



Material Safety Data Sheet

Section 1: Product & Company Identification

Product Name: Electronic Component Wash

Product Number (s): 04005

Manufactured By:

CRC Industries, Inc.
885 Louis Drive
Warminster, PA 18974
www.crcindustries.com

General Information	(215) 674-4300
Technical Assistance	(800) 521-3168
Customer Service	(800) 272-4620
24-Hr Emergency (CHEMTREC)	(800) 424-9300

Section 2: Hazards Identification

Emergency Overview

Appearance & Odor: Colorless volatile liquid with ethereal and faint sweetish odor

WARNING

Vapor harmful. Eye irritant. Contents under pressure.

As defined by OSHA's Hazard Communication Standard, this product is hazardous.

Potential Health Effects:

EYE: Irritant. Liquid contact will irritate and may cause conjunctivitis.

SKIN: Prolonged and/or repeated contact with material can cause irritation and defatting of the skin.

INHALATION: Overexposure to vapor may cause dizziness, loss of concentration and irritation. With high exposure levels, effects can include central nervous system (CNS) depression and cardiac arrhythmia. Product vapors displace air and can cause suffocation especially in a confined space.

INGESTION: Discomfort due to volatility would be expected. Some of the inhalation effects could be expected.

CHRONIC EFFECTS: None identified.

TARGET ORGANS: None identified.

Medical Conditions Aggravated by Exposure:

Pre-existing respiratory or cardiac conditions could be worsened by exposure to vapors.

See Section 11 for toxicology and carcinogenicity information on product ingredients.

Section 3: Composition/Information on Ingredients

COMPONENT	CAS NUMBER	% by Wt.
1,1-Dichloro-1-fluoroethane (HCFC-141B)	1717-00-6	85 - 95
Isopropyl alcohol	67-63-0	3 - 8
Carbon dioxide	124-38-9	2 - 6

Section 4: First Aid Measures

- Eye Contact:** Immediately flush with plenty of water for 15 minutes, lifting eyelids occasionally to facilitate irrigation. Get medical attention.
- Skin Contact:** Remove contaminated clothing and wash affected area with soap and water. Call a physician if irritation persists. Wash contaminated clothing prior to re-use.
- Inhalation:** Remove person to fresh air. Keep person calm. If not breathing, give artificial respiration. If breathing is difficult give oxygen. Do NOT give epinephrine (adrenaline). Call a physician.
- Ingestion:** Do NOT induce vomiting unless instructed to do so by a physician. Do NOT give stimulants. Get medical attention immediately.

Note to Physicians: Because of possible disturbances of cardiac rhythm, catecholamine drugs such as epinephrine should be used with special caution and only in situations of emergency life support. Treatment of overexposure should be directed at the control of symptoms and the clinical conditions.

Section 5: Fire-Fighting Measures

Flammable Properties: This product is nonflammable in accordance with aerosol flammability definitions (16 CFR 1500.3(c)(6)).

Flash Point:	None	Upper Explosive Limit:	17.7
Autoignition Temperature:	1022 F	Lower Explosive Limit:	7.6

Suitable Extinguishing Media: Choose an extinguishing agent appropriate for the surrounding fire.

Products of Combustion: Product will decompose at temperatures above 482 F. Decomposition products include hydrochloric acid, hydrofluoric acid and carbonyl halides, such as phosgene.

Protection of Fire-Fighters: Firefighters should wear self-contained, NIOSH-approved breathing apparatus for protection against suffocation and possible toxic decomposition products. Proper eye and skin protection should be provided. Use water spray to keep fire-exposed containers cool and to knock down vapors which may result from product decomposition.

Section 6: Accidental Release Measures

Personal Precautions: Use personal protection recommended in Section 8.

Environmental Precautions: Take precautions to prevent contamination of ground and surface waters. Do not flush into sewers or storm drains.

Methods for Containment & Clean-up: Dike area to contain spill. Eliminate all ignition sources. Ventilate the area with fresh air. If in confined space or limited air circulation area, clean-up workers should wear appropriate respiratory protection and other personal protective equipment. Recover or absorb spilled material using an absorbent designed for chemical spills. Place used absorbents into proper waste containers.

Section 7: Handling and Storage

Handling Procedures: Minimize vapor accumulation by providing air circulation. Wear eye protection.

Storage Procedures: Store in a cool dry area out of direct sunlight. Aerosol cans must be maintained below 120 F to prevent cans from rupturing.

Aerosol Storage Level: I

Section 8: Exposure Controls/Personal Protection

Exposure Guidelines:

COMPONENT	OSHA		ACGIH		OTHER		UNIT
	TWA	STEL	TWA	STEL	TWA	SOURCE	
1,1-Dichloro-1-fluoroethane	NE	NE	NE	NE	500	AIHA	ppm
Isopropyl alcohol	400	500(v)	200	400	NE		ppm
Carbon Dioxide	5000	30000	5000	30000	NE		ppm
N.E. – Not Established (c) – ceiling (s) – skin (v) – vacated							

Engineering Controls: Area should have ventilation to provide fresh air. Use local exhaust to prevent accumulation of vapors. Use mechanical means if necessary to maintain vapor levels below the exposure guidelines. If working in a confined space, follow applicable OSHA regulations

Respiratory Protection: None required for normal work where adequate ventilation is provided. Use a NIOSH-approved cartridge respirator with organic vapor cartridge if vapors exceed exposure limits. Use a self-contained breathing apparatus in confined spaces and for emergencies.

Eye/face Protection: For normal conditions, wear safety glasses. Where there is reasonable probability of liquid contact, wear splash-proof goggles.

Skin Protection: Use protective gloves such as MYLAR® coated Durafab, PVA or neoprene. Also, use full protective clothing if there is prolonged or repeated contact of liquid with skin.

Section 9: Physical and Chemical Properties

Physical State: liquid

Color: clear, colorless

Odor: ethereal and sweetish odor

Specific Gravity: 1.21

Initial Boiling Point: 89.6 F

Freezing Point: ND

Vapor Pressure: 10.02 psia @ 70 F

Vapor Density: 4.1 (air = 1)

Evaporation Rate: > 1 (ether = 1)

Solubility: 0.17% @ 77 F (in water)

pH: NA

Volatile Organic Compounds: wt %: 4.8 g/L: 58.08 lbs./gal: 0.48**Section 10: Stability and Reactivity**

Stability: Stable

Conditions to Avoid: Avoid sources of ignition. Ignition / flash may result if concentration is in the flammable range (See Section 5). At all concentration ranges, exposure of this product to high energy sources may yield toxic and/or corrosive decomposition products.

Incompatible Materials: Strong acids and alkalis, reactive metals such as powdered or freshly abraded aluminum, sodium, potassium, calcium, magnesium, zinc, molten aluminum, barium and lithium shavings. Strong oxidizing agents.

Hazardous Decomposition Products: Hydrochloric and hydrofluoric acids; and carbonyl halides, such as phosgene.

Possibility of Hazardous Reactions: No

Section 11: Toxicological Information

Long-term toxicological studies have not been conducted for this product. The following information is available for components of this product.

ACUTE EFFECTS

<u>Component</u>	<u>Test</u>	<u>Result</u>	<u>Route</u>	<u>Species</u>
1,1-dichloro-1-fluoroethane	LC50	62,000 ppm/ 4H	Inhalation	albino rat
1,1-dichloro-1-fluoroethane	LD50	> 5 g/kg	Oral	rat
1,1-dichloro-1-fluoroethane	LD50	> 2 g/kg	Dermal	rabbit

CHRONIC EFFECTS**Carcinogenicity:**

	<u>Component</u>	<u>Result</u>
OSHA:	None listed	
IARC:	None listed	
NTP:	None listed	

Mutagenicity: 1,1-dichloro-1-fluoroethane Ames Assay – Not Active

Other: 1,1-dichloro-1-fluoroethane cardiac sensitization threshold: 10,000 ppm

Section 12: Ecological Information

Ecological studies have not been conducted for this product. The following information is available for

components of this product.

Ecotoxicity: 1,1-dichloro-1-fluoroethane – daphnia and fish: 31.2 mg/L – 126 mg/L
 algae: not toxic up to 44 mg/L

Persistence / Degradability: minimal biodegradability

Bioaccumulation / Accumulation: No data

Mobility in Environment: No data

Section 13: Disposal Considerations

Disposal: The dispensed liquid product is not a hazardous waste if it is unused. Spent liquid, when used as a solvent, is a hazardous waste with a waste code of F001 (See 40 CFR Part 261.20 – 261.33) Aerosol containers should be emptied and depressurized before disposal. Empty containers may be recycled.

All disposal activities must comply with federal, state and local regulations. Local regulations may be more stringent than state or national requirements.

Section 14: Transport Information

Proper shipping description:

US DOT (ground): Aerosols, non-flammable, 2.2, UN1950

Special Provisions: Can be shipped as a limited quantity.

Section 15: Regulatory Information

U.S. Federal

Toxic Substances Control Act (TSCA):

All ingredients are either listed on the TSCA inventory or are exempt.

Comprehensive Environmental Response, Compensation and Liability Act (CERCLA):

Reportable Quantities (RQ's) exist for the following ingredients: None

Spills or releases resulting in the loss of any ingredient at or above its RQ require immediate notification to the National Response Center (800-424-8802) and to your Local Emergency Planning Committee.

Superfund Amendments Reauthorization Act (SARA) Title III:

Section 302 Extremely Hazardous Substances (EHS): None

Section 311/312 Hazard Categories:	Fire Hazard	No
	Reactive Hazard	No
	Release of Pressure	Yes
	Acute Health Hazard	Yes
	Chronic Health Hazard	Yes

Section 313 Toxic Chemicals: This product contains the following substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372:
 1,1-dichloro-1-difluoroethane (92%)

Clean Air Act:

Section 112 Hazardous Air Pollutants (HAPs): None

State Regulations

California Safe Drinking Water and Toxic Enforcement Act (Prop 65):

This product may contain the following chemicals known to the state of California to cause cancer, birth defects or other reproductive harm: NONE

State Right to Know:

New Jersey: 1717-00-6, 67-63-0
Pennsylvania: 1717-00-6, 67-63-0
Massachusetts: 1717-00-6, 67-63-0
Rhode Island : 1717-00-6, 67-63-0

Additional Regulatory Information: 1,1-Dichloro-1-fluoroethane (HCFC-141B) is a Class II Ozone Depleting Substance subject to use and sales restrictions. See 40 CFR Part 82.70 for a description of the acceptable uses for this product.

Section 16: Other Information

NFPA: Health: 2 Flammability: 1 Reactivity: 0
HMIS: Health: 2 Flammability: 1 Reactivity: 0 PPE: B

Prepared By: Michelle Rudnick
CRC #: 410
Revision Date: 8/3/2006

Changes since last revision: MSDS reformatted in accordance with ANSI Z400.1-2004

The information contained in this document applies to this specific material as supplied. It may not be valid for this material if it is used in combination with any other materials. This information is accurate to the best of CRC Industries' knowledge or obtained from sources believed by CRC to be accurate. Before using any product, read all warnings and directions on the label.

CAS: Chemical Abstract Service NA: Not Applicable
ppm: Parts per Million ND: Not Determined
TCC: Tag Closed Cup NE: Not Established
PMCC: Pensky-Martens Closed Cup g/L: grams per Liter
PPE: Personal Protection Equipment lbs./gal: pounds per gallon
TWA: Time Weighted Average STEL: Short Term Exposure Limit
OSHA: Occupational Safety and Health Administration AIHA: American Industrial Hygiene Assoc.
NIOSH National Institute of Occupational Safety & Health
ACGIH American Conference of Governmental Industrial Hygienists