

DU PONT E I NEMOURS & CO CHEMICALS & PIGMENTS DEPT -- SUVA 134A -- 6830-01-370-6208  
===== Product Identification =====

Product ID:SUVA 134A  
MSDS Date:03/23/1999  
FSC:6830  
NIIN:01-370-6208  
Status Code:A  
MSDS Number: CKSCJ  
=== Responsible Party ===  
Company Name:DU PONT E I NEMOURS & CO CHEMICALS & PIGMENTS DEPT  
Address:1007 MARKET ST  
City:WILMINGTON  
State:DE  
ZIP:19898  
Country:US  
Info Phone Num:800-44  
1-7515  
Emergency Phone Num:(800)424-9300  
Resp. Party Other MSDS Num.:DU000693  
Preparer's Name:MSDS COORDINATOR  
Chemtec Ind/Phone:(800)424-9300  
CAGE:23037

=== Contractor Identification ===  
Company Name:DU PONT E I NEMOURS & CO CHEMICALS & PIGMENTS DEPT  
Address:1007 MARKET ST  
Box:City:WILMINGTON  
State:DE  
ZIP:19898  
Country:US  
Phone:800-441-7515  
CAGE:23037

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

Ingred Name:ETHANE, 1,1,1,2-TETRAFLUORO-  
CAS:811-97-2  
= Wt:100.  
Other REC

Limits:1000 PPM, 8 & 12 HR  
OSHA PEL:NONE ESTABLISHED  
ACGIH TLV:NONE ESTABLISHED

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

Reports of Carcinogenicity:NTP:UNKNOWN IARC:NO OSHA:NO

Health Hazards Acute and Chronic:INHALATION: ETHANE,

1,1,1,2-TETRAFLUORO-GROSS OVEREXPOSURE MAY CAUSE: CENTRAL NERVOUS SYSTEM DEPRSSION WITH DIZZINESS, CONFUSION, INCOORDINATION, DROWSINESS OR UNCONSCIOUSNESS. IRREGULAR HEART BEAT WI TH A STRANGE SENSATION IN THE CHEST, H

EART THUMPING, APPREHENSION,

LIGHTHEADEDNESS, FEELING OF FAINTING, DIZZINESS, WEAKNESS, SOMETIMES PROGRESSING TO LOSS OF CONSCIOUSNESS AND DEATH.

SUFFOCATION, IF A IR IS DISPLACED BY VAPORS. SKIN: IMMEDIATE EFFECTS OF OVEREXPOSURE MAY INCLUDE: FROSTBITE, IF LIQUID OR ESCAPING VAPOR CONTACTS THE SKIN. EYE: FROSTBITE-LIKE EFFECTS MAY OCCUR IF THE LIQUID OR ESCAPIN G VAPORS CONTACT THE EYES.

Explanation of Carcinogenicity:NONE OF THE COMPONENTS PRESENT IN THIS MATERIAL AT

CONCENTRATIONS EQUAL TO OR GREATER THAN 0.1% ARE LISTED BY IARC, NPT, OSHA OR ACGIH AS A CARCINOGEN.

Effects of Overexposure:INHALATION: ETHANE, 1,1,1,2-TETRAFLUORO-GROSS OVEREXPOSURE MAY CAUSE: CENTRAL NERVOUS SYSTEM DEPRSSION WITH DIZZINESS, CONFUSION, INCOORDINATION, DROWSINESS OR UNCONSCIOUSNESS. IRREGULAR HEART BEAT WI TH A STRANGE SENSATION IN THE CHEST, HEART THUMPING, APPREHENSION, LIGHTHEADEDNESS, FEELING OF FAINTING, DIZZINESS, WEAKNESS, SOMETIMES PROGRESSING T

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Medical Cond Aggravated by Exposure:INCREASED SUSCEPTIBILITY TO EFFECTS OF MATERIAL MAY BE OBSERVED IN PERSONS WITH PRE-EXISTING DISEASE OF CENTRAL NERVOUS SYSTEM & CARDIOVASCULAR SYSTEM.

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

First Aid:INHALATION: IF HIGH CONCENTRATIONS INHALED, IMMEDIATELY REMOVE TO FRESH AIR. KEEP PERSON CALM. IF NOT BREATHING, GIVE ARTIFICIAL RESPIRATION. IF BREATHING DIFFICULT, GIVE OXYGEN. CALL PHYSICIAN. SKIN: IN CASE OF CONTACT, IMMEDIATELY FLUSH SKIN WITH PLENTY WATER FOR AT LEAST 15 MINUTES, WHILE REMOVING CONTAMINATED CLOTHING & SHOES. CALL PHYSICIAN . WASH CONTAMINATED CLOTHING BEFORE REUSE. TREAT FOR FROSTBITE IF NECESSARY BY GENTLY WARMING AFFECTED AREA. EYE: IN CASE OF CONTACT, IMMEDIATELY FLUSH EYES WITH PLENTY OF WATER FOR AT LEAST 15 MINUTES. CALL PHYSICIAN. INGESTION: INGESTION IS NOT A POTENTIAL ROUTE OF EXPOSURE.

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

Flash Point:WILL NOT BURN

Lower Limits:NA

Upper Limits:NA

Extinguishing Media:USE MEDIA APPROPRIATE FOR SURROUNDING MATERIAL. COOL TANK/CONTAINER WITH WATER SPRAY.

Fire Fighting Procedures:

SELF-CONTAINED BREATHING APPARATUS MAY BE REQUIRED IF CYLINDERS RUPTURE OR RELEASE UNDER FIRE CONDITIONS.

Unusual Fire/Explosion Hazard:NOT FLAMMABLE UP TO 100C AT ATMOSPHERIC PRESSURE BUT MIXTURES WITH HIGH CONCENTRATIONS OF AIR AT ELEVATED PRESSURE CAN BECOME COMBUSTIBLE AT AMBIENT TEMP. AS TEMPERATURE OF MATERIAL IS INCREASED LOWER PRESSURE (>ATMOSPHERIC) CAN CREATE SAME EFFECT. DO NOT MIX WITH HIGH CONCENTRATIONS OF AIR ABOVE ATMOSPHERIC PRESSURE.

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

Spill Release Procedures:VENTILATE AREA, ESPECIALLY LOW OR ENCLOSED PLACES WHERE HEAVY VAPORS MIGHT COLLECT. REMOVE OPEN FLAMES. USE SELF-CONTAINED BREATHING APPARATUS (SCBA) IF LARGE SPILL OR LEAK OCCURS.

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

Handling and Storage Precautions:USE WITH SUFFICIENT VENTILATION TO KEEP EMPLOYEE EXPOSURE BELOW RECOMMENDED LIMITS. HFC-134A SHOULD NOT BE MIXED

WITH AIR FOR LEAK TESTING OR USED FOR ANY OTHER PURPOSE ABOVE ATMOSPHERIC PRESSURE. SEE FLAMMABLE PROPERTIES SECTION. STORE IN A CLEAN, DRY PLACE. DO NOT HEAT ABOVE 52C (126 F).

Other Precautions:AVOID CONTACT WITH CHLORINE OR OTHER STRONG OXIDIZING AGENTS SHOULD BE AVOIDED.

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

Respiratory Protection:UNDER NORMAL MANUFACTURING CONDITIONS, NO RESPIRATORY PROTECTION IS REQUIRED WHEN USING THIS PRODUCT. SELF

F-CONTAINED BREATHING APPARATUS (SCBA) IS REQUIRED IF A LARGE RELEASE OCCURS.

Ventilation:NORMAL VENTILATION FOR STANDARD MANUFACTURING PROCEDURES IS GENERALLY ADEQUATE. LOCAL EXHAUST SHOULD BE USED WHEN LARGE AMOUNTS ARE RELEASED.

Protective Gloves:IMPERVIOUS

Eye Protection:CHEMICAL SPLASH GOGGLES.

Other Protective Equipment:NOT PROVIDED

Work Hygienic Practices:NOT PROVIDED

Supplemental Safety and Health

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

HCC:G3

B

Boiling Pt:=-26.5C, -15.7F

Vapor Pres:96 PSIA @ 25C

Vapor Density:3.6

Spec Gravity:1.208 @ 77F

Evaporation Rate & Reference:>1 (CCL4=1)

Solubility in Water:0.15 WT% @ 25C

Appearance and Odor:COLORLESS, LIQUIFIED GAS, SLIGHT ETHER ODOR.

Percent Volatiles by Volume:100

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

Stability Indicator/Materials to Avoid:YES

INCOMPATIBLE WITH ALKALI OR ALKALINE EARTH METALS-POWDERED AL, ZN, BE, ETC.

Stability Condition to Avoid:AVOID O

PEN FLAMES AND HIGH TEMPERATURES.

Hazardous Decomposition Products:DECOMPOSITION PRODUCTS ARE HAZARDOUS. THIS MATERIAL CAN BE DECOMPOSED BY HITH TEMPERATURES (OPEN FLAMES, GLOWING METAL SURFACES, ETC.) FORMING HYDROFLUORIC ACID AND POSSIBLY CARBONYL FLUORIDE.

Conditions to Avoid Polymerization:WILL NOT OCCUR.

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

Toxicological Information:SHORT DURATION OF VAPOR SPRAY PRODUCED VERY SLIGHT EYE IRRITATION. ANIMAL TESTING INDICATES MATERIAL IS SLIGHT

SKIN IRRITANT BUT NOT SKIN SENSITIZER. INHALATION: 4 HR, ALC, RAT: 567000 PPM. SINGLE EXPOSURE CAUSED CARDIAC SENSITIZATION, A POTENTIALLY FATAL DISTURBANCE OF HEART RHYTHM ASSOCIATED WITH HEIGHTENED SENSITIVITY TO ACTION OF EPINEPHRINE. LOWEST OBSERVED ADVERSE EFFECT LEVEL FOR CARDIAC SENSITIZATION: 75000 PPM. SINGLE EXPOSURE CAUSED LETHARGY, NARCOSIS, INCREASED RESPIRATORY RATES (TEMPORARY EFFECTS). SINGLE DOSE TO NEAR LETHAL DOSE: PULMONARY EDEMA. CONTINUED IN OTHER INFORMATION FILE LD.

===== Ecological Information =====

Ecological:AQUATIC TOXICITY: 48 HR EC50 - DAPHNIA MAGNA: 980 MG/L; 96 HR LC50 - RAINBOW TROUT: 450 MG/L.

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

Waste Disposal Methods:CONTAMINATED HFC-134A CAN BE RECOVERED BY DISTILLATION OR REMOVED TO A PERMITTED WASTE DISPOSAL FACILITY. COMPLY WITH FEDERAL, STATE, AND LOCAL REGULATIONS.

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

Transport Information:DOT INFORMATION: 1,1,1,2-TETRAFLUOROETHANE, 2.2, UN NO 3159, NONFLAMMABLE GAS LABEL.

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

SARA Title III Information:SARA SECTION 311/312 CLASSES: ACUTE, CHRONIC, PRESSURE. NOT ON SARA EHS, CERCLA HAZARDOUS SUBSTANCE, SARA TOXIC CHEMICAL LISTS.

Federal Regulatory Information:INCLUDED IN TSCA INVENTORY.

State Regulatory Informatio

n:NOT PROVIDED

===== Other Information =====

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