

MILLER-STEPHENSON CHEMICAL CO, INC -- PTFE RELEASE AGENT/DRY LUBRICANT --
9150-01-443-9003

===== Product Identification =====

Product ID:PTFE RELEASE AGENT/DRY LUBRICANT

MSDS Date:02/01/1999

FSC:9150

NIIN:01-443-9003

Status Code:A

MSDS Number: CKYHL

=== Responsible Party ===

Company Name:MILLER-STEPHENSON CHEMICAL CO, INC

Address:55 BACKUS AVE/GEORGE WASHINGTON HIGHWAY

Box:950

City:DANBURY

State:

CT

ZIP:06810

Country:US

Info Phone Num:203-743-4447

Emergency Phone Num:(800)424-9300

Preparer's Name:JANET STEPHENS

Chemtrec Ind/Phone:(800)424-9300

CAGE:18598

=== Contractor Identification ===

Company Name:MILLER-STEPHENSON CHEMICAL CO INC

Address:55 BACKUS AVE/GEORGE WASHINGTON HWY

Box:950

City:DANBURY

State:CT

ZIP:06810

Country:US

Phone:203-743-4447

CAGE:18598

Company Name:RADIAN INTL LLC

Address:8501 N MOPAC BLVD

Box:201088

City:AUSTIN

State:TX

ZIP:78720-1088

Country:US

Phone:512-419-5224

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Composition/Information on Ingredients
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Ingred Name:1,1-DICHLORO-1-FLUOROETHANE
CAS:1717-00-6
RTECS #:KI0997000
Minimum % Wt:77.
Maximum % Wt:80.
Ozone Depleting Chemical:2

Ingred Name:TELOMER OF TETRAFLUOROETHYLENE (65530-85-0, 163440-89-9,
131324-06-6)
= Wt:1.

Ingred Name:1,1,1,2-TETRAFLUOROETHANE
CAS:811-97-2
Minimum % Wt:18.
Maximum % Wt:22.

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Hazards Identification
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Repos
Reports of Carcinogenicity:NTP:NO IARC:NO OSHA:NO
Health Hazards Acute and Chronic:INHALATION OF HIGH CONCENTRATIONS OF
VAPOR MAY BE HARMFUL AND MAY CAUSE HEART IRREGULARITIES,
UNCONSCIOUSNESS, OR DEATH. THE COMPOUND IS A SKIN IRRITANT, IS A
MILD EYE IRRITANT, AND IS NOT A SKIN SENSITIZER IN ANIMALS. A
SINGLE EXPOSURE OF 1,1-DICHLORO-1-FLUOROETHANE BY SKIN CONTACT
CAUSED DECREASED BODY WEIGHT, REDNESS OF SKIN, AND LIVER EFFECTS.
Effects of Overexposure:INHALATION OF HIGH CON
CENTRATIONS OF VAPOR MAY
BE HARMFUL AND MAY CAUSE HEART IRREGULARITIES, UNCONSCIOUSNESS, OR
DEATH. THE COMPOUND IS A SKIN IRRITANT, IS A MILD EYE IRRITANT, AND
IS NOT A SKIN SENSITIZER IN ANIMALS.

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First Aid Measures
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First Aid:INHALATION: IMMEDIATELY REMOVE TO FRESH AIR. KEEP PERSONS
CALM. IF NOT BREATHING, GIVE ARTIFICIAL RESPIRATION. IF BREATHING IS
DIFFICULT, GIVE OXYGEN. CALL A PHYSICIAN. EYE: IN CASE OF CONTACT,
IMME

DIA TELY FLUSH EYES WITH PLENTY OF WATER FOR AT LEAST 15 MINUTES. SKIN: FLUSH SKIN WITH WATER AFTER EXCESSIVE CONTACT. WASH CONTAMINATED CLOTHING BEFORE REUSE. ORAL: IF SWALLOWED, DO NOT INDUCE VOMITING, IMMEDIATELY GIVE TWO GLASSES OF WATER. NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON. CALL A PHYSICIAN.

===== Fire Fighting Measures =====

Flash Point Method:TCC

Flash Point:NONE

Autoignition Temp:Autoignition Temp Text:ND

Lower Limits

:7.4

Upper Limits:15.5

Extinguishing Media:WATER SPRAY OR FOG, FOAM, DRY CHEMICAL OR CARBON DIOXIDE.

Fire Fighting Procedures:EVACUATE PERSONNEL TO SAFE AREA. USE WATER SPRAY OR FOG. WEAR SELF-CONTAINED BREATHING APPARATUS (SCBA).

Unusual Fire/Explosion Hazard:VAPORS ARE HEAVIER THAN AIR AND MAY TRAVEL TO A SOURCE OF IGNITION AND FLASH BACK. AVOID HIGH TEMPERATURES AND STATIC CHARGES. CONTAINERS MAY RUPTURE UNDER FIRE CONDITIONS. USE WATER SPRAY TO COOL CONTAINERS.

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===== Accidental Release Measures =====

Spill Release Procedures:REVIEW FIRE AND EXPLOSION HAZARDS AND SAFETY PRECAUTIONS BEFORE PROCEEDING WITH CLEAN UP. USE APPROPRIATE PERSONAL PROTECTIVE EQUIPMENT DURING CLEAN UP. VENTILATE AREA. DO NOT FLUSH TO SEWERS. COLLECT ON ABSORBENT MATERIAL AND TRANSFER TO DRUMS FOR RECOVERY OR DISPOSAL.

===== Handling and Storage =====

Handling and Storage Precautions:STORE IN A CLEAN DRY AREA. DO NOT HEAT ABOVE 125F. ROTATE STOCK TO SHELF LIFE OF ONE YEAR.

===== Exposure Controls/Personal Protection =====

Respiratory Protection:WHERE VENTILATION IS INADEQUATE USE LOCAL EXHAUST SYSTEM DESIGNED FOR FLAMMABLE GAS ATMOSPHERE TO REMOVE VAPORS.

Ventilation:USE WITH SUFFICIENT VENTILATION TO KEEP EMPLOYEE EXPOSURE BELOW THE RECOMMENDED EXPOSURE LIMIT.

Protective Gloves:MYLAR GLOVES

Eye Protection:CHEMICAL SPLASH GOGGLES

Work Hygienic Practices:AVOID

BREATHING VAPORS OR MIST. AVOID CONTACT WITH EYES, SKIN OR CLOTHING. WASH THOROUGHLY AFTER HANDLING. FLUOROTELOMER SHOULD NOT BE HANDLED AROUND TOBACCO PRODUCTS.

Supplemental Safety and Health

INHALATION OF VAPORS IN THE PRESENCE OF TABACCO PRODUCTS CAUSES POLYMER FUME FEVER.

===== Physical/Chemical Properties =====

HCC:N1

Boiling Pt:=32.C, 89.6F

B.P. Text:APPROX

Vapor Pres:10 PSIA AT 21C

Vapor Density:4.0

Spec Gravity:1.23 G/CC

pH:NEUTRAL

Evaporation R

ate & Reference:>1 (CC14=1)

Solubility in Water:NEGLIGIBLE

Appearance and Odor:WHITE MILKY LIQUID, FAINT ETHERAL ODOR

Percent Volatiles by Volume:99

===== Stability and Reactivity Data =====

Stability Indicator/Materials to Avoid:YES

STRONG ACIDS AND ALKALIS. FINELY POWDERED METALS SUCH AS AL, MG, ZN.

STORNG OXIDIZING AGENTS AND SOME DESICCANTS.

Stability Condition to Avoid:AVOID HEAT, SPARKS AND FLAME.

Hazardous Decomposition Products:THIS PRODUCT CAN BE DECO

MPOSED BY HIGH

TEMPERATURES (FLAME, GLOWING METAL SURFACES, ETC.) FORMING HYDORGEN

FLUORIDE HYDROGEN CHLORIDE, CARBON MONOXIDE AND CARBON DIOXIDE.

Conditions to Avoid Polymerization:WILL NOT OCCUR.

===== Toxicological Information =====

Toxicological Information:IN A TWO YEAR INHALATION STUDY,

1,1-DICHLORO-1-FLUOROETHANE, AT CONCENTRATIONS OF 5,000 PPM OR

15-20,000 PPM, PRODUCED AN INCREASED INCIDENCE OF BENIGN TESTICULAR

TUMORS IN RATS. THE NO E

EFFECT LEVEL F OR THIS STUDY WAS 1,500 PPM.

ANIMAL DATA SHOW DEVELOPMENTAL EFFECTS ONLY AT EXPOSURE LEVELS PRODUCING OTHER TOXIC EFFECTS IN THE ADULT ANIMAL. REPRODUCTIVE DATA ON RATS SHOW INTERFERENCE WITH REPRODUCTION ONLY AT LEVELS WHICH PRODUCE OTHER TOXIC EFFECTS IN THE ADULT ANIMAL. TESTS IN BACTERIAL AND MAMMALIAN CELL CULTURES ARE GENERALLY NEGATIVE. IT HAS NOT PRODUCED GENETIC DAMAGE IN TESTS ON ANIMALS .

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===== Ecological Information =====
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Ecological:AQUATIC TOXICITY: 1,1-DICHLORO-1-FLUOROETHANE 96 HRS. LC50,
RAINBOW TROUT: 20 MG/L.

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===== Disposal Considerations =====

Waste Disposal Methods:COMPLY WITH FEDERAL, STATE AND LOCAL
REGULATIONS.

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===== MSDS Transport Information =====

Transport Information:DOMESTIC (DOT): CONSUMER COMMODITY ORM-D.
INTERNATIONAL AIR (IATA): AEROSOLS, NON-FLAMMABLE, 2.2, UN1950,
NON-FLAMMABLE GAS.

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===== Regulatory Information =====

SARA Title III Information:PRODUCT HAZARD CATEGORIES: ACUTE HEALTH -
YES, CHRONIC HEALTH - NO, FIRE HAZARD - NO, REACTIVITY HAZARD - NO,
PRESSURE HAZARD - YES. LISTS: EXTREMELY HAZARDOUS SUBSTANCE - NO,
CERCLA HAZARDOUS SUBSTANCE - NO, TOXIC CHEMICALS - NO.

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