

Electro-Wash®
C80, C160, C240, C240-4

IDENTIFICATION

Name: Electro-Wash	Chemical Family: Halogenated Hydrocarbon
Synonyms: Trichlorotrifluoroethane, Freon®TF, FC-113, Trichloro- fluoromethane, R-11, Freon® 11	Formula: CCl ₂ FCClF ₂ /CCl ₃ F/CO ₂
CAS Name: 1,1,2-Trichloro-1,2,2-Tri- fluoroethane	CAS Registry No.: 76-13-1
Trichlorofluoromethane	75-69-4
Carbon Dioxide Propellant	124-38-9
Manufacturer: Chemtronics Inc. 681 Old Willets Path Hauppauge, NY 11788	Medical/Transportation Emergency Phone: 516-582-3322

PHYSICAL DATA (Propellant Free Basis)

Boiling Point (°F): 75-118	Vapor Pressure: 334mm Hg @ 77°F
Density: 1.46 g/cc @ 77°F	Solubility in H₂O: Negligible
Vapor Density (Air=1): 4.6 @ 77°F	Evaporation Rate (Ether=1): 1
pH Information: Neutral	Appearance: Clear
Form: Liquid	Odor: Faint solvent odor
Color: Colorless	
Percent Volatile by Volume: 100	

HAZARDOUS COMPONENTS

No carcinogens as per NTP, IARC or OSHA lists.

Material(s):	Approximate %:
Trichlorotrifluoroethane	20-50
Trichlorofluoromethane	50-70
Carbon Dioxide Propellant	3

HAZARDOUS REACTIVITY

Stability: Material is stable. However, avoid spraying near open flames or red hot surfaces. Do not heat aerosol containers above 49° C/120° F.

Decomposition: This compound can be decomposed by high temperatures (open flames, glowing metal surfaces, etc.) forming hydrochloric and hydrofluoric acids, possibly carbonyl halides.

Incompatibility: Alkali or alkaline earth metals—powdered Al, Zn, Be, etc.

Polymerization: Will not occur.

FIRE AND EXPLOSION DATA

Flash Point: None	Method: TOC
Autoignition Temperature: Not determined	Flammable Limits in Air, % by Vol.: Lower: Nonflammable Upper: Nonflammable

Autodecomposition Temperature: Not determined.

Fire and Explosion: Pressurized aerosol containers at elevated temperatures may vent, rupture or burst and add to flying and falling debris. Decomposition may occur.

Extinguishing Media: Nonflammable	Special Fire Fighting Instructions: Self-contained breathing apparatus (SCBA) may be required if aerosols rupture and contents are spilled under fire conditions.
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HEALTH HAZARD INFORMATION

Principal Health Hazards:

Inhalation: Vapor is heavier than air and can cause suffocation by reducing oxygen available for breathing. Breathing high concentrations of these products can cause light-headedness, giddiness, shortness of breath, and may lead to narcosis, cardiac irregularities, unconsciousness or death. Trichlorotrifluoroethane LC 50 Rats 52,000 ppm/4 hrs. Trichlorofluoromethane LC 50 Rats 26,200 ppm/4 hr.

Skin: Not a corrosive or irritant after single contact. However, repeated liquid contact can cause defatting of the skin resulting in irritation. This material is poorly absorbed through the skin (Trichlorotrifluoroethane Rabbit ALD > 11,000 mg/kg).
Eye: Liquid contact can cause discomfort, usually no extended effect.

Oral: Although oral toxicity is low (Trichlorotrifluoroethane LD 50 Rats 43,000 mg/kg; ALD for Trichlorofluoromethane is greater than 37.25 mg/kg in Rats) ingestion of Trichlorotrifluoroethane is to be avoided.

Exposure Limits:

Material:	TLV (ACGIH):	PEL (OSHA):
Trichlorotrifluoroethane	1000 ppm	1000 ppm
Trichlorofluoromethane	1000 ppm	1000 ppm
Carbon Dioxide Propellant	5000 ppm	5000 ppm

Safety Precautions: Avoid breathing vapors and prolonged skin exposure. Use only in well-ventilated area.

First Aid:

Inhalation: Remove to fresh air, call a physician. If not breathing, give artificial respiration, preferably mouth-to-mouth. If breathing is difficult, give oxygen. Do not give epinephrine or similar drugs.

Eye: Immediately flush with plenty of water for at least 15 minutes. Call a physician.

Skin: Flush with water. Get medical attention if irritation is present.

Oral: No specific intervention is indicated as the compound is not likely to be hazardous by ingestion. However, consult a physician if necessary. Do not induce vomiting as the hazard of aspirating the material into the lungs is a greater hazard than allowing it to progress through the intestinal tract.

Note to Physician: Because of possible increased risk of eliciting cardiac dysrhythmias, catecholamine drugs, such as epinephrine, should be considered only as a last resort in life threatening emergencies.

Medical Conditions Possibly Aggravated by Exposure:
Cardiovascular Disease: See Principal Health Hazards, Inhalation Section.

Other Health Hazards:

Electro-Wash is not listed as a carcinogen by IARC, NTP or OSHA. Based on animal studies and human experiences, this mixture poses no hazard to man relative to systemic toxicity, carcinogenicity, mutagenicity or teratogenicity when occupational exposures are below its recommended TLV.

PROTECTION INFORMATION

Generally Applicable Control Measures: Normal ventilation for standard manufacturing procedures is generally adequate. Local exhaust should be used when large amounts are released. Mechanical ventilation should be used in low places.

Personal Protective Equipment: Butyl gloves should be used to avoid prolonged or repeated exposure. Chemical splash goggles should be available for use as needed to prevent eye contact. Under normal manufacturing conditions no respiratory protection is required when using this product. Self-contained breathing apparatus is required if a large spill occurs. Do not spray liquid on skin.

DISPOSAL INFORMATION

Spill, Leak or Release: Ventilate area. Remove open flames or red hot surfaces. Allow to evaporate.

Waste Disposal: Allow to evaporate. Do not puncture or incinerate aerosol cans. Comply with federal, state and local regulations.

SHIPPING INFORMATION

Domestic—Other Than Air (DOT):

Proper Shipping Name: Consumer Commodity

Hazard Class: ORM-D

UN No.:

DOT Label:

DOT Placard:

International Water or Air (IMO/ICAO):

Proper Shipping Name: Aerosol, nonflammable, NOS

Hazard Class: 2

UN No.: 1950

IMO/ICAO Label: Aerosol, nonflammable gas, contains CO₂

OTHER INFORMATION

Shipping Containers: Aerosol Cans

Storage Conditions: Do not store near sources of heat, in direct sunlight or where temperatures exceed 120° F. Do not puncture or damage containers. Rotate stock.

Date Revised: 6/87

Person Responsible: S.H. Stein, Ph.D.



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