

MATERIAL SAFETY 3M
DATA SHEET 3M Center
St. Paul, Minnesota
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DIVISION: ELECTRICAL PRODUCTS DIVISION

TRADE NAME:

16-101 3M General Purpose Contact Cleaner

ID NUMBER/U.P.C.:

80-6109-2787-5 00-54007-42817-6

ISSUED: June 16, 1999

SUPERSEDES: November 18, 1997

DOCUMENT: 08-0835-2

1. INGREDIENT	C.A.S. NO.	PERCENT
1,1-DICHLORO-1-FLUOROETHANE.....	1717-00-6	90 - 95
METHYL ALCOHOL.....	67-56-1	2 - 6
CARBON DIOXIDE.....	124-38-9	3

This product contains the following toxic chemical or chemicals subject to
the reporting requirements of Section 313 of Title III of the Emergency
Planning and Community Right-To-Know Act of 1986 and 40 CFR Part 372:

1,1-DICHLORO-1-FLUOROETHANE
METHYL ALCOHOL

2. PHYSICAL DATA

BOILING POINT:..... 0 - 150 F
VAPOR PRESSURE:..... 527 mmHg
VAPOR DENSITY:..... > 1.0 Air=1
EVAPORATION RATE:..... > 1 Ether=1
SOLUBILITY IN WATER:..... N/A
SPECIFIC GRAVITY:..... 1.21 Water=1
PERCENT VOLATILE:..... 100 % by vol
pH:..... N/D
VISCOSITY:..... N/D
MELTING POINT:..... N/D

APPEARANCE AND ODOR:

Aerosol, clear, fast evaporating liquid.

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

3. FIRE AND EXPLOSION HAZARD DATA

FLASH POINT:..... N/A TCC
FLAMMABLE LIMITS - LEL:..... N/A
FLAMMABLE LIMITS - UEL:..... N/A %
AUTOIGNITION TEMPERATURE:..... N/A

EXTINGUISHING MEDIA:

Carbon dioxide, Dry chemical, Alcohol-resistant 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. Water may not effectively extinguish fire; however, it should be used to keep fire-exposed containers and surfaces cool and prevent explosive rupture. Water may be used to blanket the fire. When fire fighting conditions are severe and total thermal decomposition of the product is possible, 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:

See Hazardous Decomposition section for products of combustion.
Closed containers exposed to heat from fire may build pressure and explode. Aerosol container contains gas under pressure.

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

OSHA FIRE HAZARD CLASS: Not applicable

4. REACTIVITY DATA

STABILITY: Stable

INCOMPATIBILITY - MATERIALS/CONDITIONS TO AVOID:
None known.

HAZARDOUS POLYMERIZATION: Hazardous polymerization will not occur.

HAZARDOUS DECOMPOSITION PRODUCTS:

Carbon Monoxide and Carbon Dioxide, Hydrogen Chloride, Hydrogen Fluoride, Formaldehyde, Chlorofluorocarbons, Irritant Vapors or Gases. See Health Hazard Data section.

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5. ENVIRONMENTAL INFORMATION

SPILL RESPONSE:

Refer to other sections of this MSDS for information regarding physical and health hazards, respiratory protection, ventilation, and personal protective equipment. Ventilate area. Extinguish all ignition sources. Evacuate unprotected personnel from hazard area. Place leaking containers in a well-ventilated area, preferably in an exhaust hood, if available, or outdoors.

RECOMMENDED DISPOSAL:

Incinerate in a permitted hazardous waste incinerator. Facility must be capable of handling aerosol cans. Combustion products will include HF and HCl.

ENVIRONMENTAL DATA:

Not determined.

REGULATORY INFORMATION:

Volatile Organic Compounds: 100 % by wt.
VOC Less H₂O & Exempt Solvents: 3.88 % %WT..

Since regulations vary, consult applicable regulations or authorities before disposal. In the event of an uncontrolled release of this material, the user should determine if the release qualifies as a reportable quantity. U.S. EPA Hazardous Waste Number = D001 (Ignitable)

EPCRA HAZARD CLASS:

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

6. SUGGESTED FIRST AID

EYE CONTACT:

Immediately flush eyes with large amounts of water. Get immediate medical attention.

SKIN CONTACT:

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

INHALATION:

Remove person to fresh air. If not breathing, give artificial respiration. If breathing is difficult, get immediate medical attention.

IF SWALLOWED:

No need for first aid is anticipated.

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7. PRECAUTIONARY INFORMATION

EYE PROTECTION:

Avoid eye contact with vapor, spray, or mist. Wear unvented goggles during operations in which exposure is likely.

SKIN PROTECTION:

Wear appropriate gloves when handling this material. A pair of gloves made from the following material(s) are recommended: butyl rubber, polyethylene/ethylene vinyl alcohol, polyethylene/polyvinylidene chloride (Saranex), fluoroelastomer (Viton).

RECOMMENDED VENTILATION:

Use with appropriate local exhaust ventilation. If exhaust ventilation is not adequate, use appropriate respiratory protection.

RESPIRATORY PROTECTION:

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:

Not an expected route of exposure.

RECOMMENDED STORAGE:

Store in a cool place. Store away from acids. Store away from heat. Contents may be under pressure, open carefully.

FIRE AND EXPLOSION AVOIDANCE:

Keep away from heat, sparks, open flame, and other sources of ignition. Do not pierce or burn container, even after use.

HMIS HAZARD RATINGS: HEALTH: 3 FLAMMABILITY: 0 REACTIVITY: 0
PERSONAL PROTECTION: B

EXPOSURE LIMITS

INGREDIENT	VALUE	UNIT	TYPE	AUTH	SKIN*
1,1-DICHLORO-1-FLUOROETHANE.....	500	PPM	CEIL	CMRG	
1,1-DICHLORO-1-FLUOROETHANE.....	500	PPM	TWA	AIHA	
METHYL ALCOHOL.....	200	PPM	TWA	ACGIH	Y
METHYL ALCOHOL.....	250	PPM	STEL	ACGIH	Y
METHYL ALCOHOL.....	200	PPM	TWA	OSHA	Y
METHYL ALCOHOL.....	250	PPM	STEL	OSHA	Y
CARBON DIOXIDE.....	5000	PPM	TWA	ACGIH	
CARBON DIOXIDE.....	30000	PPM	STEL	ACGIH	
CARBON DIOXIDE.....	10000	PPM	TWA	OSHA	
CARBON DIOXIDE.....	30000	PPM	STEL	OSHA	

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EXPOSURE LIMITS (continued)

INGREDIENT	VALUE	UNIT	TYPE	AUTH	SKIN*
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* 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
- CMRG: Chemical Manufacturer Recommended Exposure Guidelines
- OSHA: Occupational Safety and Health Administration

8. HEALTH HAZARD DATA

EYE CONTACT:

Single exposure may cause:

Mild Eye Irritation: signs/symptoms can include redness, swelling, pain, and tearing.

SKIN CONTACT:

Mild Skin Irritation (after prolonged or repeated contact): signs/symptoms can include redness, swelling, and itching.

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

INHALATION:

Intentional concentration and inhalation may be harmful or fatal.

Single overexposure, above recommended guidelines, may cause:

Blindness.

Prolonged or repeated exposure 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.

IF SWALLOWED:

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

Ingestion may cause:

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8. HEALTH HAZARD DATA (continued)

Blindness.

SECTION CHANGE DATES

INGREDIENTS SECTION CHANGED SINCE November 18, 1997 ISSUE

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