

VAN WATERS AND ROGERS -- FREON TF -- 6850-00-105-3084

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

Product ID:FREON TF
MSDS Date:07/25/1990
FSC:6850
NIIN:00-105-3084
MSDS Number: BPHFR
=== Responsible Party ===
Company Name:VAN WATERS AND ROGERS
Address:1600 NORTH BLDG.
City:SEATTLE
State:WA
ZIP:93104-1564
Country:US
Info Phone Num:408-435-8700
Emergency Phone Num:408-435-8700 OR 303-338-5651
CAGE:87664

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= Contractor Identification ===
Company Name:CHEMICAL COMMODITIES AGENCY, INC.
Address:27447 PACIFIC STREET
Box:City:HIGHLAND
State:CA
ZIP:92346-2640
Country:US
Phone:909-864-2310
CAGE:60777
Company Name:VAN WATERS AND ROGERS INC., UNIVAR CORP.
Address:1600 NORTON BLDG. 801 2ND AVENUE
Box:City:SEATTLE
State:WA
ZIP:98104-1564
Country:US
Phone:206-447-5911/800-424-9300(CHEMTREC)
CAGE:87664

===== Composition/Information on Ingredients =====

Ingred Name:1,1,2-TRICHLORO-1,2,2-TRIF

LUOROETHANE (FREON 113) (SARA
III)
CAS:76-13-1
RTECS #:KJ4000000
Fraction by Wt: >99%
OSHA PEL:1000PPM/1250STEL
ACGIH TLV:1000PPM/1250STEL9192
Ozone Depleting Chemical:1

===== Hazards Identification =====

LD50 LC50 Mixture:LD50 (ORAL RAT) IS 43 G/KG
Routes of Entry: Inhalation:YES Skin:YES Ingestion:YES
Reports of Carcinogenicity:NTP:NO IARC:NO OSHA:NO
Health Hazards Acute and Chronic:ACUTE: VAPORS ARE HEAVIER THAN AIR AND
CAN CAUSE SUFFOCATION BY
REDUCING OXYGEN AVAILABLE FOR BREATHING.
BREATHING VAPORS PLUS EPINEPHRIN TYPE DRUGS MAY CAUSE CARDIAC
IRREGULARITIES. CHRONIC: NO SPEC IFIC INFORMATION AVAILABLE.
Explanation of Carcinogenicity:NONE OF THE CHEMICALS IN THIS PRODUCT IS
LISTED BY IARC, NTP OR OSHA AS A CARCINOGEN.
Effects of Overexposure:INHALE: LIGHT-HEADEDNESS, GIDDINESS, SHORTNESS
OF BREATH, NARCOSIS, CARDIAC IRREGULARITIES, UNCONSCIOUSNESS OR
DEATH. EYE: IRRITATION. SKIN:NOTHING WITH BRIEF EXPOSURE;BUT

POSSIBLE IRRITATION AFTER PR OLONGED CONTACT. INGEST: LARGE
QUANTITIES MAY CAUSE NAUSEA AND VOMITING.
Medical Cond Aggravated by Exposure:CARDIOVASCULAR DISEASE MAY BE
AGGRAVATED.

===== First Aid Measures =====

First Aid:INHALATION: REMOVE SUBJECT TO FRESH AIR. MAINTIAN BREATHING.
EYE: FLUSH WITH PLENTY OF WATER FOR 15 MINUTES. GET IMMEDIATE
MEDICAL ATTENTION. SKIN: WASH WITH SOAP AND WATER. REMOVE
CONTAMINATED CLOTHI NG AND SHOES. I
F IRRITATION PERSISTS, SEE DR.
INGESTION: DO NOT INDUCE VOMITING. GET IMMEDIATE MEDICAL ATTENTION.
NOTHING BY MOUTH IF UNCONSCIOUS OR CONVULSING.

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

Flash Point:NONE
Extinguishing Media:THIS MATERIAL IS NOT COMBUSTABLE. USE
EXTINGUISHING MEDIA APPPPROPRIATE FOR SURROUNDING FIRE.
Fire Fighting Procedures:FIRE FIGHTERS SHOULD WEAR SCBA & FULL
PROTECTIVE CLOTHING. USE WATER SPRAY TO COOL NEARBY CONTAINERS &
STR

STRUCTURES EXPOSED TO FIRE.

Unusual Fire/Explosion Hazard:EXTINGUISH ALL NEARBY SOURCES OF IGNITION
SINCE VAPORS DECOMPOSE TO HAZARDOUS PRODUCTS AT HIGH TEMPERATURES.

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

Spill Release Procedures:WIPE OR SOAK UP SMALL SPILLS WITH PAPER TOWEL
OR INERT ABSORBANT. DIKE TO RETAIN LARGE SPILLS. VACUUM UP FREE
LIQUID. REMOVE RESIDUE WITH INERT ABSORBANT. PLACE IN DOT DISPOSAL
CONTAINER. KEEP OUT OF SEWERS,STORM DRAINS, SUR
FACE WATERS, SOIL.

Neutralizing Agent:NO INFORMATION GIVEN ON MSDS BY SUPPLIER

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

Handling and Storage Precautions:STORE IN COOL, DRY, WELL VENTILATED
AREA. KEEP CONTAINERS CLOSED. STORE AWAY FROM OTHER CHEMICALS. DO
NOT USE PRESSURE TO EMPTY CONTAINER.

Other Precautions:'EMPTY' CONTAINERS MAY CONTAIN RESIDUE OR VAPOR.
TREAT THEM WITH THE RESPECT DUE FULL ONES. DO NOT CUT,WELD,ETC. ON
THEM. VAPORS ARE HEAVIER THAN
AIR & COLLECT IN LOW PLACES. DO NOT
ENTER WHERE VAPORS ARE EXPECTED W/O SCBA & OBSERVER.

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

Respiratory Protection:WEAR NIOSH APPROVED SCBA OR SUPPLIED AIR
RESPIRATOR IF CONDITIONS OF USE GENERATE VAPORS OR MISTS.

Ventilation:MECHANICAL (GENERAL) VENTILATION CAPEABLE OF MAINTAINING
EMISSIONS AT THE POINT BELOS THE PEL.

Protective Gloves:RUBBER

Eye Protection:CHEMICAL SAFETY GOGGLES

Other Protective Equipment:SAFETY S

HOWER AND EYE BATH. LONG SLEEVED

SHIRT, TROUSERES, SAFETY SHOES, RUBBER APRON.ED OR REPEATED
CONTACT.

Work Hygienic Practices:MFR: ? HMIS:USE GOOD CHEMICAL HYGIENE
PRACTICE. AVOID UNNECESSARY CONTACT. WASH THOROUGHLY BEFORE EATING
OR DRINKING.

Supplemental Safety and Health

MSDS RECEIVED FROM NAVY (FOCAL POINT N). NAVY IDENTIFIED NSN.

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

HCC:V2

NRC/State Lic Num:NONE

Boiling Pt:=47.8C, 118.F

Melt/Freeze Pt:=-35.C

, -31.F
Vapor Pres:334 MM
Vapor Density:2.9
Spec Gravity:1.57
Evaporation Rate & Reference:>1 (BUTYL ACETATE=1)
Solubility in Water:NIL
Appearance and Odor:CLEAR, COLORLESS LIQUID WITH SLIGHT ETHEREAL ODOR.

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

Stability Indicator/Materials to Avoid:YES
ALKALIS, OXIDIZING MATERIALS, WATER & MOIST AIR, ALKALI OR ALKALINE
EARTH METALS, ALUMINUM OR ZINC.
Stability Condition to Avoid:OPEN FLAMES, WELDING ARCS, OR OTHER HIGH
TEMPERATURE SOURCES WHICH MAY INDUCE THERMAL DECOMPOSITION.
Hazardous Decomposition Products:MAY LIBERATE CARBON MONOXIDE, CARBON
DIOXIDE, HYDROGEN CHLORIDE, CHLORINE, PHOSGENE, OR HYDROGEN
FLOURIDE.

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

Waste Disposal Methods:DISPOSE OF CONTAMINATED PRODUCT AND MATERIALS
USED IN CLEANING UP SPILLS AND LEAKS IN A MANNER APPROVED FOR THIS
MATERIAL.CONSULT APPROPRIATE FEDERAL STATE AND LOCAL REGULATIORY
AGENCIE
S TO ACERTAIN P ROPER DISPOSAL PROCEDURES.

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