OxyChem®

Fluorolube 229-0260

MATERIAL SAFETY DATA SHEET

MSDS NUMBER : M7732

MSDS DATE : 01-25-91

PRODUCT NAME : FLUOROLUBE® FS 5

24 HOUR EMERGENCY PHONE: (716) 278-7021

I. PRODUCT IDENTIFICATION

HMIS HAZARD RATINGS

HEALTH HAZARD 0 FIRE HAZARD 0 REACTIVITY 1

Based on the National Paint & Coatings Association HMIS rating system. This product is not an OSHA hazardous material as defined in 29 CFR 1910.1200.

SARA/TITLE III HAZARD CATEGORIES (See Section X)

Immediate (ACUTE) Health: NO
Delayed (Chronic) Health: NO
Fire Hazard: NO
Reactive Hazard: NO
Sudden Release of Pressure: NO

MANUFACTURER'S NAME AND ADDRESS : Occidental Chemical Corporation, Customer Service, Occidental Tower, P O Box 809050, Dallas, Texas 75380 Telephone (1-800-752-5151)

CHEMICAL NAME: Chlorotrifluoroethylene Polymer CAS NUMBER: 9002-83-9

SYNONYMS/COMMON NAMES: Fluorolube 011

CHEMICAL FORMULA: X-(CF2-CFCL)n-Y

DOT PROPER SHIPPING NAME: NA

DOT HAZARD CLASS: NA

DOT I.D. NUMBER: NA

DOT HAZARDOUS SUBSTANCE: NA

II. HEALTH HAZARD INFORMATION

EMERGENCY AND FIRST AID PROCEDURES

EYES:

IMMEDIATELY flush eyes with a directed stream of water for at least 15 minutes. Forcibly hold eyelids apart to ensure complete irrigation of all eye and lid tissue. GET MEDICAL ATTENTION IF IRRITATION OCCURS.

SKIN:

Wash with soap and water.

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CAS = Chemical Abstract Service Number ND = No relevant information found or not available
PEL = OSHA Permissible Exposure Limit CORP = Corporate Exposure Limit
TLV = ACGIH Threshold Limit Value, Current * = See Chronic Effects Information NA = Not applicable

IMPORTANT The information presented herein, while not guaranteed, was prepared by competent technical personnel and is true and accurate to the best of our knowledge NO WARRANTY, OR GUARANTY, EXPRESS OR IMPLIED IS MADE REGARDING PERFORMANCE, STABILITY, OR OTHERWISE This information is not intended to be all-inclusive as to the manner and conditions of use, handling and storage Other factors may involve other or additional safety or performance considerations. While our technical personnel will be happy to respond to questions regarding safe handling and use procedures, safe handling responsibility of the customer No suggestions for use are intended as, and nothing herein shall

II. HEALTH HAZARD INFORMATION (Continued)

INHALATION:
Get person out of contaminated area to fresh air.

INGESTION:
NEVER give anything by mouth to an unconscious person. If swallowed, DO NOT INDUCE VOMITING. Give large quantities of water. (If available, give several glasses of milk.) If vomiting occurs spontaneously, keep airway clear and give more water. SEEK MEDICAL ATTENTION IMMEDIATELY.

ROUTES OF EXPOSURE

INHALATION:
No effects expected.

SKIN:
No skin effects expected.

EYE CONTACT:
May cause mild irritation.

INGESTION:
Practically non-toxic.

EFFECTS OF OVEREXPOSURE

ACUTE:
May cause mild eye irritation.

CHRONIC:
None known.

TOXICOLOGY DATA:

Acute Oral Toxicity LD50 (rat)	=	>10 g/kg
Acute Dermal Toxicity LD50 (rabbit)	=	>5 g/kg
Primary Skin Irritation (rabbit)	=	Mild Reversible Irritation
Primary Eye Irritation (rabbit)	=	Very slight Reversible Conjunctival Irritation

New material is relatively non-toxic. Material in service may become contaminated with toxic foreign substances.

Exposure of laboratory rats to high concentrations of a chlorotrifluoroethylene (CTFE) polymer by either oral or inhalation administration has resulted in the development of signs of liver toxicity. Based upon the outcome of studies in primates, the liver toxicity appears to be specific to rodents and therefore, not relevant to man.

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III. INGREDIENTS

CAS NUMBER / NAME
9002839 Ethene, chlorotrifluoro-, homopolymer

EXPOSURE LIMITS	PERCENTAGE	
PEL=Not Established	VOL	100
TLV=Not Established	WT	100

COMMON NAMES:

Listed On(List Legend Below):
19 23

See Section II
All components of this product that are required to be on the TSCA Inventory are listed on the inventory.
Not listed as carcinogen - IARC, NTP, OSHA

LIST LEGEND
19 PA REQUIREMENT- 3% OR GREATER 23 NJ REQUIREMENT- 1% OR GREATER

IV. FIRE AND EXPLOSION DATA

FLASH POINT: NA AUTOIGNITION TEMPERATURE: NA

FLAMMABLE LIMITS IN AIR, % BY VOLUME- UPPER: NA
LOWER: NA

EXTINGUISHING MEDIA:
Use agent suitable for surrounding fire.

SPECIAL FIRE FIGHTING PROCEDURES:
In fire conditions, wear NIOSH/MSHA approved positive pressure self-contained breathing apparatus and full protective equipment.

UNUSUAL FIRE AND EXPLOSION HAZARD:
Fluorolubes decompose and depolymerize above 500°F. Decomposition products may be toxic and hazardous. Avoid friction or galling and contact with aluminum or magnesium parts. Friction or galling can cause localized areas of instantaneously high pressure and temperature which may result in localized detonation. See also Section VII.

V. SPECIAL PROTECTION

VENTILATION REQUIREMENTS:
General room ventilation plus local exhaust at points of emission.

SPECIFIC PERSONAL PROTECTIVE EQUIPMENT

RESPIRATORY:
Respiration protection is not required under normal use.

EYE:
Wear safety glasses with side shields (ANSI 87.1)

GLOVES:
Wear impervious gloves.

VI. PHYSICAL DATA

BOILING POINT @ 760 mm Hg: Decomposes above 500°F

FREEZING POINT: -75±15°F (-60±10°C)

VAPOR PRESSURE: 2.2mm Hg @ 200°F

SPECIFIC GRAVITY (H_2O=1): 1.87 at 100°F

SOLUBILITY IN H_2O % BY WT: Insoluble

VAPOR DENSITY (Air=1): NA

APPEARANCE AND ODOR: Clear, colorless oil

pH: NA

VII. REACTIVITY DATA

CONDITIONS CONTRIBUTING TO INSTABILITY:

Fluorolube has been known to detonate when used on aluminum fittings. Detonation can occur when Fluorolube is allowed to contact aluminum in confined spaces under heavy loads or high pressure. This reaction will only occur when aluminum is free of its oxide coating. Friction, galling, or seizure can remove the oxide coating and expose fresh aluminium. The same type of reactions may occur with magnesium. Therefore, do not use Fluorolube for the lubrication of aluminum or magnesium parts.

INCOMPATIBILITY:

Reacts violently with sodium, potassium, amines, liquid fluorine, liquid chlorine trifluoride. Do not use for lubrication of aluminum or magnesium.

HAZARDOUS DECOMPOSITION PRODUCTS:

Decomposes when heated above 500°F releasing hazardous decomposition products including hydrogen fluoride, hydrogen chloride, chlorotrifluoroethylene and other toxic organic fluorine compounds.

VIII. HANDLING AND STORAGE

HANDLING AND STORAGE PRECAUTIONS:

Keep containers tightly sealed to avoid contamination. Avoid conditions of galling or friction with aluminum or magnesium parts including container closures.

DO NOT REUSE THIS CONTAINER. Product residues may remain in this container. All labeled precautions MUST be observed. Dispose of container in a manner meeting government regulations.

PRODUCT DISPOSAL. Product should be completely removed from this container. Material that cannot be used or chemically reprocessed should be disposed of in a manner meeting government regulations.

IX. ENVIRONMENTAL PROCEDURES

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED:

Wipe up Fluorolube Oils or take up with absorbent material and place in marked containers for reclamation or disposal.

WASTE DISPOSAL METHOD:

Incinerate in equipment designed to handle hydrogen chloride and hydrogen fluoride as products of combustion or submit to an approved chemical disposal service for disposal in accordance with government regulations.

X. ADDITIONAL INFORMATION

Fluorolube oils are not listed by chemical name or trade name nor included in a general category as being regulated or listed as a substance in various acts or publications of Government agencies and International organizations recognized as authorities in identifying materials as actual, potential or suspected threats to human health and safety or the environment.

Fluorolube is a registered trademark of Occidental Chemical Corporation.

No exposure limits have been established for Fluorolube oils.

This product is not an OSHA hazardous material as defined in 29 CFR 1910.1200.

To aid our customers in complying with regulatory requirements, SARA Title III hazard categories for this product are indicated in Section I. If the word "YES" appears next to any category, this product may be reportable by you under the requirements of 40 CFR Part 370. Please consult those regulations for details.

XI. PREPARATION INFORMATION

For additional Non-Emergency health, safety, or environmental information telephone (716) 286-3081, or write to:

Occidental Chemical Corporation
Product Stewardship Department
Suite 400
360 Rainbow Boulevard South
Niagara Falls, NY 14302

For Emergencies: 24 HOUR EMERGENCY PHONE: (716) 278-7021

This MSDS replaces MSDS No. M7732 dated 5/5/89.

WARNING LABEL INFORMATION

Occidental Chemical Corporation
Electrochemicals & Specialty Products
Dallas, Texas 75062

In case of CHEMICAL EMERGENCIES - Call (716) 278-7021 (24 hours)

This product is not an OSHA hazardous material as defined in 29 CFR 1910.1200.

SIGNAL WORD: CAUTION

STATEMENT OF HAZARDS:
DO NOT USE FOR LUBRICATION OF ALUMINUM OR MAGNESIUM PARTS
MAY CAUSE MILD EYE IRRITATION

INFORMATION REQUIRED BY FEDERAL, STATE OR LOCAL REGULATIONS:
This product contains:

CAS#	NAME
9002839	Ethene, chlorotrifluoro-, homopolymer

HMIS RATING SYSTEM: HEALTH 0 FLAMMABILITY 0 REACTIVITY 1

FOR INDUSTRIAL USE ONLY **LABEL 011M7732**

For further information, Request OCC MSDS.

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