

DU PONT E I DE NEMOURS & CO CHEMICALS & PIGMENTS -- FREON 14/FREON 23 SPECIALTY  
FLUOROCARBON (1 -- 4935-00-930-3892

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

Product ID:FREON 14/FREON 23 SPECIALTY FLUOROCARBON (1

MSDS Date:05/01/1989

FSC:4935

NIIN:00-930-3892

MSDS Number: BQXVG

=== Responsible Party ===

Company Name:DU PONT E I DE NEMOURS & CO CHEMICALS & PIGMENTS

Address:1007 MARKET ST

City:WILMINGTON

S

tate:DE

ZIP:19898

Country:US

Info Phone Num:302-695-0756

Emergency Phone Num:800-441-7515,800-424-9300(CHEMTREC)

Preparer's Name:K.P.BROWN

CAGE:0BA38

=== Contractor Identification ===

Company Name:DU PONT E I DE NEMOURS AND CO INC CHEM

Address:DELLE DONNE CORPORATE CTR

City:WILMINGTON

State:DE

ZIP:19880-0800

Country:US

Phone:800-441-7515

CAGE:0BA38

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:800-44

1-7515

CAGE:23037

Company Name:GOODMAN BALL INC

Address:3639 HAVEN AVE

Box:City:MENLO PARK AVE

State:CA

ZIP:94025-1009

Country:US

Phone:415-363-0113

CAGE:62502

Company Name:PACIFIC SCIENTIFIC CO HTL/KIN-TECH DIVISION

Address:1800 HIGHLAND AVE

Box:City:DUARTE

State:CA

ZIP:91010

Country:US

Phone:818-359-9317/602-796-1100

CAGE:05167

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

EC Limits:NONE RECOMMENDED

Ingred Name:TETRAFLUOROMETHANE (FREON 14)

CAS:75-73-0

RTECS #:FG4920000

Fraction by Wt: 16%

Other REC Limits:NONE RECOMMENDED

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

LD50 LC50 Mixture:NONE SPECIFIED BY MANUFACTURER.

Routes of Entry: Inhalation:YES Skin:YES Ingestion:NO

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

Health Hazards Acute and Chronic:EYES AND SKIN: LIQUID CONTACT MAY CAUSE FROSTBITE. INHALATION: HIGH CONCENTRATIONS OF VAPOR IS

HARMFUL AND MAY CAUSE HEART IRREGULARITIES, ALTERATION OF THE HEART'S ELECTRICAL ACTIVITY, CNS DEPRESSION , UNCONSCIOUSNESS, AND DEATH. INTENTIONAL MISUSE CAN BE FATAL. INGESTION: NOT CONSIDERED A POTENTIAL ROUTE OR EXPOSURE.

Effects of Overexposure:EYES AND SKIN: IRRITATION, FROSTBITE.

INHALATION: HEART IRREGULARITIES, ALTERATION OF HEART'S ELECTRICAL ACTIVITY, CNS DEPRESSION, DIZZINESS, HEADACHE, CONFUSION, INCOORDINATION, UNCONSCIOUSNESS, IRREGULAR

PULSE, PALPITATIONS,

INADEQUATE CIRCULATION, DEATH. INGESTION: NOT CONSIDERED A POTENTIAL ROUTE OF EXPOSURE.

Medical Cond Aggravated by Exposure:INDIVIDUALS WITH PRE-EXISTING

DISEASES OF THE CENTRAL NERVOUS OR CARDIOVASCULAR SYSTEM MAY HAVE INCREASED SUSCEPTIBILITY TO THE TOXICITY OF EXCESSIVE EXPOSURES.

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

First Aid:EYES: FLUSH WITH LARGE AMOUNTS OF WATER. GET MEDICAL ATTENTION. SKIN: REMOVE CONTAMINATED CLOTHES.

FLUSH AREA WITH

LARGE AMOUNTS OF WATER. TREAT FOR FROSTBITE IF NECESSARY.

INHALATION: MOVE TO FRESH AIR. IF NOT BREATHING GIVE CPR. IF BREATHING DIFFICULT GIVE OXYGEN. GET MEDICAL ATTENTION. INGESTION: INGESTION IS NOT CONSIDERED A POTENTIAL ROUTE OF EXPOSURE.

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

Flash Point:NONFLAMMABLE

Extinguishing Media:USE MEDIA APPROPRIATE FOR COMBUSTIBLES IN AREA.

Fire Fighting Procedures:USE WATER SPRAY OR FOG TO

COOL FIRE EXPOSED  
CONTAINERS. SELF-CONTAINED BREATHING APPARATUS IS REQUIRED IF  
CYLINDERS RUPTURE OR RELEASE UNDER FIRE CONDITIONS.  
Unusual Fire/Explosion Hazard:CYLINDERS ARE EQUIPED WITH PRESSURE AND  
TEMPERATURE RELIEF DEVICES, BUT STILL MAY RUPTURE UNDER FIRE  
CONDITIONS.

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

Spill Release Procedures:VENTILATE AREA, ESPECIALLY LOW PLACES WHERE  
HEAVY VAPORS MIGHT COLLECT. REMOVE OPEN FLAMES. WEAR SELF-CONTAIN  
ED  
BREATHING APPARATUS (SCBA) FOR LARGE SPILLS.  
Neutralizing Agent:NONE SPECIFIED BY MANUFACTURER.

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

Handling and Storage Precautions:STORE IN A CLEAN, DRY AREA AWAY FROM  
FLAMES AND HEAT ABOVE 125F.  
Other Precautions:NONE SPECIFIED BY MANUFACTURER.

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

Respiratory Protection:NONE REQUIRED UNDER NORMAL CONDITIONS OF USE.  
SELF-CONTAINED BREATHING APPARAT  
US (SCBA) IS REQUIRED IF A LARGE  
SPILL OR RELEASE OCCURS.  
Ventilation:NORMAL VENTILATION ADEQUATE FOR STANDARD PROCEDURES.LOCAL  
EXHAUST WHEN LARGE AMOUNTS RELEASED.MECNANICAL FOR LOW PLACES.  
Protective Gloves:LINED LEATHER GLOVES IF SKIN CONTACT.  
Eye Protection:SPLASH GOGGLES IF CONTACT IS POSSIBLE.  
Other Protective Equipment:NONE SPECIFIED BY MANUFACTURER.  
Work Hygienic Practices:WASH AFTER HANDLING AND BEFORE EATING,  
DRINKING, OR SMOKING. LAUNDER CONTAMINATED CLOTHING BEFORE REUSE.

Supplemental Safety and Health

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

HCC:G3  
Boiling Pt:B.P. Text:-146F,-99C  
Decomp Temp:Decomp Text:>1409F,>765  
Vapor Pres:119PSIA  
Vapor Density:2.52  
Spec Gravity:1.413  
Evaporation Rate & Reference:>1 (CCL4=1)  
Solubility in Water:0.08 % BY WT.  
Appearance and Odor:COLORLESS GAS. SLIGHT ETHEREAL ODOR.  
Percent Volatiles by Volume:100

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

Stability Indicator/Materia

Is to Avoid: YES

ALKALI OR ALKALINE EARTH METALS-POWDERED ALUMINUM, ZINC, BERYLLIUM, ETC.

Stability Condition to Avoid: AVOID OPEN FLAMES AND HIGH TEMPERATURES.

Hazardous Decomposition Products: THIS PRODUCT CAN BE DECOMPOSED BY HIGH TEMPERATURES, OPEN FLAMES FORMING HYDROFLUORIC ACID AND POSSIBLY CARBONYL HALIDES.

Conditions to Avoid Polymerization: WILL NOT OCCUR.

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

Waste Disposal Methods: DISPOSE OF WASTE IN ACCORDANCE WITH LOCAL, STATE

AND FEDERAL REGULATIONS. RECLAIM BY DISTILLATION OR VENT TO ATMOSPHERE.

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