MATERIAL SAFETY DATA SHEET

Finished Product

NTE® ELECTRONICS, INC.

Date-Issued: 01/20/2003
MSDS Ref. No: RX200-20
Date-Revised: 01/20/2003
Revision No: New MSDS

ECG Electronics Degreaser

1. PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: ECG Electronics Degreaser
PRODUCT DESCRIPTION: Cleaner/Degreaser
PRODUCT CODE: RX200-20
CHEMICAL FAMILY: HCFC / Alcohol Blend

MANUFACTURER

NTE Electronics, Inc.
44 Farrand St.
Bloomfield, NJ 07003

Phone: 973-748-5089

24 HR. EMERGENCY TELEPHONE NUMBERS

CHEMTREC (U.S.): (800) 424-9300
CANUTEC: (613) 996-6666
Emergency Phone: 1-888-748-1777 8:00 am - 5:00 pm CST

2. COMPOSITION / INFORMATION ON INGREDIENTS

Chemical Name	Wt.%	CAS#	EINECS#
1,1-dichloro-1-fluoroethane	80 - 90	1717-00-6	200-891-8
Methanol	0.8 - 5	67-56-1	200-659-6
Carbon dioxide	2 - 4	124-38-9	
Ethanol	5 - 15	64-17-5	200-578-6

EEC LABEL SYMBOL AND CLASSIFICATION

EEC Harmful - "Xn"

EEC Environment - "N"

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

PHYSICAL APPEARANCE: Clear, Colorless, Volatile Liquid

IMMEDIATE CONCERNS: Warning! High concentrations of vapor can reduce oxygen available for breathing. Harmful if inhaled. May decompose on contact with flames or extremely hot metal surfaces to produce toxic and corrosive products.

POTENTIAL HEALTH EFFECTS

EYES: Liquid contact can cause irritation, which may be severe.

SKIN: Prolonged or repeated contact can result in defatting and drying of the skin which may result in skin irritation and dermatitis (rash).

SKIN ABSORPTION: Harmful if absorbed through skin.

INGESTION: Ingestion of large amounts may produce abdominal pain, nausea and vomiting. Swallowing small amounts is not likely to produce harmful effects.

INHALATION: High concentrations in immediate area can displace oxygen and can cause dizziness, unconsciousness, and possibly death with longer exposure. Keep people away from such vapors without self-contained breathing apparatus.

SIGNS AND SYMPTOMS OF OVEREXPOSURE

EYES: Can cause severe eye irritation.

INGESTION: Poison - may be fatal if swallowed.

ACUTE TOXICITY: Overexposure may cause dizziness and loss of concentration. At higher levels, CNS depression and cardiac arrhythmia may result.

MEDICAL CONDITIONS AGGRAVATED: Inhalation of high concentrations can cause an increase in the sensitivity of the heart to adrenaline, which could result in irregular heartbeat and reduced heart function. Workers with heart disease or compromised heart function should have limited exposure to material.

4. FIRST AID MEASURES

EYES: Immediately flush eyes with plenty of water for at least 15 minutes. Get immediate medical attention.

SKIN: Immediately wash skin with soap and plenty of water. Remove contaminated clothing. Get medical attention if symptoms occur. Wash clothing before reuse.

INGESTION: Aspiration hazard. If swallowed, vomiting may occur spontaneously, but do not induce. If vomiting occurs, keep head below hips to prevent aspiration into lungs. Call a physician immediately.

INHALATION: Remove to fresh air. If not breathing, give artificial respiration or give oxygen by trained personnel. Seek immediate medical attention.

5. FIRE FIGHTING MEASURES

FLAMMABLE LIMITS: 7.4 to 15.5

EXTINGUISHING MEDIA: As appropriate for combustibles in area.

EXPLOSION HAZARDS: Vapors, when present in the flammable range (listed above), especially in a confined or poorly ventilated space, can be ignited with a flame or high intesity source of heat.

FIRE FIGHTING PROCEDURES: Use water spray to keep fire-exposed containers cool and to knock down vapors which may result from product decomposition.

FIRE FIGHTING EQUIPMENT: As in any fire, wear self-contained breathing apparatus pressure-demand, (MSHA/NIOSH approved or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

SMALL SPILL: Avoid runoff into storm sewers and ditches which lead to waterways.

LARGE SPILL: -Implement cleanup procedures.
-If in public area, keep public away and advise authorities.
-Recover by pumping (use an explosion proof or hand pump) or with a suitable absorbent.

RELEASE NOTES: Spills and releases may have to be reported to Federal and/or local authorities.

7. HANDLING AND STORAGE

GENERAL PROCEDURES: Use only in a well ventilated area.

STORAGE: Store in a cool place in original container and protect from sunlight.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

EXPOSURE GUIDELINES:

OSHA HAZARDOUS COMPONENTS (29 CFR 1910.1200)

		EXPOSURE LIMITS					
		OSHA PEL		ACGIH TLV		Supplier OEL	
		ppm	mg/m^3	ppm	mg/m^3	ppm	mg/m^3
1,1-dichloro-1-fluoroethane	**TWA**	NONE		500		500	

Methanol	**TWA**	S 200[1]	260	S 200	262	NL	NL
	STEL	250	310	250	328	NL	NL
Ethanol	**TWA**	1000	1900	1000	1880	NL	NL
	STEL	NL	NL	NL	NL	NL	NL

OSHA TABLE COMMENTS:
1. S = Skin

ENGINEERING CONTROLS: Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits.

PERSONAL PROTECTIVE EQUIPMENT

EYES AND FACE: For normal conditions, wear safety glasses. Where there is reasonable probability of liquid contact, wear splash-proof goggles.

SKIN: The glove(s) listed below may provide protection against permeation. Gloves of other chemically resistant materials may not provide adequate protection.

Buna
Butyl
Natural Latex
Neoprene
Solvex
Viton

RESPIRATORY: A respiratory protection program that meets OSHA 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use.

COMMENTS: Suggested gloves: MYLAR coated Durafab, PVA or neoprene.

9. PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE: Liquid
ODOR: Faint ethereal odor
APPEARANCE: Clear, Colorless liquid
pH: Not Applicable
PERCENT VOLATILE: 100
BOILING POINT: 30°C (86°F)
FREEZING POINT: Not Determined
SOLUBILITY IN WATER: <5
EVAPORATION RATE: >1 (n-Butyl Acetate=1)
SPECIFIC GRAVITY: 1.21 @ 25°C/25°C
(VOC): 100 g/L
(VOC) NOTES: Non-exempt

10. STABILITY AND REACTIVITY

CONDITIONS TO AVOID: Heat, flames, ignition sources, and incompatables.

HAZARDOUS DECOMPOSITION PRODUCTS: May form hydrochloric and hydrofluoric acids - possibly carbonyl halides, when exposed to high temperatures.

INCOMPATIBLE MATERIALS: Strong acids and alkalis, reactive metals and strong oxidizing agents.

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11. TOXICOLOGICAL INFORMATION

SENSITIZATION: Acute Oral Toxicity: Cardiac Sensitization Threshold = 10,000ppm

SUBCHRONIC:

Fischer 344 Rats - slightly toxic - 20,000 ppm

Inhalation: 20,000 ppm

REPRODUCTIVE EFFECTS: Reproduction (2-generation rat): Reduced fertility and reduced bodyweight - 20,000 ppm / NOEL = 8,000 ppm.

TERATOGENIC EFFECTS: Teratology (rat) - maternal and fetal tox. - 20,000 ppm / NOEL = 8,000 ppm Teratology (rabbit) - Slight bodyweight loss - 4,200 ppm / NOEL= 1,400 ppm

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12. ECOLOGICAL INFORMATION

ENVIRONMENTAL DATA: Biodegradability - Minimal

ECOTOXICOLOGICAL INFORMATION: Daphnia and Fish - 31.2 mg/L - 125 mg/L, Moderately toxic. Algae - Not toxic up to 44 mg/L

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13. DISPOSAL CONSIDERATIONS

DISPOSAL METHOD: Federal, State, and Local laws governing disposal of materials can differ. Ensure compliance with proper authorities before disposal.

RCRA/EPA WASTE INFORMATION: Spent (used) Dichlorofluoroethane used as a solvent is a hazardous waste: F002

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14. TRANSPORT INFORMATION

DOT (DEPARTMENT OF TRANSPORTATION)
PROPER SHIPPING NAME: CONSUMER COMMODITY ORM-D

AIR (ICAO/IATA)
PROPER SHIPPING NAME: CONSUMER COMMODITY ID8000

VESSEL (IMO/IMDG)
PROPER SHIPPING NAME: AEROSOLS IN LIMITED QUANTITIES OF CLASS 2
UN/NA NUMBER: 1950

PACKING GROUP: N/A

15. REGULATORY INFORMATION

UNITED STATES

SARA TITLE III (SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT)

311/312 HAZARD CATEGORIES: IMMEDIATE / DELAYED

313 REPORTABLE INGREDIENTS: Dichlorofluoroethane

TSCA (TOXIC SUBSTANCE CONTROL ACT)

TSCA REGULATORY: This product is listed on the TSCA Inventory.

EUROPEAN COMMUNITY

EEC LABEL SYMBOL AND CLASSIFICATION

EEC Harmful - "Xn"

EEC Environment - "N"

GENERAL COMMENTS: Dichlorofluoroethane is subject to U.S. Environmental Agengy Clean Air Act Regulations Sectins 610,611, and 612 - Significant New Alternatives Program (SNAP) policy at 40 CFR Part 82. Section 611 requires the following label text on all shipments of this product:
WARNING: CONTAINS DICHLOROFLUOROETHANE (HCFC-141b), A SUBSTANCE WHICH HARMS PUBLIC HEALTH AND ENVIRONMENT BY DESTROYING OZONE IN THE UPPER ATMOSPHERE.

Refer to sections 610 and 612 for list of acceptable and unacceptable uses for this product.

16. OTHER INFORMATION

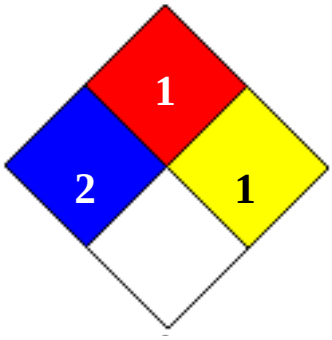
APPROVED BY: Pierce A. Pillon **TITLE:** Chemist

REVISION SUMMARY New MSDS

HMIS RATING

HEALTH:		**1**
FLAMMABILITY:		**1**
PHYSICAL HAZARD:		**1**
PERSONAL PROTECTION:		

NFPA CODES



DATA SOURCES: Code of Federal Regulations (CFR)
The Sigma-Aldrich Library of Regulatory and Safety Data
OSHA Hazard Communication Standard (29CFR1910.1200)
Various Federal, State and Local Regulations

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