



# MATERIAL SAFETY DATA SHEET

## PRODUCT IDENTIFICATION

**PRODUCT NAME: ELECTRIC CONTACT CLEANER**

**PART #: N4830**

(NFPA RATINGS)

HEALTH: 2

FIRE: 0

REACTIVITY: 0

(HMIS RATINGS)

HEALTH: 2

FIRE: 0

REACTIVITY: 0

HMIS PROTECTIVE EQUIPMENT: B

<b>PRODUCT INFORMATION</b> (800) 262-0012	<b>MEDICAL EMERGENCY</b> (856) 455-4555
<b>TRANSPORTATION EMERGENCY</b> CHEMTREC (800) 424-9300	<b>DISTRIBUTOR / MANUFACTURER</b> NATIONAL REFRIGERANTS, INC. 661 KENYON AVE. ROSENHAYN, NJ

## HAZARDOUS INGREDIENTS

OSHA Hazardous Components (29 CFR 1910.1200)

	CAS NUMBER	EXPOSURE LIMITS: 8 HR. TWA OSHA PEL	ACGIH TLV
1,1,1,2-Tetrafluoroethane	811-97-2	Not established	Not established
1-Bromopropane	106-94-5	* Not established	Not established
3,3-Dichloro-1,1,1,2,2-Pentafluoropropane	422-56-0	Not established	Not established
1,3-Dichloro-1,1,2,2,3-Pentafluoropropane	507-55-1	Not established	Not established

\*Manufacturer's suggested Exposure Limit = 25 ppm over 8 hours.

## HAZARDS IDENTIFICATIONS

**PRIMARY ROUTES OF ENTRY:** (X) INHALATION ( ) INGESTION (X) SKIN ABSORPTION (X) EYE

### ACUTE EFFECTS:

**INHALATION:** Excessive inhalation of vapors can cause central nervous system depression, dizziness, weakness, confusion, incoordination or unconsciousness. Irregular heart beat with a strange sensation in the chest, "heart thumping", apprehension, lightheadedness, feeling or fainting, dizziness, weakness may progress to loss of consciousness and death. Suffocation if air is displaced by vapors.

**EYE CONTACT:** Irritation with tearing, pain or blurred vision.

**SKIN CONTACT:** Slight irritation with itching, redness or swelling. Prolonged exposure and direct spraying of skin may result in defatting of the skin and/or frostbite.

**INGESTION:** Aspiration which may cause "chemical pneumonia". Symptoms include coughing, gasping, choking, shortness of breath, bluish discoloration of skin, rapid breathing and increased heart rate.

**CHRONIC EFFECTS:** (Effects due to excessive exposure to the raw materials of this mixture) Excessive inhalation may result in central nervous system effects.

**MEDICAL CONDITION GENERALLY AGGRAVATED BY EXPOSURE:** May aggravate existing eye, skin, or upper respiratory conditions.

**CARCINOGENICITY:** LISTED IN NTP: No IARC: No OSHA: No

**WARNING:** This product contains a chemical or chemicals known to the State of California to cause birth defects or other reproductive harm.



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## FIRST AID MEASURES

**INHALATION:** Remove to fresh air. Resuscitate if necessary. Get medical attention.  
**EYE CONTACT:** Flush with water for 15 minutes. If irritated, seek medical attention.  
**SKIN CONTACT:** Wash with soap and water. If irritated, seek medical attention.  
**INGESTION:** DO NOT INDUCE VOMITING. Drink two large glasses of water. Get immediate medical attention.

## FIRE FIGHTING MEASURES

**FLAMMABILITY** as per USA FLAME PROJECTION TEST (aerosols):  
extinguishes flame: NOT categorized as FLAMMABLE  
**FLASHPOINT (TEST METHOD):** (non-aerosols) N/A  
**FLAMMABLE LIMITS: LOWER:** N/E **UPPER:** N/E  
**AUTOIGNITION TEMPERATURE:** N/E  
**SPECIAL FIRE FIGHTING PROCEDURES:** Self-contained breathing apparatus.  
**EXTINGUISHING MEDIA:** Use carbon dioxide, dry chemical or foam.  
**UNUSUAL FIRE & EXPLOSION HAZARDS:** Do not expose aerosols to temperatures above 130 deg. F or the container may rupture.

## ACCIDENTAL RELEASE MEASURES

**STEPS TO BE TAKEN IF MATERIAL IS SPILLED OR RELEASED:** Absorb with suitable medium. Incinerate or landfill according to local, state or federal regulation. DO NOT FLUSH TO SEWER.

## HANDLING AND STORAGE

Do not puncture or incinerate containers. Do not store at temperatures above 130 deg. F.

## EXPOSURE CONTROLS/PERSONAL PROTECTION

**ENGINEERING CONTROLS:** Adequate ventilation to keep vapor concentration below TLV.

**PERSONAL PROTECTION:**

**Respiratory Protection:** If vapor concentration exceeds TLV, use respirator approved by NIOSH for organic vapor.

**Protective Gloves:** Neoprene or other as recommended compatible by glove manufacture.

**Eye Protection:** Safety glasses recommended.

**Other Protective Clothing & Equipment:** None

**Hygienic Work Practices:** Wash hands with soap and water before handling food.

## PHYSICAL AND CHEMICAL PROPERTIES

**VAPOR PRESSURE:** psig @ 70<sup>o</sup>f (aerosols): 50-60

**SPECIFIC GRAVITY (H<sub>2</sub>O=1):** Concentrate Only = 1.33

**SOLUBILITY IN WATER:** Negligible

**APPEARANCE & ODOR:** Spray as a clear, forceful, stream with solvent odor.

**BOILING POINT:** N/A

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

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

**WATER REACTIVE:** No

**VAPOR PRESSURE:** (non-aerosols) N/A



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## STABILITY AND REACTIVITY

**STABILITY:** Stable

**INCOMPATIBILITY:** Strong oxidizing agents, strong bases sodium hydroxide, potassium hydroxide, alkaline earth metals, finely powdered metals such as aluminum, magnesium or zinc.

**CONDITIONS TO AVOID:** Open flame, glowing metal surfaces, welding arcs, heat, sparks.

**HAZARDOUS DECOMPOSITION PRODUCTS:** Carbon monoxide, carbon dioxide, hydrofluoric acid, hydrochloric acid, chlorine, bromine and possible carbonyl halides.

**HAZARDOUS POLYMERIZATION:** Will not occur.

## DISPOSAL CONSIDERATIONS

Aerosol cans when vented to atmospheric pressure through normal use, pose no disposal hazard.

## TRANSPORTATION INFORMATION

**PROPER SHIPPING NAME:** Consumer commodity, ORM-D

## REGULATORY INFORMATION

**SARA TITLE III** (Superfund Amendments and Reauthorization Act): Chemical components of this product are not listed on the SARA Title III list.

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**DATE OF LATEST REVISION/REVIEW:**  
**PERSON RESPONSIBLE FOR MSDS:**

10/09  
Ray Madariaga