

CYCLO[®] INDUSTRIES, LLC

MATERIAL SAFETY DATA SHEET

This MSDS is being provided to your company for the purpose of providing current health and safety information to your management and for your employees who work with this product. Please read the information on these sheets and then provide this information to those people at your company whose responsibility it is to comply with FEDERAL, STATE and COMMUNITY RIGHT TO KNOW regulations. Also, make this information available to any employee who requests it.

If Cyclo Industries, LLC considers the formula of this product to be a trade secret, the exact chemical names of the ingredient(s) and the percentages in which they are combined will not appear in the body of this sheet. The exact composition is available upon request to physicians, industrial hygienists and other health professionals.

SECTION 1 – PRODUCT & COMPANY IDENTIFICATION

Product Name: Cyclo[®] Electronic Contact Cleaner, Stock No. C-86

Product Use: Use for printed circuits, relays, points, plugs, contacts, tape heads, tuners, etc.

Manufactured by: Cyclo Industries, LLC
10190 Riverside Drive, Palm Beach Gardens, Florida 33410-4881
Telephone: (561) 775-9600

First Aid Emergency: (800) 752-7869 or (312) 906-6194

Shipping Emergency: (800) 424-9300 or (703) 527-3887 (CHEMTREC)

SECTION 2 – COMPOSITION/INFORMATION ON INGREDIENTS

CAS Reg. No.	Material	Percentage	Exposure Limits
1717-00-6	1,1-Dichloro-1-fluoroethane	80 – 100	Not established = OSHA PEL Not established = ACGIH TLV
67-63-0	2-Propanol, Isopropyl alcohol	0 – 10	400 ppm = OSHA PEL 400 ppm = ACGIH TLV
124-38-9	Carbon dioxide	0 – 10	10000 ppm = OSHA PEL 5000 ppm = ACGIH TLV

SECTION 3 – HAZARDS IDENTIFICATION

Effects of Overexposure:

Ingestion: Not a likely route of exposure.

Inhalation: Narcosis, asphyxiation, loss of coordination, increased pulse rate, cardiac sensitization, deeper respiration and cardiac arrhythmia. Do not give ephinephrine or similar drugs.

Skin Contact: Contact may dry the skin. Prolonged contact may cause irritation. Not easily absorbed. Solvent action can dry and defat the skin causing the skin to crack, leading to dermatitis.

Eye Contact: Prolonged contact may cause irritation due to defatting.

SECTION 3 – HAZARDS IDENTIFICATION continued**Health Hazards (Acute and Chronic):**

ACUTE: Eye irritant, skin irritant, narcotic in high concentrations.

CHRONIC: Not known.

Carcinogenicity: NTP Carcinogen = No; IARC Monographs = No; OSHA Regulated = No**Medical Conditions Generally Aggravated by Exposure:** None known.**SECTION 4 – FIRST AID MEASURES****First Aid Procedures:**

Ingestion: If swallowed, do NOT induce vomiting. Seek immediate medical advice and/or attention.

Skin Contact: Wipe off with towel. Wash with soap and water. Get medical attention if irritation persists.

Inhalation: Remove to fresh air. Administer oxygen if needed. Apply artificial respiration if breathing has stopped. Get medical attention.

Eye Contact: Wash immediately with large volumes of fresh water for at least 15 minutes. Get medical attention.

SECTION 5 – FIRE FIGHTING MEASURES**Flash Point:** None**Method Used:** TCC**Flammable Limits in Air by Volume:**

Lower Explosion Level (LEL) = 2

Upper Explosion Level (UEL) = 15.5

Extinguishing Media: Foam, alcohol foam, CO₂, dry chemical, water fog**Special Fire Fighting Procedures:** Water spray may be ineffective. Water may be used to cool containers to prevent pressure build-up and explosion when exposed to extreme heat. If water is used, fog nozzles preferred. Wear goggles and self-contained breathing apparatus.**Unusual Fire and Explosion Hazards:** Closed containers may explode from internal pressure build-up when exposed to extreme heat and discharge contents. Liquid content of container will not support combustion. Overexposure to decomposition products may cause a health hazard. Symptoms may not be readily apparent. Obtain medical attention.**HMIS Code:** Health = 1 Flammability = 2 Reactivity = 0**SECTION 6 – ACCIDENTAL RELEASE MEASURES****Spill/Leak Procedures:** Avoid breathing vapors. Ventilate area. Remove all sources of ignition. Clean up area with absorbent material and place in closed containers for disposal.

SECTION 7 – HANDLING AND STORAGE

Handling Procedures: Store and use in cool, dry, well-ventilated areas. Do not puncture or incinerate (burn) cans. Do not stick pin, nail or any other sharp object into opening on top of can. Do not spray in eyes. Do not take internally. See product label for additional information. KEEP OUT OF THE REACH OF CHILDREN.

Storage Procedures: Store and use in cool, dry, well-ventilated areas. Do not store above 120°F. The storage of non-flammable products with non-flammable or flammable pressurizing agent, in cartons, is the same as for ordinary canned goods in cartons.

SECTION 8 – EXPOSURE CONTROLS / PERSONAL PROTECTION

Respiratory Protection: None under normal use. Avoid breathing vapors. In restricted areas, use approved chemical/mechanical filters designed to remove a combination of particles and vapor. In confined areas, use approved air line type respirator or hood. Self-contained breathing apparatus is required for vapor concentrations above PEL/TLV limits.

Ventilation: Sufficient to prevent inhalation of solvent vapors. General dilution and/or local exhaust ventilation in volume or pattern to keep PEL/TLV of most hazardous ingredient below acceptable limit and LEL below stated limit.

Protective Gloves: None under normal use. Solvent resistant required for prolonged or repeated contact.

Eye Protection: None under normal use, however, safety glasses with splash guards or full face shield is recommended.

Other Protective Equipment: None under normal use, however, use of solvent resistant apron or other clothing is recommended.

Work/Hygienic Practices: Eye washes and safety showers in the workplace are recommended.

SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

Boiling Range: 89.6°F - 177°F (32°C -80°C) **Specific Gravity (H₂O=1):** 1.19

Vapor Pressure:	<u>mm Hg @ Temp.</u>	Vapor Density: Heavier than air
1,1-Dichloro-1-Fluoroethane	500 68	Solubility in Water: Nil
2-Propanol, Isopropyl Alcohol	33 68	
Carbon dioxide	38650 60	

Evaporation Rate (Butyl Acetate = 1): Slower than ether

Appearance and Odor: Aerosol product

SECTION 10 – STABILITY AND REACTIVITY

Stability: Stable

Conditions to Avoid: Application to hot surfaces. Storage above 120°F. Exposure to open flame.

Incompatibility (materials to avoid): Freshly abraded aluminum surfaces; aluminum, magnesium and zinc powders; chemically active metals such as Na, K or Ca.

Hazardous Decomposition or Byproducts: Decomposition fumes may contain carbon monoxide, halogen acids and possibly carbonyl halides such as phosgene.

Hazardous Polymerization: Will not occur.

SECTION 11 – TOXICOLOGICAL INFORMATION

Long-term toxicological studies have not been conducted for this product. See Section 3 of this MSDS for acute symptoms of overexposure and carcinogenicity information.

SECTION 12 – ECOLOGICAL INFORMATION

Aquatic/Terrestrial No data is available at this time.

Toxicity

Environmental Fate

SECTION 13 – DISPOSAL CONSIDERATIONS

Waste Disposal Method: Dispose of in accordance with local, state and federal regulations. Before attempting clean up, refer to other sections of this MSDS for hazard caution information.

SECTION 14 – TRANSPORT INFORMATION

U.S. DOT

Shipping Description:	Aerosol, Consumer Commodity ORM-D
ID Number:	Not applicable
Hazard Class:	Not applicable
Packing Group:	Not applicable
Label:	Not applicable
Placards:	Not applicable

IMDG

Shipping Description:	Aerosol, Limited Quantity
ID Number:	1950
Hazard Class:	2
Packing Group:	Not required
Label:	Not applicable
Markings:	Not applicable
Placards:	Not required

SECTION 15 – REGULATORY INFORMATION
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TSCA Inventory: All of the ingredients in this product are listed on the TSCA Inventory

SARA Extremely

Hazardous Substances None

SARA Section 313 This product contains the following toxic chemical 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 (SARA 313 – Toxic Chemical Release Reporting)

<u>Chemical Name</u>	<u>CAS#</u>	<u>Weight %</u>
1,1-Dichloro-1-fluoroethane	1717-00-6	80 - 100

CERCLA/Superfund (RQ): This product is not subject to CERCLA reporting requirements. Many states have more stringent release reporting requirements. Report spills required under federal, state and local regulations.

California Proposition 65: This product does not contain chemicals known to the State of California to cause cancer, birth defects and other reproductive harm.

SECTION 16 – OTHER INFORMATION

Volatile Organic Compound (VOC): 6.2%

Document Date: 3/31/03

Supersedes: 11/17/00

Revisions: Section 11 – Added entire section, Section 12 – Added entire section, Section 14 – Added entire section, Section 15 – Added entire section and Section 16 - VOC.

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