MATERIAL SAFETY DATA SHEET
Finished Product

NTE®
ELECTRONICS, INC.

Date-Issued: 8/4/2004
MSDS Ref. No: RX401-16
Date-Revised: 8/4/2004
Revision No: New MSDS

ECG RX401-16

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1. PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: ECG Contact Cleaner, Degreaser & Wash
PRODUCT DESCRIPTION: Contact Cleaner
PRODUCT CODE: RX401-16

MARKETER
NTE Electronics, Inc.
44 Farrand Street
Bloomfield, NJ 07003

Phone: 973-748-5089

24 HR. EMERGENCY TELEPHONE NUMBERS

CHEMTREC (U.S.): (800) 424-9300
CANUTEC: (613) 996-6666
Emergency Phone: 1-800-631-1250 8:00 am – 5:00 pm EST

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2. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	Wt. %	CAS#	EINECS#
1,2-transdichloroethylene (Trans)	30-90	156-60-5	205-860-2
1,1,1,3,3-Pentaflouropropane (HFC-24fa)	10-50	460-73-1	4191706
Ethyl Hydroxy Propionate	<1	97-64-3	202-598-0
1,1,1,2-Tetraflouroethane (HFC-134a)	10-20	811-97-2	223770
Carbon Dioxide	1-10	124-38-9	

EEC LABEL SYMBOL AND CLASSIFICATION

R20 – Harmful by inhalation.

EEC Harmful – "Xn"

R36/37/38 – Irritating to eyes, respiratory system and skin.

EEC Irritant – "Xi"

R52/53 – Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

EEC Environment – "N"

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW:

PHYSICAL APPARANCE: Transparent, colorless 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: Substance causes substantial eye irritation.

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

INGESTION: Substance may be harmful is swallowed.

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: Liquid splashed in the eye may cause redness, irritation and conjunctivitis.

SKIN: Prolonged exposure causes redness, pain, drying, and cracking of the skin.

INGESTION: For large amounts, abdominal pain, nausea and vomiting.

INHALATION: High concentrations may lead to central nervous system effects (drowsiness, nausea, headaches, paralysis and loss of consciousness.)

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

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4. FIRST AID MEASURES

EYES: Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Have eyes examined and tested by medical personnel.

SKIN: Prolonged exposure causes redness, pain, drying and cracking of the skin.

INGESTION: For large amounts; abdominal pain, nausea and vomiting.

INHALATION: High concentrations may lead to central nervous system effects (drowsiness, dizziness, nausea, headaches, paralysis and loss consciousness).

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

5. FIRE FIGHTING MEASURES

FLASHPOINT AND METHOD: Not Flammable

EXTINGUISHING MEDIA: Use alcohol foam, carbon dioxide, or water spray when fighting fires involving this material.

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

HAZARDOUS DECOMPOSITION PRODUCTS: Toxic oxides of carbon and corrosive vapors of hydrogen chloride.

6. ACCIDENTAL RELEASE MEASURES

SMALL SPILL: Contain spill with dike to prevent entry into sewers.

LARGE SPILL: If this material is released into a work area, evacuate the area immediately.

GENERAL PROCEDURES: Dike area to contain spill. Take precautions as necessary to prevent contamination of ground and surface waters. Recover spilled material on adsorbent, such as sawdust or vermiculite, and sweep into closed containers for disposal. After all visible traces, including vapors, have been removed thoroughly wet vacuum the area. Do not flush to sewer. If area of spill is porous, remove as much contaminated earth, gravel, etc. as necessary and place in closed containers for disposal.

SPECIAL PROTECTIVE EQUIPMENT: Only personnel equipped with proper respiratory and skin/eye protection should be permitted in area. See Section 8 for details.

7. HANDLING AND STORAGE

HANDLING Use with adequate ventilation.

STORAGE: Store away from heat.

8. EXPOSURE CONTROLS/ PERSONAL PROTECTION

EXPOSURE GUIDELINES:
OSHA HAZARDOUS COMPONENTS (29 CFR 1910.1200)

		EXPOSURE LIMITS					
		OSHA PEL		ACGIH TLV		Supplier OEL	
		Ppm	mg/m³	ppm	mg/m³	ppm	mg/m³
1,2-Transdichloroethylene (Trans)	**TWA**	NE[1]		200		NE	
	STEL	NE		200			
1,1,1,3,3-Pentaflouropropane (HFC – 24fa)	**TWA**	NONE		NONE		300	
	STEL	NONE		NONE			

Ethyl Hydroxy Propionate	**TWA** **STEL**	[2]	 [3]	
1,1,1,2 – Tetraflouroethane (HFC – 134a)	**TWA**	NE	NE	1,000 [4]

OSHA TABLE COMMENTS:

1. NOT ESTABLISHED
2. NA=NOT APPLICABLE
3. NOT APPLICABLE
4. * (AEL) = Acceptable Exposure Limit as established by the manufacture

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.
Viton, Solvex, Butyl, Buna, Neoprene.

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.

OTHER USE PRECAUTIONS: Emergency shower and eyewash facility should be in close proximity.

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9. PHYSICAL AND CHEMICAL PROPERTIES

ORDOR: Faint ethereal odor
APPEARANCE: Clear, Colorless liquid
PERCENT VOLATILE: 100
VAPOR PRESSURE: 17.8 psi at 20˚ C (68˚ F)
EVAPORATION RATE: <1 (TCE=1)
SPECIFIC GRAVITY: 1.249 (water=1)
(VOC): 856.5 g/L (non exempt VOC)

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10. STABILITY AND REACTIVITY

STABLE: YES

HAZARDOUS POLYMERIZATION: NO

CONDITIONS TO AVOID: Stable. However, may decompose if heated.

STABILITY: Stable.

POLYMERIZATION: Will not occur.

HAZARDOUS DECPMPOSITION PRODUCTS: May form hydrofluoric acids – possibly carbonyl halides, when exposed to high temperatures.

INCOMPATIBLE MATERIALS: Oxidizing agents, alkalies and bases.

11. TOXICOLOGICAL INFORMATION

ACUTE

EYES: Moderately to severely irritating.

DERMAL LD50: Mildly to moderately irritating.

ORAL LD50: Slight to very low toxicity.

INHALATION LC50: Slight to very low toxicity.

TERATOGENIC EFFECTS: Test results indicate this compound/mixture is not teratogenic.

12. ECOLOGICAL INFORMATION

ENVIRONMENTAL DATA: There is limited information available on the environmental fate and effects of this material. The primary environmental concern for release is the impact on aquatic and terrestrial species. Due care should be taken to avoid the accidental release of this material into the environment.

13. DISPOSAL CONSIDERATIONS

FOR LARGE SPILLS: Contaminated sawdust, vermiculite, or porous surfaces must be disposed of in a permitted hazardous waste management facility. Recovered liquids may be reprocessed or incinerated or must be treated in a permitted hazardous waste management facility.

GENERAL COMMENTS: Dispose of in a manner consistent with federal, state, and local regulations.

14. TRANSPORATION INFORMATION

DOT (DEPARTMENT OF TRANSPORATON)

PROPER SHIPPING NAME: CONSUMER COMMODITY ORM-D
PRIMARY HAZARD CLASS/DIVISION: No classification
UN/NA NUMBER: N/A
PACKING CODE GROUP: N/A

AIR (ICAO/IATA)

PROPER SHIPPING NAME: CONSUMER COMMODITY ORM-D
PRIMARY HAZARD CLASS/DIVISION: 9
UN/NA NUMBER: ID8000
PACKING CODE GROUP: N/A
IATA NOTE: Domestic shipments only. When shipping International contact TechSpray shipping department.

VESSEL (IMO/IMDG)

PROPER SHIPPING NAME: AEROSOLS IN LIMITED QUANTITES OF CLASS 2
PRIMARY HAZARD CLASS/DIVISION: 2.2
UN/NA NUMBER: UN1950
PACKING GROUP: N/A
IMDG NOTE: Page 2102

15. REGULATORY INFORMATION

UNITED STATES

SARA TITLE III (SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT)

311/312 HAZARD CATEGORIES: IMMEDIATE / DELAYED

FIRE: NO **PRESSURE GENERATING:** YES **REACTIVITY:** NO **ACUTE:** YES **CHRONIC:** YES

TITLE III NOTES: Not listed as an Extremely Hazardous Substance.

CERCLA (COMPREHENSIVE RESPONSE, COMPENSATION, AND LIABILITY ACT)

CERCLA REGULATORY: Release to air, land, or water whitish exceed the RQ must be reported to the National Response Center (800) 424-8802 and to your Local Emergency Planning Committee.

CERCLA RQ: Trans – 1,2 – dichlorethylene is listed in Table 302.4 of 40 CFR Part 302 as a hazardous substance. Reportable Quantity = 1,000 lbs.

EPA

EPA RQ INGREDIENT: trans – 1,2 – dichloroethylene (# 156-60-5)

TSCA (TOXIC SUBSTANCE CONTROL ACT)

TSCA REGULATORY: All chemicals in this product are listed on the TSCA Inventory.

CANADA

WHMIS (WORKER HAZARDOUS MATERIALS INFORMATION SYSTEM) : This MSDS had been prepared according to the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.

WHMIS CLASS: Class D2B – Toxic Materials

EUROPEAN COMMUNITY

EEC LABEL SYMBOL AND CLASSIFICATION

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EEC Environment – “N”

CALIFORNIA PROPOSITION 65: This product does not contain any chemicals known to the State of California to cause cancer.

16. OTHER INFORMATION

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

REVISION SUMMARY: New MSDS

HMIS RATING		NEPA CODES	
HEALTH	**2**	2	
FLAMMABILITY	**2**		
PHYSICAL HAZARD	**0**	2	**0**
PERSONAL PROTECTION:			

MANUFACTURER SUPPLEMENATL NOTES: The use of this product for cleaning is subject to U.S. Patent no. 5,902,412 and use is restricted by TechSpray, L.P.

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