

# MATERIAL SAFETY DATA SHEET

Finished Product



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MSDS Ref. No: RX1700-2.5  
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## ECG Smoke Detector Tester

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### 1. PRODUCT AND COMPANY IDENTIFICATION

**PRODUCT NAME:** ECG Smoke Detector Tester  
**PRODUCT DESCRIPTION:** Smoke Detector Tester  
**PRODUCT CODE:** RX1700-2.5

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

#### 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

**Phone: 973-748-5089**

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### 2. COMPOSITION/INFORMATION ON INGREDIENTS

<u>Chemical Name</u>	<u>Wt. %</u>	<u>CAS#</u>	<u>EINECS#</u>
1,1,1,2-Tetraflouroethane (HFC-134a)	92-99	811-97-2	223770
2-Propanol	1-5	67-63-0	200-661-0
Dibutylphthalate	<3	84-74-2	

#### EEC LABEL SYMBOL AND CLASSIFICATION

R63 – Possible risk of harm to the unborn child.

EEC Harmful – “Xn”

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

EEC Irritant – “Xi”

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### 3. HAZARDS IDENTIFICATION

#### EMERGENCY OVERVIEW:

**PHYSICAL APPARANCE:** 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:** Irritating, and may injure eye tissue if not removed promptly.

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

**INGESTION:** Single dose toxicity is low to moderate. If vomiting occurs, liquid can be aspirated into lungs, causing chemical pneumonia/systemic effects. Psychotropic, CNS, and gastrointestinal effects possible.

**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.

**SKIN:** Exposure to rapidly expanding gas or vaporizing liquid may cause frostbite (“cold” burn.)

**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. Get medical attention, if irritation persists.

**SKIN:** In case of cold burns (frostbite) caused by rapidly expanding gas or vaporizing liquids, get medical attention promptly.

**INGESTION:** If swallowed, do not induce vomiting. If conscious and alert, give two glasses of water. Seek medical attention.

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

**NOTES TO PHYSICIAN:** Because of the 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.

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**5. FIRE FIGHTING MEASURES**

**FLASHPOINT AND METHOD:** None:....ASTM D-56 (Tag C.C.)

**FLAMMABLE LIMITS:** None\*

**AUTOIGNITION TEMPERATURE:** >750°C (1382°F)

**FLAMMABLE CLASS:** Not Applicable

**FLAME PROPAGATION OR BURNING RATE OF SOLIDS:** Not Applicable

**EXTINGUISHING MEDIA:** As appropriate for combustibles in area.

**EXPLOSION HAZARDS:** This product is not flammable at ambient temperatures and atmospheric pressure. However, this material may become combustible when mixed with air under pressure and exposed to strong ignition sources.

**FIERE FIGHTING PROCEDURES:** Use water spray to cool containers.

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

**COMMENTS:** \*Based on ASHRAE Standard 34 with match ignition.

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## 6. ACCIDENTAL RELEASE MEASURES

**GENERAL PROCEDURES:** Isolate hazard area. Keep unnecessary and unprotected personnel from entering.

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

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## 7. HANDLING AND STORAGE

**HANDLING** Follow standard safety precautions for handling and use of compressed gas cylinders.

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

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## 8. EXPOSURE CONTROLS/ PERSONAL PROTECTION

### EXPOSURE GUIDELINES:

#### OSHA HAZARDOUS COMPONENTS (29 CFR 1910.1200)

#### EXPOSURE LIMITS

		<u>OSHA PEL</u>		<u>ACGIH TLV</u>		<u>Supplier OEL</u>	
		<u>Ppm</u>	<u>mg/m<sup>3</sup></u>	<u>ppm</u>	<u>mg/m<sup>3</sup></u>	<u>ppm</u>	<u>mg/m<sup>3</sup></u>
1,1,1,2-Tetrafluoroethane (HFC-134a)	TWA NE					1,000[1]	
2-Propanol	TWA	400	980	400	983	NL[2]	NL
	STEL	500	1225	500	1230	NL	NL

### Dibutylphthalate

#### OSHA TABLE COMMENTS:

1. \*(AEL)= Acceptable Exposure Limit as established by the manufacture
2. NL = Not Listed

**ENGINEERING CONTROLS:** Local exhaust ventilation may be necessary to control any air contaminants to within their TLVs during the use of this product.

## PERSONAL PROTECTIVE EQUIPMENT

**EYES AND FACE:** Wear safety glasses (or goggles) and a face shield.

**SKIN:** Skin contact with liquid may cause frostbite. General work clothing and gloves (leather) should provide adequate protection. If prolonged contact with the liquid or gas is anticipated, insulated gloves constructed of PVA, neoprene or butyl rubber should be used. Any contaminated clothing should be promptly removed and washed before reuse.

**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.

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## 9. PHYSICAL AND CHEMICAL PROPERTIES

**PHYSICAL STATE:** Gas

**ORDOR:** Faint ethereal order

**pH:** Neutral

**PERCENT VOLATILE:** 100 at 20°C (68°F)

**VAPOR PRESSURE:** 85.8 psi at 21.1°C (70°F)

**VAPOR DENSITY:** 3.0 (Air=1)

**BOILING POINT:** -16°C (-27°F)

**SOLUBILITY IN WATER:** Negligible

**EVAPORATION RATE:** >1 (H<sub>2</sub>O=1)

**SPECIFIC GRAVITY:** 1.22 (water=1) AT 20°C (68°F)

**(VOC):** 20 g/L (non exempt VOC)

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## 10. STABILITY AND REACTIVITY

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

**STABILITY:** Stable.

**POLYMERIZATION:** Will not occur.

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

**INCOMPATIBLE MATERIALS:** Chemically active metals: potassium, calcium, powdered aluminum, magnesium and zinc.

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## 11. TOXICOLOGICAL INFORMATION

### ACUTE

**INHALATION LC50:** >500000 ppm, 4-hour

**SENSITIZATION:** Cardiac sensitization threshold (dog) 80,000 ppm. NOEL – 50,000 ppm.

### SUBCHRONIC:

Subchronic inhalation (rat) NOEL – 50,000 ppm

Chronic NOEL – 10,000 ppm

### CARCINOGENICITY:

**IARC:** NOT listed

**NTP:** NOT listed

**OSHA:** NOT listed

**MUTAGENICITY:** Collective data indicate non-mutagenic.

**TERATOGENIC EFFECTS:** NOEL (rat and rabbit) – 40,000 ppm.

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## 12. ECOLOGICAL INFORMATION

**ENVIRONMENTAL DATA:** Degradability (BOD): This material is a gas at room temperature; therefore, it is unlikely to remain in water.

**DISTRIBUTION:** Octanol Water Partition Coefficient: Log P=1.06

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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.

**GENERAL COMMENTS:** 1,1,1,2 – tetrafluoroethane is subject to U.S. Environmental Protection Agency Clean Air Act Regulations, Section 608 in 40 CFR Part 82 regarding refrigerant recycling.

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## 14. TRANSPORTATION INFORMATION

### DOT (DEPARTMENT OF TRANSPORTATION)

**PROPER SHIPPING NAME:** CONSUMER COMMODITY ORM-D

**TECHNICAL NAME:** 1,1,1,2-Tetrafluoroethane

**PRIMARY HAZARD CLASS/DIVISION:** No classification

**UN/NA NUMBER:** NA

**PACKING CODE GROUP:** N/A

**OTHER SHIPPING INFORMATION:** Must have a copy of the DOT-E-10232 with each shipment.

### AIR (ICAO/IATA)

**PROPER SHIPPING NAME:** CONSUMER COMMODITY ID8000

**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 QUANTITIES OF CLASS 2

**PRIMARY HAZARD CLASS/DIVISION:** 2.2

**UN/NA NUMBER:** UN1950

**PACKING GROUP:** N/A

**IMDG NOTE:** Page 2102

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## 15. REGULATORY INFORMATION

### UNITED STATES

**SARA TITLE III (SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT)**

**311/312 HAZARD CATEGORIES:** IMMEDIATE / PRESSURE  
**PRESSURE GENERATING:** YES **ACUTE:** YES

**313 REPORTABLE INGREDIENTS:** 2-propanol (CAS #67-63-0) Butyl phthalate (CAS# 84-74-2)

**CERCLA (COMPREHENSIVE RESPONSE, COMPENSATION, AND LIABILITY ACT)**

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

**TSCA (TOXIC SUBSTANCE CONTROL ACT)**

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

**OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA)**

**29 CFR 1910.119---PROCESS SAFETY MANAGEMENT OF HIGHLY HAZARDOUS CHEMICALS:**

None of the chemicals in this product are considered highly hazardous by OSHA

**CANADA**

**WHMIS CLASS:** Class A, Class D2B.

**DOMESTIC SUBSTANCE LIST (INVENTORY):** All components of this product are listed on the Canadian DSL.

**EUROPEAN COMMUNITY**

**EEC LABEL SYMBOL AND CLASSIFICATION**

R63 – Possible risk of harm to the unborn child.

EEC Harmful – “Xn”

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

EEC Irritant – “Xi”

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

**GENERAL COMMENTS:** 1,1,1,2-tetrafluoroethane is subject to U.S. Environmental Agency Clean Air Act Regulations, (40CFR Part 82).

**COMMENTS:** WARNING: Contains 1,1,1,2-tetrafluoroethane (HFC-134a), a greenhouse gas which may contribute to global warming.

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**16. OTHER INFORMATION**

**APPROVED BY:** Pierce A. Pillon

**TITLE:** Chemist

**REVISION SUMMARY:** New MSDS

<b>HMIS RATING</b>		<b>NEPA CODES</b>	
HEALTH	<b>1</b>		<b>1</b>
FLAMMABILITY	<b>1</b>		
PHYSICAL HAZARD	<b>0</b>	<b>2</b>	<b>0</b>
PERSONAL PROTECTION:			

**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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## **MANUFACTURER DISCLAIMER**

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