

DUPONT -- FREON 502 REFRIGERANT -- 6830-00-144-9952

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

Product ID:FREON 502 REFRIGERANT

MSDS Date:10/05/1996

FSC:6830

NIIN:00-144-9952

Status Code:A

MSDS Number: CLBTT

==== Responsible Party ===

Company Name:DUPONT

Address:1007 MARKET STREET

City:WILMINGTON

State:DE

ZIP:19898

Country:US

Info Phone Num:800-441-9442

Emergency Phone Num:8004413637

Chemtrec Ind/Phone:(80

0)424-9300

CAGE:18873

==== Contractor Identification ===

Company Name:E.I. DUPONT DE NEMOURS & CO

Address:1007 MARKET STREET

Box:City:WILMINGTON

State:DE

ZIP:19898

Country:US

Phone:800-441-7515;800-441-9442

CAGE:18873

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

Ingred Name:CHLOROPERFLUOROETHANE

CAS:76-15-3

RTECS #:KH7877500

= Wt:51.2

Other REC Limits:TLV 8 HR, TWA

ACGIH TLV:1000 PPM 6,320 MG/M3

Ozone Depleting Chemical:1

Ingred Name:CHLORODIFLUOROMETHANE

CAS:75-45-6

RT

ECS #:PA6390000

= Wt:48.8

ACGIH TLV:3540 MG/M3;1000 PPM

Ozone Depleting Chemical:2

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

Health Hazards Acute and Chronic:INHALATION OF HIGH CONCENTRATIONS OF VAPOR IS HARMFUL AND MAY CAUSES HEART IRREGULARITIES, UNCONSCIOUSNESS, OR DEATH. INTENTIONAL MISUSE OR DELIBERATE INHALATION CAN CAUSE DEATH WITHOUT WARNING. VAPOR REDUCES OXYGEN AVAILABLE FOR BREATHING AND IS HEAVIER THAN AIR. LIQUID CONTACT CAN CAUSE FRO

STBIGHT.

Explanation of Carcinogenicity: NONE OF THE COMPOUNETS PRESENT IN THIS MATERIAL AT CONCENTRATIONS EQUAL TO OR GREATER THAN 0.1% ARE LISTED BY IARC, NTP, OSHA OR ACGIH AS A CARCINOGEN.

Effects of Overexposure: OVEREXPOSURE TO VAPORS BY INHALATION MAY INCLUDE TEMPORARY NERVOUS SYSTEM DEPRESSION WITH ANAESTHETIC EFFECTS SUCH AS DIZZINESS, HEADACHE, CONFUSION, INCOORDINATION, AND LOSS OF CONSCIOUSNESS. HIGHER INHALATION EXPOSURES TO THE VAPORS MAY CAUSE TEMPORARY ALTE

RATION OF THE HEART'S ELECTRICAL ACTIVITY WITH IRREGULAR PULSE, PALPITATIONS, OR INADEQUATE CIRCULATION. FATALITY FROM GROSS OVEREXPOSURE MAY OCCUR. SKIN CONTACT WITH THE LIQUID MAY CAUSE FROSTBIGHT.

Medical Cond Aggravated by Exposure: INDIVIDUALS WITH PREEXISTING DISEASES OF THE CENTRAL NERVOUS SYSTEM, CARDIOVASCULAR SYSTEM, LUNGS OR KIDNEYS MAY HAVE INCREASED SUSCEPTIBILITY TO THE TOXICITY TO EXCESSIVE EXPOSURES.

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

First Aid: INHALATION: IF LARGE AMOUNTS ARE INHALED, IMMEDIATELY REMOVE TO FRESH AIR. KEEP PERSONS CALM. IF NOT BREATHING, GIVE ARTIFICIAL RESPIRATION. IF BREATHING IS DIFFICULT, GIVE OXYGEN AND CALL PHYSICIAN. SKIN CONTACT: IN CASE OF SKIN CONTACT, FLUSH WITH WATER FOR 15 MINUTES. TREAT FOR FROST BIGHT IF NECESSARY. BY GENTLY WARMING AFFECTED AREA. EYE CONTACT: IN CASE OF EYE CONTACT, IMMEDIATELY FLUSH EYES WITH PLENTY OF WATER FOR 15 MINUTES. CALL A PHYS

ICIAN. INGESTION; INGETTION IS NOT CONCIDERED A POTENTIAL ROUE OF EXPOSURE.

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

Flash Point:NONFLAMMABLE

Autoignition Temp:=704.C, 1299.2F

Autoignition Temp Text:704C

Extinguishing Media:AS APPROPRIATE FOR CUMBUSTIBLE IN AREA.

Fire Fighting Procedures:KEEP CONTAINER COOL WITH WATER SPRAY. SCBA IS REQUIRED IF CYLINDERS RUPTURE OR RELEASE UNDER FIRE CONDITIONS.

Unusual Fire/Explosion Hazard:CYLINDERS ARE EQUIPPED WITH TEMPERATURE

AND PRESSURE RELIEF DEVICES BUT STILL MAY RUPTURE UNDER FIRE CONDITIONS. DECOMPOSITION MAY OCCUR.

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

Spill Release Procedures:NOTE: REVIEW FIREFIGHTING MEASURES AND HANDLING (PERSONELL) SECTIONS BEFORE PRECEEDIG WITH CLEANUP. USE APPROPRIATE PERSONAL PROTECTIVE EQUIPMENT DURING CLEANUP. ACCIDENTAL RELEASE MEASURES; VENTELATE AREA-ESPECIALLY LOW PLACES WHERE HEABVY VAPORS MIGHT COLLECT. REMOVE OPEN FLAMES. USE SCBA FOR LARGE SPILLS. COMPLY WITH FEDERAL, STATE, AND LOCAL REGULATIONS FOR REPORTING RELEASES.

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

Handling and Storage Precautions:HANDLING (PERSONELL) AVOID BREATHING VAPORS. AVOID LIQUID CONTACT WITH SKIN OR EYES. USE WITH SUFFICIENT VENTELATION TO KEEP EMPLOYEE EXPOSURE BELOW RECCOMENDED LIMITS. STORAGE: CLEAN, DRY AREA. DO NOT HEAT ABOVE 50 DEGREES CELSEUS (125F)

Other Precautions:\*NOT E TO PHYSICIAN: BECAUSE OF POSSIBLE DISTERBANCE OF CARDIAC RHYTHM, CATEHOLAMINE DRUGS, SUCH AS EPINEPHRINE, SHOULD BE USED WITH SPECIAL CAUTION ONLY IN SITUATIONS OF EMERGENCY LIFE SUPPORT.

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

Respiratory Protection:NO RESPIRATORY PROTECTION IS REQUIRED WHEN USING THIS PRODUCT. SCBA IS REQUIRED IF A SPILL OR RELEASE OCCURS.

Ventilation:USE WITH SUFFICIENT VENTELATION TO KEEP EMPLOYEE EXPOSURE BELOW FRCCOMENDE

D EXPOSURE LIMITS. LOCAL EXHAUST SHOULD BE USED

WHEN LARGE ABOUNTS ARE RELEASED.

Protective Gloves:IMPRERVERIOUS GLOVE

Eye Protection:CHEMICAL SPLASH GOGGLES

Supplemental Safety and Health

MECHANICAL VENTELATION SHOULD BE USED IN LOW OR ENCLOSED PLACES.

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

Boiling Pt:=-45.4C, -49.7F

B.P. Text:-45.4C

Vapor Pres:169PSIA @25DG C. (77F)

Vapor Density:3.92@25C (

Evaporation Rate & Reference:>1(CC14=1)

Solubility in Water:0.15WE

IGHT %@25C (77F)

Appearance and Odor:SLIGHLY ETHEREAL

Percent Volatiles by Volume:100 WEIGHT %

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

Stability Indicator/Materials to Avoid:YES

ALKALINE EARTH METALS. POWEERED AL, ZN, BE, ETC.

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

Hazardous Decomposition Products:FORMING HYDROCHLORIC AND HYDROFLUORIC ACID, AND POSSIBLY CARBONYL HALIDES.

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

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Toxicological Information:ANIMAL DATA "FREON" 115 INHALATION 4 HR LC50:

>800,000PPM IN RATS. ORAL ALD: 1,200MG/KG IN RATS. THE EFFCTS OF A SINGLE INHALATION EXPOSURE AT HIGH CONCENTRATIONS ICLUE RAPID RESPIRATION AND INACTIVIT Y. REPEATEDF EXPOSURE AT LOWER LEVELS PRODUCED NO SIGNS OF TOXICITY. EXPOSURE TO 150,000 PPM WITH SIMULTANEOUS EPINEPHRINE CHALLENGE PRODUCED CARDIAC ARRHYTHMIA IN DOG.. THE RFFECTS OF REPEATED INGEST ION INCLUDE MILD DIARHEA, SALIVATION

, ANDF INCREASED ACTIVITY. NO ANIMAL TEST REPORTS ARE AVAILABLE TO DEFINE CARCINOGENIC DEVELOPMENTAL OR REPRODUCTIVE HAZARDS. \*\*

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

Ecological:AQUATIC TOXICITY: "FREON" 22 48 HR EC50-DAPHINA MAGNA:

443MG/L

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

Waste Disposal Methods:COMPLY WITH FEDERAL, STATE, AND LOCAL REGULATIONS. REMOVE TO A PERMITTED WASTE DISPOSAL FACILITY OR RECLAIM BY DI

STILATION.

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

Transport Information: SHIPPING INFORMATION, DOT/IMO PROPPER SHIPPING

NAME: CHLORODIFLUOROMETHANE AND CHLOROPENTAFLUOROETHANE MIXTURE.  
HAZARD CLASS 2.2 DOT/IMO LABEL, NONFLAMMABLE GAS. SHIPING  
CONTAINERS CYLINDER TON TANKS.

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

SARA Title III Information: TITLE III HAVARD CLASSIFICATIONS: SECTIONS

311, 312. ACUTW YES, CHRONIC, NO. FIRE  
, NO. REACTIVITY, NO.

PRESSURE, YES. HAZARDOUS CHEMICAL LISTS: SARA EXTREMELY HAZARDOUS  
SUBSTANCE: NO. CERCLA HAZARDOUS SUBSTANCE; NO. SARA TOXIC  
CHEMICAL, SEE COMPONENET SECTION.

Federal Regulatory Information: TSCA INVINTORY STATUS:

REPORTED/INCLUDED.

State Regulatory Information:

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

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