

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 CAUES 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 FROSTBIGHT.

Explanation of Carcinogenicity:NONE OF THE COMPONENTS 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 ICLUDE 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 ALTERATION

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: I CASE OF EYE CONTACT, IMMEDIATELY FLUSH EYES WITH PLENTY OF WATER FOR 15 INUTES. 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 TEMPE
RATURE

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-ESPECIALLLY LOW
PLACES WHERE HEABVY VAPORS MIGHT COLLECT. REMOVE OPE

N 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 NO T HEAT ABOVE 50 DEGREES CELSEUS
(125F)

Other Precautions:*NOT

E TO PHYSICIAN: BECAUSE OF POSSIBLE DISTERBANCE

OF CARDIAC RHYTHEM, 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 AMOUNTS ARE RELEASED.

Protective Gloves:IMPERVIOUS GLOVE

Eye Protection:CHEMICAL SPLASH GOGGLES

Supplemental Safety and Health

MECHANICAL VENTILATION 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

WGT %@25C (77F)

Appearance and Odor:SLIGHTLY ETHEREAL

Percent Volatiles by Volume:100 WEIGHT %

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

Stability Indicator/Materials to Avoid:YES

ALKALINE EARTH METALS. POWDERED 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 LD: 1,200MG/KG IN RATS. THE EFFECTS OF A
SINGLE INHALATION EXPOSURE AT HIGH CONCENTRATIONS INCLUDE RAPID
RESPIRATION AND INACTIVITY. REPEATED EXPOSURE AT LOWER LEVELS
PRODUCED NO SIGNS OF TOXICITY. EXPOSURE TO 150,000 PPM WITH
SIMULTANEOUS EPINEPHRINE CHALLENGE PRODUCED CARDIAC ARRHYTHMIA IN
DOG.. THE EFFECTS OF REPEATED INGESTION INCLUDE MILD DIARRHEA,
SALIVATION
, AND 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-DAPHNIA 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 COMPONENT SECTION.

Federal Regulatory Information:TSCA INVINTORY STATUS:
REPORTED/INCLUDED.

State Regulatory Information:

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

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