

E I DUPONT DE NEMOURS & CO, FREON PROD -- FREON TF CLEANING AGENT FREON PRECISION  
CLEANING AGENT -- 6850-00-167-4701

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Product Identification  
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Product ID:FREON TF CLEANING AGENT FREON PRECISION CLEANING AGENT

MSDS Date:11/23/1995

FSC:6850

NIIN:00-167-4701

MSDS Number: CCHQW

=== Responsible Party ===

Company Name:E I DUPONT DE NEMOURS & CO, FREON PROD

Address:1007 MARKET ST

City:WILMINGTO

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State:DE

ZIP:19899

Country:US

Info Phone Num:800-441-9442/800-424-9300(CHEMTREC)

Emergency Phone Num:800-441-3637/800-424-9300(CHEMTREC)

CAGE:5P414

=== Contractor Identification ===

Company Name:E I DUPONT DE NEMOURS & CO, FREON PROD (REPLACED BY 73925)

Address:1007 MARKET ST

Box:City:WILMINGTON

State:DE

ZIP:19899

Country:US

Phone:800-441-3637-MED 800-424-9300-TRAN

CAGE:5P414

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Composition/Information on Ingredients  
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Ingred Name:1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHAN

E (FREON 113) (SARA

313)

CAS:76-13-1

RTECS #:KJ4000000

Fraction by Wt: 100%

Other REC Limits:NONE SPECIFIED

OSHA PEL:1000 PPM

ACGIH TLV:1000PPM/1250STEL; 96

Ozone Depleting Chemical:1

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Hazards Identification  
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LD50 LC50 Mixture:LD 50 ORAL RAT 43000 MG/KG

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

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

Health Hazards Acute and Chronic:INHALATION OR INGESTION MAY CAUSE  
TEMPORARY NERVOUS

SYSTEM DEPRESSION; HIGHER CONCENTRATIONS MAY ALTER HEART ELECTRICAL ACTIVITY. SKIN & EYE CONTACT MAY CAUSE MILD IRRITATION. INGESTION HAZARD IS PRIMARILY ASPIRATION. CHRONIC: PROLONGED SKIN CONTACT MAY CAUSE TINGLING OR NUMBNESS.

Explanation of Carcinogenicity:FREON 113 IS NOT LISTED AS A CARCINOGEN BY IARC, NTP OR OSHA.

Effects of Overexposure:EYES: MILD IRRITATION, TEARING, BLURRED VISION. SKIN: MILD IRRITATION, DRYNESS. INHALATION/INGESTION: TEMPORARY NERVOUS SYSTEM

DEPRESSION, DIZZINESS, HEADACHE, CONFUSION, INCOORDINATION, LOSS OF CONSCIOUSNESS. ASPIRATION: COUGHING, GASPING, CHOKING, SHORTNESS OF BREATH.

Medical Cond Aggravated by Exposure:SKIN DISEASE - FREON 113 IS A DEFATTING AGENT AND CAN CAUSE DERMATITIS ON PROLONGED EXPOSURE. PERSONS WITH PRE- EXISTING SKIN DISORDERS MAY BE MORE SUSCEPTIBLE TO THE EFFECTS OF THIS AGENT.

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

First Aid:INHALATION-REMOVE TO FRESH AIR, CALL A PHYSICIAN. IF NOT BREATHING, GIVE ARTIFICIAL RESPIRATION. IF BREATHING IS DIFFICULT, GIVE OXYGEN. EYE/SKIN-FLUSH WITH WATER FOR 15 MINUTES. IF IRRITATION PERSISTS, GET MEDICAL ATTENTION. INGESTED-GET MEDICAL ATTENTION. DO NOT INDUCE VOMITING AS THE HAZARD OF ASPIRATING INTO THE LUNGS IS TOO GREAT.

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

Flash Point:NONE  
Lower Limits:NONE  
Upper Limits:NONE  
Extinguishing Media:NON-FLAMMABLE. USE EXTINGUISHING MEDIA APPROPRIATE FOR SURROUNDING FIRE.  
Fire Fighting Procedures:WEAR FIRE FIGHTING PROTECTIVE EQUIPMENT AND A FULL FACED SELF CONTAINED BREATHING APPARATUS. COOL FIRE EXPOSED CONTAINERS WITH WATER SPRAY.  
Unusual Fire/Explosion Hazard:DRUMS MAY RUPTURE UNDER FIRE CONDITIONS. DECOMPOSITION MAY OCCUR.

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

Spill Release Procedures:USE SCBA FOR LARGE SPILLS. VENTILATE AREA. DO NOT FLUSH TO SEWERS. DIKE SPILL

S. COLLECT ON ABSORBENT MATERIAL &  
TRANSFER TO STEEL DRUMS FOR RECOVERY OR DISPOSAL. COMPLY WITH  
FEDERAL, STATE AND LOCAL REGULATIONS ON REPORTING RELEASES.  
Neutralizing Agent:NONE SPECIFIED BY MANUFACTURER.

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Handling and Storage  
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Handling and Storage Precautions:STORE IN A CLEAN, COOL, DRY AND  
WELL-VENTILATED AREA. DO NOT HEAT ABOVE 125F.  
Other Precautions:AVOID BREATHING VAPOR AND PROLONGED SKIN EXPOSURE. USE  
WITH SUFFICIENT VENTILATION TO KEEP EMPLOYEE EXPOSURE BELOW  
RECOMMENDED LIMITS.

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Exposure Controls/Personal Protection  
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Respiratory Protection:NONE NORMALLY REQUIRED. IF ENGINEERING CONTROLS  
FAIL OR NON-ROUTINE USE OR AN EMERGENCY OCCURS; WEAR AN MSHA/NIOSH  
APPROVED AIR-SUPPLIED RESPIRATOR OR SCBA, AS REQUIRED. USE IAW 29  
CFR 1910.134.

Ventilation:USE ADEQUATE MECHANICAL VENTILATION OR LOCAL EXHAUST TO  
MAINTAIN EXPOSURE BELOW TLV(S).

Protective Gloves:IMPERVIOUS-BUTYL RUBBER, PVA OR NEOPRENE

Eye Protection:CHEMICAL SPLASH GOGGLES W/FACESHIELD.

Other Protective Equipment:NONE SPECIFIED BY MANUFACTURER. DLA-HMIS:  
EYE WASH STATION & SAFETY SHOWER.

Work Hygienic Practices:WASH HANDS AFTER HANDLING AND BEFORE EATING,  
DRINKING, OR SMOKING. LAUNDER CONTAMINATED CLOTHES BEFORE REUSE.

Supplemental Safety and Health

NOTE TO PHYSICIAN: ACTIVATED CHARCOAL SLURRY MAY BE ADMINISTERED, 5  
ML/KG OR 350 ML FOR AN ADULT. BECAUSE OF RISK OF CARDIAC  
DYSRHYTHMIAS

, CATECHOLAMINE DRUGS SHOULD BE USED WITH SPECIAL  
CAUTION. BECAUSE OF DANGER OF ASPIRATION, GASTRIC LAVAGE SHOULD  
NOT BE USED UNLESS THE RISK IS JUSTIFIED.

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Physical/Chemical Properties  
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HCC:T6

Boiling Pt:B.P. Text:118F,48C

Melt/Freeze Pt:M.P/F.P Text:31.0F,-0.6C

Decomp Temp:Decomp Text:572F,300C

Vapor Pres:334 @ 77F

Vapor Density:2.9

Spec Gravity:1.574

pH:7

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

Solubility in Water:NEGLIGIBLE (0.02%)

Appe

Appearance and Odor: CLEAR COLORLESS LIQUID. SLIGHT ETHEREAL ODOR.  
Percent Volatiles by Volume: 100

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

Stability Indicator/Materials to Avoid: YES

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

Stability Condition to Avoid: MATERIAL IS STABLE; HOWEVER, AVOID HIGH  
HEAT, OPEN FLAMES AND OTHER SOURCES OF IGNITION

Hazardous Decomposition Products: HYDROCHLORIC AND HYDROFLUORIC ACIDS,  
POSSIBLY CARBONYL HAL  
IDES.

Conditions to Avoid Polymerization: POLYMERIZATION WILL NOT OCCUR.

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

Waste Disposal Methods: COMPLY WITH FEDERAL, STATE AND LOCAL  
REGULATIONS. REMOVE TO A PERMITTED WASTE DISPOSAL FACILITY. EPA  
HAZARDOUS WASTES NOS. F001 AND F002 MAY APPLY TO WASTE MATERIALS.

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