

92-012

MATERIAL SAFETY DATA SHEET

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TEKTRONIX PN 252-0120-00

HMS CODES: H F R P
1 0 0 0

PRODUCT CODE: 92-012
PRODUCT NAME: DIELECTRIC FLUID F-114
TYPE OF PRODUCT: CHLOROFLUOROCARBON
DOT CLASS: AEROSOLS, 2.2, UN 1950, LIMITED QUANTITY
SECTION I - MANUFACTURER'S IDENTIFICATION

MANUFACTURED BY : RUDD COMPANY, INC.
1630 15th AVE. W., SEATTLE, WA., 98119
INFORMATION PHONE: 206-264-5400 24 HOUR EMERGENCY PHONE:
(SPILL, LEAK, FIRE, ACCIDENT)
CALL CHEMTREC 1-800-424-9300

DATE PREPARED/REVISED: 07/26/1993 NAME OF PREPARER: RUDD COMPANY, INC.
REASON REVISED: CHANGED DOT CLASS, SECTION III, SECTION IV.

SECTION IIA - HAZARDOUS INGREDIENTS/IDENTITY INFORMATION

CAS NUMBER DESCRIPTION	WEIGHT PERCENT	OCCUPATIONAL EXPOSURE LIMITS			VAPOR PRESSURE mm HG @
		OSHA PEL	ACGIH TLV	OTHER	
00876-14-2 DICHLOROTETRAFLUOROETHANE	100	1000 ppm	1000 ppm	7000 mg/m3	1821 @

*PELs represent lowered 1988 limits and may not be enforceable by Federal OSHA.

SECTION IIB - OTHER REGULATORY INFORMATION

CAS NUMBER DESCRIPTION	CARCINOGEN		SARA TITLE III		CALIFORNIA	
	NTP	IARC OSHA	302	313	PE5	I II
00876-14-2 DICHLOROTETRAFLUOROETHANE					X	X

SECTION III - PHYSICAL/CHEMICAL CHARACTERISTICS

BOILING RANGE: 38 to 38 DEG F. WT/GAL: 12.23 (WITH PROP: 12.23)
VAPOR DENSITY: HEAVIER THAN AIR EVAPORATION RATE: FASTER THAN
CALCULATED V.O.C.: .00LB/GL (0GR/LT) (n-Butyl acetate-MEDIAN)
SOLUBILITY IN WATER: NON-SOLUBLE
APPEARANCE AND ODOR:
CLEAR COLORLESS LIQUID, SLIGHT ETHEREAL ODOR.

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

OSHA FLAMMABILITY CLASS: N/A

BULK PRODUCT FLASH POINT: N/A DEG F.
BULK PROPELLANT FLASH POINT: N/A DEG F.
PACKAGED PRODUCT FLAME EXTENSION: 00

METHOD USED: N/A

FLAMMABLE LIMITS IN AIR BY VOLUME: - LOWER: UPPER:

EXTINGUISHING MEDIA:
FOAM, CO2, DRY CHEMICAL, WATER FOG

SPECIAL FIREFIGHTING PROCEDURES: Evacuate all unnecessary personnel. Use full protective equipment, including self-contained breathing apparatus. Use water spray, preferably fog, to cool closed containers to prevent pressure build-up and possible explosion. Do not allow product or runoff from fire control to enter storm or sanitary sewers, lakes, rivers, streams, or waterways.

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UNUSUAL FIRE AND EXPLOSION HAZARDS: Contents under pressure. Exposure to heat or prolonged exposure to sun may cause bursting.

----- SECTION V - REACTIVITY DATA -----

HAZARDOUS DECOMPOSITION PRODUCTS: At high temperatures may form hydrochloric and hydrofluoric acids.

INCOMPATIBILITY (MATERIALS TO AVOID): Alkaline earth metals, powdered aluminum and zinc.

STABILITY: Stable.

HAZARDOUS POLYMERIZATION: Will not occur.

CONDITIONS TO AVOID: High temperature and humidity, ignition source, vapor build-up.

----- SECTION VI - HEALTH HAZARD DATA -----

PRIMARY ROUTE(s) OF EXPOSURE: Inhalation, skin contact.

ACUTE EFFECTS FROM SHORT TERM EXPOSURE:

May cause headache, dizziness, nausea, weakness, shortness of breath, loss of coordination and irregular heartbeat. Exposure to extremely high vapor concentrations may cause unconsciousness and asphyxiation. Intentional misuse by deliberately concentrating and inhaling the contents may be harmful or fatal.

EYES: Contact with liquid or vapors causes irritation (redness, watering, itching, stinging, blurred vision).

SKIN: Contact causes irritation (dryness, itching, cracking, rash and swelling).

Direct contact with propellant may cause frostbite.

SKIN ABSORPTION: None known.

CHRONIC EFFECTS FROM LONG TERM/REPEATED EXPOSURE: Long-term or repeated overexposure, without proper ventilation or personal protection, may cause damage to:

OTHER: N/A

CARCINOGEN DATA: N/A

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE: Respiratory tract irritation; nausea; skin and eye disorders; sensitization to chemical substances.

----- SECTION VII - EMERGENCY AND FIRST AID PROCEDURES -----

SWALLOWING: In case of accidental ingestion, call Poison Center, Emergency Room or Physician immediately.

INHALATION: Remove from exposure to fresh air. If breathing is difficult, give oxygen. If breathing has stopped, give artificial respiration. Keep person warm and quiet. Get medical attention immediately.

EYE: Immediately flush with plenty of water for 15 minutes, while lifting upper and lower eyelids. Get medical attention.

SKIN: Wash with soap and water. Remove and clean contaminated clothing and shoes. Get medical attention if irritation persists.

OTHER: Have Material Safety Data Sheet available, if possible, when calling Poison Center, Emergency Room or Physician.

----- SECTION VIII - PERSONAL PROTECTION -----

RESPIRATORY PROTECTION: OUTDOORS OR OPEN AREAS: If necessary, because of wind, etc use mechanical filter respirator or particle mask to avoid breathing spray mists.

ENCLOSED OR RESTRICTED VENTILATION AREAS: Use NIOSH approved cartridge respirator to keep vapor/mist levels of hazardous ingredients (listed in Section II) below the occupational exposure limits (PEL and TLV). If exposure levels are unknown, or limits exceeded, a full facepiece air-purifying cartridge respirator is recommended. Use filters to avoid breathing spray particles. Follow respirator manufacturer's instructions for use.

VENTILATION: INDOOR OR ENCLOSED AREAS: Provide general mechanical ventilation or local exhaust to keep vapor concentrations below the PELs and TLVs in Section II and Lower Flammable Limits in Section IV.

HAND PROTECTION: When necessary, wear impermeable gloves to prevent skin contact. Consult safety equipment supplier for specific recommendation of construction material.

EYE PROTECTION: Wear safety glasses, with side shields, designed to protect eyes against liquid splash and mists. Note: Contact lenses may contribute to the severity of an eye injury and should not be worn when working with chemicals.

OTHER PROTECTIVE EQUIPMENT: When necessary, wear protective clothing to avoid skin contact with liquid and overspray.

WORK/HYGIENIC PRACTICES: Eye washes and safety showers are recommended in the workplace. Wash hands after using and before eating, drinking or using tobacco products. Thoroughly clean contaminated clothing and shoes before reuse. Periodically monitor exposure levels to hazardous ingredients listed in Section II and review permissible limits.

===== SECTION IX - SPILL OR LEAK PROCEDURES =====

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED: Eliminate ignition sources and ventilate area. Evacuate unnecessary personnel. Wear protective equipment. Dike and contain spill with inert material. Transfer liquid to containers for disposal or recovery. Prevent material from entering storm or sanitary sewers and open bodies of water.

WASTE DISPOSAL: Waste material and empty containers must be disposed of in accordance with all local, state and federal environmental control regulations. Use only approved waste management facilities.

===== SECTION X - SPECIAL PRECAUTIONS =====

HANDLING PRECAUTIONS: Use proper methods of ventilation to prevent vapor build-up. Avoid spraying hot surfaces. Avoid breathing vapors and spray mists. Avoid contact with eyes and skin. Do not take internally. Use adequate methods of ventilation, respiratory and personal protection equipment. Do not heat, puncture or incinerate containers. Contents are under pressure and may contain vapors, even when empty. Do not remove or deface label.

SHIPPING AND STORAGE PRECAUTIONS: Contents under pressure. Do not store above 120 degrees F. or permit prolonged exposure to sunlight. Protect containers from damage. Store in buildings or areas designed and protected for storage of aerosols. Keep out of reach of children.

OTHER PRECAUTIONS: For industrial use only.

===== SECTION XI - DISCLAIMER =====

DISCLAIMER: THE INFORMATION CONTAINED HEREIN HAS BEEN COMPILED FROM SOURCES CONSIDERED TO BE RELIABLE. TO THE BEST OF OUR KNOWLEDGE AND BELIEF, ALL INFORMATION IS ACCURATE AND IS PROVIDED IN GOOD FAITH. HOWEVER, NO GUARANTEE OF ACCURACY IS MADE OR IMPLIED.

