

**MATERIAL SAFETY DATA SHEET**  
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EMERGENCY PHONE NO.: (FOR SPILL, LEAK, FIRE, EXPOSURE OR ACCIDENT): 1-800-535-5053

\*\*\*\*\* CLEANER LUBE II 12012, 12014 \*\*\*\*\*

**SECTION I - PRODUCT IDENTIFICATION**

PRODUCT NAME: Cleaner Lube II (aerosol)  
 PRODUCT DESCRIPTION: HFE / HCFC blended cleaner / lubricant effectively cleans while depositing a thin, inert, high-quality lubricating film which contains Polytetrafluoroethylene particles. Non-flammable, plastics safe; effectively removes oxides, varnishes and other contaminants from electronic contacts, relays, controls - provides long lasting protection.  
 RESTRICTIONS: Commercial / industrial use only - electrical / electronic equipment .

**SECTION II - HAZARDOUS INGREDIENTS**

INGREDIENT NAME(S)	CAS #	OCCUPATIONAL EXPOSURE LIMITS	
		TLV OR PEL	ORAL LD-50
1, 1- Dichloro-1-fluoroethane	1717-00-6	500 PPM (See below*)	5 gm/kg (Rat)
Methyl Nonafluoroiso-Butylether	163702-08-7	600 PPM (See below**)	5 g/kg (Rat)
Methyl Nonafluoro-Butylether	163702-07-6	600 PPM (See below**)	5 g/kg (Rat)
Carbon Dioxide	124-38-9	5000 PPM	N.E.

\*Recommended Workplace Environmental Exposure Level (WEEL) as established by American Industrial Hygiene Association

\*\*Minnesota Mining and Manufacturing Company (3-M) Medical Department developed exposure guideline  
 Carcinogenic: OSHA = no NTP = no IARC = no

**SECTION III - PHYSICAL DATA**

APPEARANCE: Transparent, colorless liquid  
 ODOR: Slight ethereal and sweet odor  
 BOILING POINT: 90 degrees F. (32.22 degrees C.)  
 VAPOR DENSITY (Air = 1): >1  
 VAPOR PRESSURE: 2310 mmHg  
 SOLUBILITY IN WATER: Nil  
 SPECIFIC GRAVITY: 1.40  
 EVAPORATION RATE (Ether =1): >1

**SECTION IV - FIRE AND EXPLOSION DATA**

HMIS RATING: Health - 1, Flammability - 0, Reactivity - 1  
 FLASH POINT: None when tested to ASTM D 1310-67 and ASTM D-56-82  
 FLAMMABLE LIMITS: LEL: 7.6; UEL: 17.7 (ASTM Method E-681.79)  
 EXTINGUISHING MEDIA: CO2, dry chemical, water spray.  
 UNUSUAL FIRE AND EXPLOSION HAZARDS: Contents thermally decompose at temperatures >250 degrees C. (482 degrees F.). Vapor concentrations within the flammable range can be ignited by flame or high-intensity heat sources,

especially in confined or poorly ventilated spaces. Heated containers may over-pressurize and fail explosively.  
 SPECIAL FIRE FIGHTING PROCEDURES: Fire fighters should wear self-contained breathing apparatus and protective clothing. Cool fire-exposed containers with water fog.

**SECTION V - HEALTH HAZARD DATA**

EMERGENCY AND FIRST AID PROCEDURES:  
Eye Contact: Flush eyes with water for at least 15 minutes. Consult a physician. Skin Contact: Wash affected area with soap and water. If irritation develops or persists, consult a physician. Inhalation: Remove victim to fresh air, administer oxygen if necessary. If victim has stopped breathing begin CPR, get immediate medical attention. Ingestion: If liquid is swallowed, consult a physician immediately; DO NOT induce vomiting unless physician directed. If spontaneous vomiting occurs, keep victim's head below hips to prevent aspiration of vomitus into lungs.  
 MEDICAL CONDITIONS PRONE TO AGGRAVATION BY EXPOSURE: Cardiovascular disease, pre-existing skin conditions.  
 PRIMARY ROUTES OF ENTRY: Inhalation, skin and eye contact.

HEALTH HAZARDS (acute and chronic) / EFFECTS OF OVEREXPOSURE: Central nervous system depression, cardiac arrhythmia and asphyxiation are possible with inhalation of high vapor concentrations.

**SECTION VI - REACTIVITY DATA**

STABILITY: Stable under normal use and storage conditions.  
 HAZARDOUS POLYMERIZATION: Will not occur.  
 HAZARDOUS DECOMPOSITION PRODUCTS (under fire conditions): This product may produce hydrochloric and hydrofluoric acids when thermally decomposed.  
 INCOMPATIBILITY: Avoid contact with strong oxidizing agents, acidic agents, reactive metals. Certain desiccants may also react with contents.  
 CONDITIONS TO AVOID: Avoid heat, flames, electric arcs and other high intensity energy sources.

**SECTION VII - SPILL OR LEAK PROCEDURES**

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: Immediately extinguish potential ignition sources, ventilate area. Take up spilled material on an inert, non-flammable absorbant material and place into a DOT approved container for disposal. Prevent liquid from entering sewers or drains.  
 WASTE DISPOSAL: Comply with all existing Federal, State and Local environmental regulations. Waste or unwanted material may be reclaimed or incinerated by permitted facilities.

**SECTION VIII - SAFE HANDLING AND USE INFORMATION**

RESPIRATORY PROTECTION: Not normally required; mechanical (general) ventilation is usually adequate. Wear a NIOSH approved organic respirator in nuisance level concentrations, a positive pressure, air-supplied respirator in high vapor concentrations or oxygen-deficient atmospheres. Local exhaust may additionally be used to control airborne vapor levels in work areas.  
 PROTECTIVE GLOVES: PVA or neoprene gloves.  
 EYE PROTECTION: Safety glasses, splash goggles, face shield  
 OTHER PROTECTIVE EQUIPMENT: Eye wash station.

**SECTION IX - SPECIAL PRECAUTIONS AND STORAGE DATA**

Cleaner Lube II 12012, 12014

PRECAUTIONS TO BE TAKEN IN HANDLING: Avoid eye and skin contact with liquid. Avoid excessive inhalation of vapors. Use in a well-ventilated environment. Intentional inhalation of contents is harmful and may be fatal.

PRECAUTIONS TO BE TAKEN IN STORING: Store containers below 120°F (48°C), away from heat or ignition sources, open flame, out of direct sunlight.

**SECTION X – SHIPPING DATA**

DOT SHIPPING NAME: Aerosols, non-flammable, (each not exceeding 1L capacity)

U.N./N.A NUMBER: UN1950

DOT HAZARD CLASS: 2.2

DOT REQUIRED LABEL: 2, (air shipment only)

DOT EXCEPTION: See Code 49 section 172.101, column (8A). Section 173.306(h) permits "limited quantity" materials (inner packagings which do not exceed 1L capacity / 61 cubic inches and for which internal pressures do not exceed 180 psig at 130 degrees F.) meeting section 171.8 definition of "consumer commodity" to be renamed "Consumer commodity", reclassified as ORM-D when shipped via ground mode, domestically.

FREIGHT CLASS: NMFC 48580

LTL: 55

TL: 35

MW:36

T.S.C.A. STATUS: Components listed

PREPARED BY: Roger Hanson

DATE PREPARED: 01-26-00            SUPERSEDES: 01-13-00

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