

JUL 16 1993

**Kontakt Clean™**  
C87, C167, C247**IDENTIFICATION**

<b>Name:</b> Kontakt Clean	<b>Chemical Family:</b> Halogenated Hydrocarbon
<b>CAS Registry No.:</b> Mixture	<b>Formula:</b> CCl <sub>2</sub> FCCLF <sub>2</sub> /CCl <sub>3</sub> F/CO <sub>2</sub>
<b>Manufacturer:</b> Chemtronics, Inc. 8125 Cobb Center Drive Kennesaw, GA 30144	<b>Medical/Transportation Emergency Phone:</b> 1-800-424-9300 (Chemtreco) (404) 424-4888 (404) 424-4267 (Fax)

**PHYSICAL DATA**

<b>Boiling Point:</b> 75-118°F	<b>Melting Point:</b> N/A
<b>Vapor Pressure:</b> 334 mm Hg @ 77°F	<b>Evaporation Rate</b> >1 (Butyl acetate=1):
<b>Vapor Density (Air=1):</b> 4.6 @ 77°F	<b>Appearance:</b> Clear
<b>Solubility in Water:</b> Negligible	<b>Form:</b> Liquid
<b>Specific Gravity (Water=1):</b> 1.46	<b>Color:</b> Colorless
	<b>Odor:</b> Faint solvent

**INGREDIENTS**

Material(s):	CAS Registry No.(s):
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1
Trichlorofluoromethane	75-69-4
Chlorodifluoromethane	75-45-6
Carbon Dioxide	124-38-9

**HAZARDOUS REACTIVITY**

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

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

**Incompatibility:** Alkali and alkaline earth metals—powdered Al, Zn, Be, or Mg.

**Polymerization:** Will not occur.

**FIRE AND EXPLOSION DATA**

**Flash Point:** None

**Method:** TOC

**Autoignition Temperature:** Non-Flammable

**Flammable Limits in Air, % by Vol.:**

Lower: Non-flammable

Upper: Non-flammable

**Autodecomposition Temperature:** Unknown

**Fire and Explosion:** Pressurized aerosol containers may vent, rupture or explode 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 containers rupture and contents are released under fire conditions.

**HEALTH HAZARD INFORMATION****Principal Health Hazards--Routes of Entry:**

**Inhalation:** Vapor is heavier than air and can cause suffocation by reducing oxygen available for breathing.

Trichlorofluoromethane TCLo/Human 50,000 ppm/30 min

Trichlorotrifluoroethane LC50/Rats 52,000 ppm/4 hrs

Chlorodifluoromethane LC50/Rats 300,000 ppm/2 hrs

**Eye:** Liquid contact will cause temporary discomfort. Usually no extended effect. Contact with spray may cause frostbite.

**Ingestion:** Although oral toxicity is low, ingestion of Kontakt Clean is to be avoided.

Trichlorotrifluoroethane LD50/Rats 43,000 mg/kg

**Skin:** Repeated liquid contact can cause defatting of the skin. This material is poorly absorbed through the skin. Contact with spray may cause frostbite.

Trichlorotrifluoroethane ALD/Rabbits >11,000 mg/kg

**Note:** In screening studies with experimental animals, exposure at approximately 5,000 ppm (v/v) and above, followed by a large intravenous epinephrine challenge, has induced serious cardiac irregularities.

**Exposure Limits:**

Material:	TWA (ACGIH):	STEL (ACGIH):	PEL (OSHA):
Trichlorofluoromethane	N/A	C1,000 ppm	N/A
Trichlorotrifluoroethane	1,000 ppm	1,250 ppm	1,000 ppm
Chlorodifluoromethane	1,000 ppm	N/A	1,000 ppm
Carbon Dioxide	5,000 ppm	30,000 ppm	10,000 ppm

**Signs and Symptoms of Over-Exposure:**

**Inhalation:** Breathing high concentrations of vapor can cause light-headedness, giddiness, shortness of breath, headache and may lead to narcosis, cardiac irregularities, circulatory system depression, unconsciousness or death.

**Eye:** Contact will cause temporary discomfort.

**Ingestion:** May cause nausea and vomiting.

**Skin:** Irritation or reddening may occur due to defatting.

**Medical Conditions Possibly Aggravated by Exposure:**

Cardiovascular disease. (See *Inhalation section*)

**First Aid:**

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

**Eye:** Immediately flush with water for 15 minutes. Seek medical attention.

**Ingestion:** 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 pass through the intestinal tract.

**Skin:** Flush with water. If irritation occurs or persists, seek medical attention.

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

**Carcinogenicity:**

Components are not listed as carcinogens by IARC or NTP.

OSHA regulated - yes; OSHA air contaminant.

Toxic - yes; low toxicity. (See *Inhalation and Ingestion sections*)

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## C87, C167, C247

### CONTROL/PPE MEASURES

	Control/PPE
Respiratory Protection: No	Good ventilation/H.C. Resp.
Ventilation: No	As needed to comply with TLV
Protective Gloves: Yes	Butyl
Eye Protection: Yes	Chemical splash goggles
Other Protection: Yes	Eye bath & Protective clothes

**Work/Hygenic Practices:** 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.

**NFPA Codes:** Health: 2, Flammability: 0, Reactivity: 1.

### DISPOSAL INFORMATION

**Spill, Leak or Release:** Ventilate area. Remove open flames or other sources of ignition. Collect spilled product with absorbent material and place in closed steel drums for proper disposal.

*SARA 311 Quantity: 5000.00*  
*Units of Measure: Lb.*

**Waste Disposal:** Comply with all federal, state and local regulations. Do not puncture or incinerate aerosol cans.

### SECTION 313 SUPPLIER INFORMATION

**Other Precautions:** This product contains the following toxic chemicals subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 (40 CFR 372).

CAS #:	CHEMICAL NAME:	RANGE PERCENT BY WEIGHT:
76-13-1	Trichlorotrifluoroethane	80.0 - 85.0 %
75-69-4	Trichlorofluoromethane	23.0 - 26.0 %

This information should be included in all MSDSs copied and distributed for this material.

Contains chemicals listed on the TSCA Inventory: Yes

### OTHER INFORMATION

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

**Date Revised:** 10/92

**Person Responsible:** M. Watkins, Quality Control Manager

### ENVIRONMENTAL IMPACT DATA

ENVIRONMENTAL IMPACT DATA			
CFC	85.0%	VOC	0.0%
HCFC	12.5%	HFC	0.0%
C1 Solv.	0.0%	GDP	0.78
For more information call: 1-800-645-5244			



**Chemtronics Inc.**  
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To the best of our knowledge, the information contained herein is accurate. However, all materials may present unknown hazards and should be used with caution. In particular, improper use of our products and their inappropriate combination with other products and substances, may produce harmful results which cannot be anticipated. Final determination of the suitability of any material is the sole responsibility of the user. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that may exist.