure, above recommended guidelines, may cause:

Kidney Effects: signs/symptoms can include reduced urine volume, blood in urine and back pain.

Liver Effects: signs/symptoms can include yellow skin(jaundice) and tenderness of upper abdomen.

Abbreviations: N/D - Not Determined N/A - Not Applicable CA - Approximately

-----  
8. HEALTH HAZARD DATA (continued)  
-----

IF SWALLOWED:

Ingestion is not a likely route of exposure to this product.

Ingestion may cause:

Irritation of Gastrointestinal Tissues: signs/symptoms can include pain, vomiting, abdominal tenderness, nausea, blood in vomitus, and blood in feces.

Central Nervous System Depression: signs/symptoms can include headache, dizziness, drowsiness, muscular weakness, incoordination, slowed reaction time, fatigue, blurred vision, slurred speech, giddiness, tremors and convulsions.

Aspiration Pneumonitis: signs/symptoms can include coughing, difficulty breathing, wheezing, coughing up blood and pneumonia, which can be fatal.

CANCER:

Note: This product contains ethanol. In IARC published Monograph No. 44, entitled, "Alcohol Drinking", the carcinogenicity of ethanol was determined based on chronic exposure to ethanol through human consumption of alcoholic beverages. This is not an expected effect during the foreseeable use of this product.

REPRODUCTIVE/DEVELOPMENTAL TOXINS:

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

-----  
SECTION CHANGE DATES  
-----

HEADING SECTION CHANGED SINCE February 06, 2001 ISSUE

-----  
Abbreviations: N/D - Not Determined N/A - Not Applicable CA - Approximately  
-----

-----  
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, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY 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.

3M provides information in electronic form as a service to its customers. Due to the remote possibility that electronic transfer may have resulted in errors, omissions or alterations in this information, 3M makes no representations as to its completeness or accuracy. In addition, information obtained from a database may not be as current as the information in the MSDS available directly from 3M.