

ELF AUTOCHEM NORTH AMERICA FLUOROCHEMICALS -- FORANE 134A -- 6830-01-370-6207

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

Product ID:FORANE 134A

MSDS Date:01/29/1998

FSC:6830

NIIN:01-370-6207

Status Code:A

MSDS Number: CJQCF

=== Responsible Party ===

Company Name:ELF AUTOCHEM NORTH AMERICA FLUOROCHEMICALS

Address:2000 MARKET ST

City:PHILADELPHIA

State:PA

ZIP:19103-3222

Country:US

Info Phone Num:215-419-77

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Emergency Phone Num:215-419-7695\7704

Chemtrec Ind/Phone:(800)424-9300

CAGE:TO328

=== Contractor Identification ===

Company Name:ELF ATOCHEM NORTH AMERICA INC

Address:2000 MARKET STREET

Box:City:PHILADELPHIA

State:PA

ZIP:19103-3222

Country:US

Phone:800-245-5858

CAGE:86460

Company Name:ELF AUTOCHEM NORTH AMERICA FLUOROCHEMICALS

Address:2000 MARKET ST

Box:City:PHILADELPHIA

State:PA

ZIP:19103-3222

Country:US

Phone:215-419-7704\7695

CAGE:TO328

Company Name:REFRIGERANT RECLAIM SERVICES INC /

DBA FULL CYCLE
Address:121 S NORWOOD DR
Box:City:HURST
State:TX
ZIP:76053
Country:US
Phone:817-282-0022
Contract Num:SP0450-99-C5460
CAGE:0YD89

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Composition/Information on Ingredients
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Ingred Name:1,1,1,2-TETRAFLUOROETHANE (R134A)
CAS:811-97-2
Fraction by Wt: 100%

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Hazards Identification
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Routes of Entry: Inhalation:YES Skin:YES Ingestion:NO
Reports of Carcinogenicity:NTP:NO IARC:NO OSHA:NO
Health Hazards Acute and
Chronic:TARGET ORGANS: CNS, RESPIRATORY SYSTEM
AND HEART. EYES: VERY SLIGHT IRRITATION. RAPID VOLATILIZATION OF
LIQUID MAY CAUSE FROSTBITE. SKIN: SLIGHT IRRITANT, CONTACT MAY
CAUSE FROSTBITE. INHALATION: CONC ENTRATED VAPORS CAN PRODUCE RAPID
ANESTHETIC EFFECTS, RESPIRATORY DEPRESSION, INCREASED SENSITIVITY
OF THE HEART TO ADRENALINE, DEPRESSION OF CARDIAC FUNCTION, DEATH
DUE TO ASPHYXIATION.

Explanation of Carcinogenicity:NONE
Effects of Overexposure:IRRITATION, FROSTBIT
ES AND PAIN, DROWSINESS,
UNCONSCIOUSNESS, RAPID HEARTBEAT, IRREGULAR HEARTBEAT.
Medical Cond Aggravated by Exposure:PREEXISTING HEART DISEASE OR
COMPROMISED HEART FUNCTION SHOULD ONLY HAVE LIMITED EXPOSURE TO
THIS MATERIAL.

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First Aid Measures
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First Aid:SKIN: IF FROSTBITTEN, WARM SLOWLY W/WATER. FLUSH W/PLENTY OF
WATER. EYES: FLUSH W/PLENTY OF CLEAN WATER FOR 15 MINS. INHALATION:
REMOVE TO FRESH AIR. IF NOT BREATHING, GIVE CP

R. IF BREATHING IS

DIFFICULT, GIVE OXYGEN. INGESTION: NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON. OBTAIN MEDICAL ATTENTION IN ALL CASES.

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

Flash Point:NONFLAMMABLE

Autoignition Temp:Autoignition Temp Text:N/E

Extinguishing Media:USE EXTINGUISHING MEDIA APPROPRIATE FOR SURROUNDING FIRE CONDITIONS.

Fire Fighting Procedures:WEAR SELF-CONTAINED BREATHING APPARATUS IF FIGHTING FIRES NEAR THIS PRODUCT DUE TO

TOXICITY OF THERMAL

DECOMPOSITION PRODUCTS.KEEP CONTAINERS COOL.

Unusual Fire/Explosion Hazard:MIXTURES OF HFC-134A WITH AIR OR OTHER OXIDIZERS UNDER HIGH TEMPERATURE AND PRESSURE, CAN BE FLAMMABLE.IN TESTS CONDUCTED AT UP TO 170C, HFC-134A IS FLAMMABLE ONLY AT PRESSURES ABOVE 50PSIA AND WITH MORE THAN 50% AIR BY VOLUME.MIXTURES CONTAINING HFC-134A SHOULD NOT BE USED FOR PRESSURE OR LEAK TESTING.

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

Spill

Release Procedures:REMOVE/EXTINGUISH IGNITION/COMBUSTION SOURCES. EVACUATE ENCLOSED SPACES UNTIL GAS IS DISPERSED. KEEP UPWIND. STOP LEAK IF POSSIBLE W/OUT RISK. DISPERSE GAS W/FLOOR-LEVEL FORCED-AIR VENTILATION. EXHAUST VAPORS OUTDOORS. REMOVE FLAMES/HEAT

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

Handling and Storage Precautions:KEEP AWAY FROM IGNITION SOURCES AND DIRECT SUNLIGHT. STORE BELOW 120F. STORE IN TIGHTLY CLOSED CONTAINERS. DO NOT REFILL THIS CYLINDER. EMPTY CONTAINERS CONTAIN HAZARDOUS RESIDUE.

Other Precautions:DON'T DROP, REUSE/REFILL CONTAINER. DON'T CUT, GRIND/WELD ON/NEAR CONTAINER. DON'T GET IN EYES, ON SKIN/CLOTHING. DON'T BREATHE VAPOR, MIST/GAS.

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

Respiratory Protection:IN INADEQUATELY VENTILATED AREAS, A NIOSH/MSHA APPROVED (TC-18C) SUPPLIED AIR RESPIRATOR/SCBA IS REQUIRED.

Ventilation:CHECK AIR FOR CONTAMINANT & FOR OXYGEN DEFICIENCY

ENCY. USE

LOCAL EXHAUST SYSTEM IF VENTILATION IS INADEQUATE.

Protective Gloves:SYNTHETIC RUBBER/NEOPRENE

Eye Protection:CHEMICAL GOGGLES

Other Protective Equipment:WEAR APPROPRIATE CHEMICAL RESISTANT PROTECTIVE CLOTHING TO PREVENT SKIN CONTACT.

Work Hygienic Practices:REMOVE/LAUNDER CONTAMINATED CLOTHING BEFORE REUSE. DESTROY CONTAMINATED SHOES.

Supplemental Safety and Health

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

HCC:G3

Boiling Pt:=-26.3C, -15.5F

Melt

/Freeze Pt:=-101.C, -149.8F

Vapor Pres:96.16 PSIA @77F

Vapor Density:3.52

Spec Gravity:1.21 @ 77F

Solubility in Water:NEGLIGIBLE

Appearance and Odor:CLEAR, COLORLESS LIQUIFIED GAS WITH FAINT ETHEREAL(ETHER-LIKE) ODOR

Percent Volatiles by Volume:100

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

Stability Indicator/Materials to Avoid:YES

AVOID CONTACT WITH STRONG ALKALI OR ALKALINE EARTH METALS, ALUMINUM, MAGNESIUM/ZINC & STRONG OXIDIZERS SINCE THEY MAY REACT WITH O

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ACCELERATE DECOMPOSITION OF THIS MATERIAL.

Stability Condition to Avoid:THERMAL DECOMPOSITION DUE TO EXPOSURE TO HEAT(>800F) OR FIRE FLAMES,EXTREMELY HOT METAL SURFACES,HEATING ELEMENTS,COMBUSTION ENGINES,ETC

Hazardous Decomposition Products:HYDROGEN FLUORIDE, CO, CO2

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

Toxicological Information:INHALATION: 4 HR LC50 RATS= 500,000 PPM; 30 MIN LC50= 750,000 PPM. CONCENTRATION >50,000 PPM PRODUCED ANESTHETIC

EFFECT IS MICE, DOG, CATS AND MOKEYS. NO TOXIC EFFECTS WERE OBSERVED IN RATS EXPOSED 6 HR/DAY, 5 DAYS/WEEK FOR 13 WEEKS FOR CONCENTRATIONS UPTO 50,000 PPM. INHALATION FOLLOWED BY IV INJECTION OF EPINEPHRINE RESULTED IN HEART SENSITIZATIONS AT LEVELS >75,000 PPM IN DOGS.

==== Ecological Information =====

Ecological:A 28 DAY BIODEGRADATION STUDY WITH HFC 134A USING AN ACTIVATED SLUDGE INOCULUM PRODUCED 3% BIODEGRADATION.

==== Disposal Considerations =====

Waste Disposal Methods:RECYCLE/RECLAIM IF POSSIBLE. RECLAIMED MATERIAL MAY BE INCINERATED BUT TOXIC & CORROSIVE COMBUSTION PRODUCTS(HF & HCL) MUST BE HANDLED APPROPRIATELY. DISPOSE OF IAW/LOCAL, STATE & FEDERAL REGULATIONS.

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