Section 1: Product & Company Identification

Product Name: CO® Contact Cleaner (aerosol)

Product Number (s): 02016, 72016

Product Use: Precision Electronics Cleaning

Manufacturer / Supplier Contact Information:

In United States: CRC Industries, Inc.
885 Louis Drive
Warminster, PA 18974
www.crcindustries.com
1-215-674-4300 (General)
(800) 521-3168 (Technical)
(800) 272-4620 (Customer Service)

In Canada: CRC Canada Co.
2-1246 Lorimar Drive
Mississauga, Ontario L5S 1R2
www.crc-canada.ca
1-905-670-2291

In Mexico: CRC Industries Mexico
Av. Benito Juárez 4055 G
Colonia Orquídea
San Luis Potosí, SLP CP 78394
www.crc-mexico.com
52-444-824-1666

24-Hr Emergency – CHEMTREC: (800) 424-9300 or (703) 527-3887

Section 2: Hazards Identification

Emergency Overview

WARNING: Contents Under Pressure.
As defined by OSHA’s Hazard Communication Standard, this product is hazardous.
Appearance & Odor: Colorless volatile liquid with ethereal and faint sweetish odor.

Potential Health Effects:

ACUTE EFFECTS:

EYE: May cause eye irritation with tearing, pain or blurred vision.

SKIN: Immediate effects may include irritation, itching, redness and swelling. Prolonged or repeated contact can cause defatting of the skin, with redness and rash.

INHALATION: Overexposure to vapor may cause dizziness, loss of concentration and irritation. With high exposure levels, effects can include central nervous system (CNS) depression and cardiac arrhythmia. Product vapors displace air and can cause suffocation especially in a confined space.

INGESTION: The major hazard is aspiration of the liquid into the lungs during swallowing or vomiting. This may result in chemical pneumonia. Symptoms include coughing, gasping, shortness of breath, bluish discoloration of the skin, and fever. Pulmonary edema, confusion, coma and seizures may occur in more serious cases.

CHRONIC EFFECTS: None identified

TARGET ORGANS: None identified

Medical Conditions Aggravated by Exposure: Pre-existing disease of the central nervous system or cardiovascular system.

See Section 11 for toxicology and carcinogenicity information on product ingredients.
Section 3: Composition/Information on Ingredients

<table>
<thead>
<tr>
<th>COMPONENT</th>
<th>CAS NUMBER</th>
<th>% by Wt.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Decafluoropentane (HFC-43-10mee)</td>
<td>138495-42-8</td>
<td>55 - 65</td>
</tr>
<tr>
<td>1,1,1,2-Tetrafluoroethane (HFC-134a)</td>
<td>811-97-2</td>
<td>35 - 45</td>
</tr>
</tbody>
</table>

Section 4: First Aid Measures

Eye Contact: Immediately flush with plenty of water for 15 minutes. Call a physician if irritation persists.

Skin Contact: Remove contaminated clothing and wash affected area with soap and water. Call a physician if irritation persists. Wash contaminated clothing prior to re-use.

Inhalation: Remove person to fresh air. Keep person calm. If not breathing, give artificial respiration. If breathing is difficult give oxygen. Do NOT give epinephrine (adrenaline). Call a physician.

Ingestion: Do NOT induce vomiting unless instructed to do so by a physician. Immediately give 2 glasses of water. Do NOT give stimulants. Get medical attention immediately.

Note to Physicians: Because of possible disturbances of cardiac rhythm, catecholamine drugs such as adrenaline 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.

Section 5: Fire-Fighting Measures

Flammable Properties: This product is nonflammable in accordance with aerosol flammability definitions. (See 16 CFR 1500.3(c)(6)).

Flash Point: None
Autoignition Temperature: ND
Upper Explosive Limit: None
Lower Explosive Limit: None

Fire and Explosion Data:

Suitable Extinguishing Media: Choose an extinguishing agent appropriate for the surrounding fire.

Products of Combustion: Product will decompose at high temperatures. Decomposition products include hydrofluoric acid and carbonyl halides, such as phosgene.

Explosion Hazards: Aerosol containers, when exposed to heat from fire, may build pressure and explode.

Protection of Fire-Fighters: Firefighters should wear self-contained, NIOSH-approved breathing apparatus for protection against suffocation and possible toxic decomposition products. Proper eye and skin protection should be provided. Use water spray to keep fire-exposed containers cool and to knock down vapors which may result from product decomposition.

Section 6: Accidental Release Measures

Personal Precautions: Use personal protection recommended in Section 8. Avoid inhaling vapors.

Environmental Precautions: Take precautions to prevent contamination of ground and surface waters. Do not flush into sewers or storm drains.

Methods for Containment & Clean-up: Dike area to contain spill. Ventilate the area with fresh air. If in confined space or limited air circulation area, clean-up workers should wear appropriate respiratory protection. Recover or absorb spilled material using an absorbent
Section 7: Handling and Storage

Handling Procedures: Minimize vapor accumulation by providing air circulation. Avoid breathing vapors or mist. Wear eye protection. Wash thoroughly after handling. Use caution around energized equipment. The metal container will conduct electricity if it contacts a live source. This may result in injury to the user from electrical shock and/or flash fire. For product use instructions, please see the product label.

Storage Procedures: Store in a cool dry area out of direct sunlight. Aerosol cans must be maintained below 120°F to prevent cans from rupturing. If stored below 14°F, mix prior to use.

Aerosol Storage Level: I

Section 8: Exposure Controls/Personal Protection

Exposure Guidelines:

<table>
<thead>
<tr>
<th>COMPONENT</th>
<th>OSHA</th>
<th>ACGIH</th>
<th>OTHER</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>TWA</td>
<td>STEL</td>
<td>TWA</td>
</tr>
<tr>
<td>Decafluoropentane</td>
<td>NE</td>
<td>NE</td>
<td>NE</td>
</tr>
<tr>
<td>1,1,1,2-Tetrafluoroethane</td>
<td>NE</td>
<td>NE</td>
<td>NE</td>
</tr>
<tr>
<td>N.E. – Not Established</td>
<td>(c) – ceiling</td>
<td>(s) – skin</td>
<td>(v) – vacated</td>
</tr>
</tbody>
</table>

Controls and Protection:

Engineering Controls: Area should have ventilation to provide fresh air. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at the source, preventing dispersion into the general work area. Use mechanical means if necessary to maintain vapor levels below the exposure guidelines. If working in a confined space, follow applicable OSHA regulations.

Respiratory Protection: None required for normal work where adequate ventilation is provided. If engineering controls are not feasible or if exposure exceeds the applicable exposure limits, use a NIOSH-approved cartridge respirator with organic vapor cartridge. Air monitoring is needed to determine actual employee exposure levels. Use a self-contained breathing apparatus in confined spaces and for emergencies.

Eye/face Protection: For normal conditions, wear safety glasses. Where there is reasonable probability of liquid contact, wear splash-proof goggles.

Skin Protection: Use protective gloves such as nitrile, PVA or neoprene. Also, use full protective clothing if there is prolonged or repeated contact of liquid with skin.

Section 9: Physical and Chemical Properties

Physical State: liquid
Color: clear, colorless
Odor: ethereal and sweetish odor
Odor Threshold: ND
Specific Gravity: 1.58
Initial Boiling Point: 131°F
Freezing Point: ND
Product Name: CO® Contact Cleaner

Vapor Pressure: 226 mmHg @ 77°F
Vapor Density: > 1 (air = 1)
Evaporation Rate: very fast
Solubility: 140 ppm (water)
Coefficient of water/oil distribution: ND
pH: NA
Volatile Organic Compounds: Federal: wt %: 0 g/L: 0 lbs./gal: 0
CARB: wt %: 60 g/L: 948 lbs./gal: 7.9

Section 10: Stability and Reactivity

Stability: Stable
Conditions to Avoid: Avoid temperature extremes. Exposure of this product to high energy sources may yield toxic and/or corrosive decomposition products.
Incompatible Materials: Alkali or alkaline earth metals such as powdered or freshly abraded aluminum, sodium, magnesium, zinc, beryllium, etc.; strong bases such as sodium hydroxide, potassium hydroxide, etc.
Hazardous Decomposition Products: Hydrofluoric acids and carbonyl halides, such as phosgene. Decafluoropentane is incompatible with strong bases and can react to form salts of hydrofluoric acid.
Possibility of Hazardous Reactions: No

Section 11: Toxicological Information

Long-term toxicological studies have not been conducted for this product. The following information is available for components of this product.

Acute Toxicity:

<table>
<thead>
<tr>
<th>Component</th>
<th>Oral LD50 (rat)</th>
<th>Dermal LD50 (rabbit)</th>
<th>Inhalation LC50 (rat)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Decafluoropentane</td>
<td>&gt; 5 mg/kg</td>
<td>&gt; 5 mg/kg</td>
<td>11,100 ppm/4H</td>
</tr>
<tr>
<td>1,1,1,2-Tetrafluoroethane</td>
<td>No data</td>
<td>No data</td>
<td>1500 g/m³/4H</td>
</tr>
</tbody>
</table>

Chronic Toxicity:

<table>
<thead>
<tr>
<th>Component</th>
<th>OSHA Carcinogen</th>
<th>IARC Carcinogen</th>
<th>NTP Carcinogen</th>
<th>Irritant E (mild) / S (mild)</th>
<th>Sensitizer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Decafluoropentane</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>E (mild) / S (mild)</td>
<td>No</td>
</tr>
<tr>
<td>1,1,1,2-Tetrafluoroethane</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>E (mild) / S (mild)</td>
<td>No</td>
</tr>
</tbody>
</table>

Reproductive Toxicity: No information available
Teratogenicity: No information available
Mutagenicity: No information available
Synergistic Effects: No information available

Section 12: Ecological Information

Ecological studies have not been conducted for this product. The following information is available for components of this product.
Section 13: Disposal Considerations

Waste Classification: The dispensed liquid product is not a RCRA hazardous waste. Pressurized containers are a D003 reactive waste. (See 40 CFR Part 261.20 – 261.33) Empty aerosol containers may be recycled.

All disposal activities must comply with federal, state, provincial and local regulations. Local regulations may be more stringent than state, provincial or national requirements.

Section 14: Transport Information

US DOT (ground): Consumer Commodity, ORM-D

ICAO/IATA (air): Consumer Commodity, ID8000, 9

IMO/IMDG (water): Aerosols, UN1950, 2.2, Limited Quantity

Special Provisions: None

Section 15: Regulatory Information

U.S. Federal Regulations:

Toxic Substances Control Act (TSCA):
All ingredients are either listed on the TSCA inventory or are exempt.

Comprehensive Environmental Response, Compensation and Liability Act (CERCLA):
Reportable Quantities (RQ’s) exist for the following ingredients: None

Spills or releases resulting in the loss of any ingredient at or above its RQ require immediate notification to the National Response Center (800-424-8802) and to your Local Emergency Planning Committee.

Superfund Amendments Reauthorization Act (SARA) Title III:
Section 302 Extremely Hazardous Substances (EHS): None

Section 311/312 Hazard Categories:
Fire Hazard No
Reactive Hazard No
Release of Pressure Yes
Acute Health Hazard Yes
Chronic Health Hazard No

Section 313 Toxic Chemicals: This product contains the following substances 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: None

Clean Air Act:
Section 112 Hazardous Air Pollutants (HAPs): None

U.S. State Regulations:
Product Name: CO® Contact Cleaner

Product Number(s): 02016, 72016, 82016

California Safe Drinking Water and Toxic Enforcement Act (Prop 65):
This product may contain the following chemicals known to the state of California to cause cancer, birth defects or other reproductive harm: None

Consumer Products VOC Regulations: This product complies with Consumer Products VOC regulations as an Electronic Cleaner

State Right to Know:
New Jersey: None
Pennsylvania: None
Massachusetts: None
Rhode Island: None

Canadian Regulations:
Canadian DSL Inventory: All ingredients are either listed on the DSL Inventory or are exempt.
WHMIS Hazard Class: A, D2B

European Union Regulations:

Additional Regulatory Information: None

Section 16: Other Information

<table>
<thead>
<tr>
<th>HMIS® (II)</th>
<th>NFPA</th>
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</thead>
<tbody>
<tr>
<td>Health:</td>
<td>1</td>
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<tr>
<td>Flammability:</td>
<td>0</td>
</tr>
<tr>
<td>Reactivity:</td>
<td>1</td>
</tr>
<tr>
<td>PPE:</td>
<td>B</td>
</tr>
</tbody>
</table>

Ratings range from 0 (no hazard) to 4 (severe hazard)

Prepared By: Michelle Rudnick
CRC #: 508D
Revision Date: 01/02/2009

Changes since last revision: Section 15: Consumer Products VOC Regulations revised

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