SAFETY DATA SHEET

1. Identification

Product identifier: NON-FLAMMABLE CONTACT CLEANER

Other means of identification
SDS number: RE1000029408

Recommended restrictions
Product Use: Cleaner
Restrictions on use: Not known.

Manufacturer/Importer/Distributor Information

Manufacturer
Company Name: CLAIRE MANUFACTURING COMPANY
Address: 1000 Integram Dr
          Pacific, MO 63069
Telephone: 1-630-543-7600
Fax: Emergency telephone number: 1-866-836-8855

2. Hazard(s) identification

Hazard Classification

Physical Hazards
Gases under pressure Compressed gas

Health Hazards
Serious Eye Damage/Eye Irritation Category 2A

Label Elements

Hazard Symbol:

Signal Word: Warning

Hazard Statement: Contains gas under pressure; may explode if heated.
Causes serious eye irritation.

Precautionary Statements

Prevention: Wash thoroughly after handling. Wear protective gloves/protective
clothing/eye protection/face protection.
Response: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

Storage: Protect from sunlight. Store in a well-ventilated place.

Hazard(s) not otherwise classified (HNOC): None.

3. Composition/information on ingredients

Mixtures

<table>
<thead>
<tr>
<th>Chemical Identity</th>
<th>CAS number</th>
<th>Content in percent (%)*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethene, 1,2-dichloro-, (1E)-</td>
<td>156-60-5</td>
<td>50 - &lt;100%</td>
</tr>
<tr>
<td>Ethane, 1,1,1,2-tetrafluoro-</td>
<td>811-97-2</td>
<td>20 - &lt;50%</td>
</tr>
<tr>
<td>Butane, 1-ethoxy-1,1,2,2,3,3,4,4,4-nonafluoro-</td>
<td>163702-05-4</td>
<td>10 - &lt;20%</td>
</tr>
<tr>
<td>Propane, 2-(ethoxydifluoromethyl)-1,1,1,2,3,3,3-heptafluoro-</td>
<td>163702-06-5</td>
<td>10 - &lt;20%</td>
</tr>
<tr>
<td>Butane, 1,1,1,2,2,3,3,4,4-nonafluoro-4-methoxy-</td>
<td>163702-07-6</td>
<td>5 - &lt;10%</td>
</tr>
<tr>
<td>Propane, 2-(difluoromethoxymethyl)-1,1,1,2,3,3,3-heptafluoro-</td>
<td>163702-08-7</td>
<td>5 - &lt;10%</td>
</tr>
</tbody>
</table>

* All concentrations are percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

4. First-aid measures

Ingestion: Call a POISON CENTER/doctor if you feel unwell. Rinse mouth.

Inhalation: Move to fresh air.

Skin Contact: Wash skin thoroughly with soap and water. If skin irritation occurs: Get medical advice/attention.

Eye contact: Immediately flush with plenty of water for at least 15 minutes. If easy to do, remove contact lenses. Get medical attention.

Most important symptoms/effects, acute and delayed

Symptoms: No data available.

Hazards: No data available.

Indication of immediate medical attention and special treatment needed

Treatment: No data available.

5. Fire-fighting measures

General Fire Hazards: Use water spray to keep fire-exposed containers cool. Fight fire from a protected location. Move containers from fire area if you can do so without risk.
Suitable (and unsuitable) extinguishing media

**Suitable extinguishing media:**
Use fire-extinguishing media appropriate for surrounding materials.

**Unsuitable extinguishing media:**
Do not use water jet as an extinguisher, as this will spread the fire.

**Specific hazards arising from the chemical:**
Vapors may travel considerable distance to a source of ignition and flash back.

Special protective equipment and precautions for firefighters

**Special fire fighting procedures:**
No data available.

**Special protective equipment for fire-fighters:**
Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA.

6. Accidental release measures

**Personal precautions, protective equipment and emergency procedures:**
Ventilate closed spaces before entering them. ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Keep upwind.

**Methods and material for containment and cleaning up:**
Absorb spill with vermiculite or other inert material, then place in a container for chemical waste.

**Notification Procedures:**
Prevent entry into waterways, sewer, basements or confined areas. Stop the flow of material, if this is without risk. ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Stop leak if you can do so without risk.

**Environmental Precautions:**
Do not contaminate water sources or sewer. Prevent further leakage or spillage if safe to do so.

7. Handling and storage

**Precautions for safe handling:**
Wash hands thoroughly after handling. Avoid contact with eyes. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Do not spray on an open flame or other ignition source. Do not pierce or burn, even after use.

**Conditions for safe storage, including any incompatibilities:**
Pressurized container: protect from sunlight and do not expose to temperatures exceeding 50°C. Do not pierce or burn, even after use. Aerosol Level 1

8. Exposure controls/personal protection

**Control Parameters**

<table>
<thead>
<tr>
<th>Chemical Identity</th>
<th>Type</th>
<th>Exposure Limit Values</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethene, 1,2-dichloro-</td>
<td>TWA</td>
<td>200 ppm 790 mg/m3</td>
<td>US. Tennessee. OELs. Occupational Exposure Limits, Table Z1A (06 2008)</td>
</tr>
</tbody>
</table>
### Appropriate Engineering Controls

No data available.

### Individual protection measures, such as personal protective equipment

#### General information:
Provide easy access to water supply and eye wash facilities. Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. If exposure limits have not been established, maintain airborne levels to an acceptable level.

#### Eye/face protection:
Wear safety glasses with side shields (or goggles).

#### Skin Protection

- **Hand Protection:** No data available.

- **Other:** Wear suitable protective clothing.

#### Respiratory Protection:
In case of inadequate ventilation use suitable respirator. Seek advice from local supervisor.

#### Hygiene measures:
Observe good industrial hygiene practices. Avoid contact with eyes. When using do not smoke.

### 9. Physical and chemical properties

#### Appearance

- **Physical state:** Gas
- **Form:** Compressed gas
- **Color:** No data available.
- **Odor:** No data available.
- **Odor threshold:** No data available.
- **pH:** No data available.
- **Melting point/freezing point:** No data available.

**Table:**

<table>
<thead>
<tr>
<th>REL</th>
<th>200 ppm</th>
<th>790 mg/m³</th>
<th>US. NIOSH: Pocket Guide to Chemical Hazards (2005)</th>
</tr>
</thead>
<tbody>
<tr>
<td>TWA</td>
<td>200 ppm</td>
<td>790 mg/m³</td>
<td>US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989)</td>
</tr>
<tr>
<td>TWA PEL</td>
<td>200 ppm</td>
<td>790 mg/m³</td>
<td>US. California Code of Regulations, Title 8, Section 5155. Airborne Contaminants (09 2006)</td>
</tr>
<tr>
<td>TWA</td>
<td>200 ppm</td>
<td>US. ACGIH Threshold Limit Values (02 2012)</td>
<td></td>
</tr>
<tr>
<td>ST ESL</td>
<td>7,900 µg/m³</td>
<td>US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (11 2016)</td>
<td></td>
</tr>
<tr>
<td>AN ESL</td>
<td>790 µg/m³</td>
<td>US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (11 2016)</td>
<td></td>
</tr>
<tr>
<td>PEL</td>
<td>200 ppm</td>
<td>790 mg/m³</td>
<td>US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)</td>
</tr>
<tr>
<td>AN ESL</td>
<td>200 ppb</td>
<td>US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (11 2016)</td>
<td></td>
</tr>
<tr>
<td>ST ESL</td>
<td>2,000 ppb</td>
<td>US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (11 2016)</td>
<td></td>
</tr>
</tbody>
</table>
Initial boiling point and boiling range: No data available.
Flash Point: Not applicable
Evaporation rate: No data available.
Flammability (solid, gas): No data available.

Upper/lower limit on flammability or explosive limits

- Flammability limit - upper (%): Estimated 13.7 % (V)
- Flammability limit - lower (%): Estimated 6.7 % (V)
- Explosive limit - upper (%): No data available.
- Explosive limit - lower (%): No data available.

Vapor pressure: 2,757.9029 - 3,447.3786 hPa (20 °C)
Vapor density: No data available.
Density: No data available.
Relative density: No data available.
Solubility(ies)
  - Solubility in water: No data available.
  - Solubility (other): No data available.
Partition coefficient (n-octanol/water): No data available.
Auto-ignition temperature: No data available.
Decomposition temperature: No data available.
Viscosity: No data available.

10. Stability and reactivity

Reactivity: No data available.
Chemical Stability: Material is stable under normal conditions.
Possibility of hazardous reactions: No data available.
Conditions to avoid: Avoid heat or contamination.
Incompatible Materials: No data available.
Hazardous Decomposition Products: No data available.

11. Toxicological information

Information on likely routes of exposure
  - Inhalation: No data available.
  - Skin Contact: No data available.
  - Eye contact: No data available.
  - Ingestion: No data available.

Symptoms related to the physical, chemical and toxicological characteristics
  - Inhalation: No data available.
  - Skin Contact: No data available.
Eye contact: No data available.
Ingestion: No data available.

Information on toxicological effects

Acute toxicity (list all possible routes of exposure)

Oral
Product: No data available.

Dermal
Product: No data available.

Inhalation
Product: No data available.

Repeated dose toxicity
Product: No data available.

Skin Corrosion/Irritation
Product: No data available.

Serious Eye Damage/Eye Irritation
Product: No data available.

Respiratory or Skin Sensitization
Product: No data available.

Carcinogenicity
Product: No data available.

IARC Monographs on the Evaluation of Carcinogenic Risks to Humans:
No carcinogenic components identified

US. National Toxicology Program (NTP) Report on Carcinogens:
No carcinogenic components identified

No carcinogenic components identified

Germ Cell Mutagenicity

In vitro
Product: No data available.

In vivo
Product: No data available.

Reproductive toxicity
Product: No data available.

Specific Target Organ Toxicity - Single Exposure
Product: No data available.

Specific Target Organ Toxicity - Repeated Exposure
Product: No data available.
Aspiration Hazard
Product: No data available.

Other effects: No data available.

12. Ecological information

Ecotoxicity:

Acute hazards to the aquatic environment:

Fish Product: No data available.

Aquatic Invertebrates Product: No data available.

Chronic hazards to the aquatic environment:

Fish Product: No data available.

Aquatic Invertebrates Product: No data available.

Toxicity to Aquatic Plants Product: No data available.

Persistence and Degradability

Biodegradation Product: No data available.

BOD/COD Ratio Product: No data available.

Bioaccumulative potential
Bioconcentration Factor (BCF)
Product: No data available.

Partition Coefficient n-octanol / water (log Kow)
Product: No data available.

Mobility in soil: No data available.

Known or predicted distribution to environmental compartments
Ethene, 1,2-dichloro-, (1E)- No data available.
Ethane, 1,1,1,2-tetrafluoro- No data available.
Butane, 1-ethoxy- No data available.
1,1,2,2,3,3,4,4,4-nonfluoro- Propane, 2- (ethoxydifluoromethyl)- No data available.
1,1,1,2,3,3,3-heptafluoro- No data available.
Butane, 1,1,2,2,3,3,4,4- nonfluoro-4-methoxy-
Propane, 2-
(difluoromethoxymethyl)-
1,1,2,3,3,3-heptafluoro-

Other adverse effects: No data available.

### 13. Disposal considerations

**Disposal instructions:** Wash before disposal. Dispose to controlled facilities.

**Contaminated Packaging:** No data available.

### 14. Transport information

#### DOT

| UN Number: | UN 1950 |
| UN Proper Shipping Name: | Aerosols, non-flammable |
| Transport Hazard Class(es): | 2.2 |
| Class: | |
| Label(s): | – |
| Packing Group: | II |
| Marine Pollutant: | No |
| Environmental Hazards: | No |
| Marine Pollutant | No |

**Special precautions for user:** Not regulated.

#### IMDG

| UN Number: | UN 1950 |
| UN Proper Shipping Name: | Aerosols, non-flammable |
| Transport Hazard Class(es): | 2 |
| Class: | |
| Label(s): | – |
| EmS No.: | – |
| Packing Group: | – |
| Environmental Hazards: | No |
| Marine Pollutant | No |

**Special precautions for user:** Not regulated.

#### IATA

| UN Number: | UN 1950 |
| Proper Shipping Name: | Aerosols, non-flammable |
| Transport Hazard Class(es): | 2.2 |
| Class: | |
| Label(s): | – |
| Packing Group: | – |
| Environmental Hazards: | No |
| Marine Pollutant | No |

**Special precautions for user:** Not regulated.

**Cargo aircraft only:** Allowed.
15. Regulatory information

US Federal Regulations
TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)
US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)
None present or none present in regulated quantities.

CERCLA Hazardous Substance List (40 CFR 302.4):

<table>
<thead>
<tr>
<th>Chemical Identity</th>
<th>Reportable quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethene, 1,2-dichloro-, (1E)-</td>
<td>lbs. 1000</td>
</tr>
</tbody>
</table>

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories
- Sudden Release of Pressure
- Immediate (Acute) Health Hazards
- Gases under pressure
- Serious Eye Damage/Eye Irritation

SARA 302 Extremely Hazardous Substance
None present or none present in regulated quantities.

SARA 304 Emergency Release Notification

<table>
<thead>
<tr>
<th>Chemical Identity</th>
<th>Reportable quantity</th>
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</thead>
<tbody>
<tr>
<td>Ethene, 1,2-dichloro-, (1E)-</td>
<td>lbs. 1000</td>
</tr>
</tbody>
</table>

SARA 311/312 Hazardous Chemical

<table>
<thead>
<tr>
<th>Chemical Identity</th>
<th>Threshold Planning Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethene, 1,2-dichloro-, (1E)-</td>
<td>10000 lbs</td>
</tr>
<tr>
<td>Ethane, 1,1,1,2-tetrafluoro-Butane, 1-ethoxy-1,1,2,2,3,3,4,4,4-nonfluoro-</td>
<td>10000 lbs</td>
</tr>
<tr>
<td>Propane, 2-(ethoxydifluoromethyl)-1,1,1,2,3,3,3-heptfluoro-Butane, 1,1,1,2,2,3,3,4,4-nonfluoro-4-methoxy-Propane, 2-(difluoromethoxymethyl)-1,1,1,2,3,3,3-heptfluoro-</td>
<td>10000 lbs</td>
</tr>
</tbody>
</table>

SARA 313 (TRI Reporting)

<table>
<thead>
<tr>
<th>Chemical Identity</th>
<th>Reporting threshold for other users</th>
<th>Reporting threshold for manufacturing and processing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethene, 1,2-dichloro-, (1E)-</td>
<td>lbs</td>
<td>lbs.</td>
</tr>
</tbody>
</table>

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130):
Clean Water Act Section 311 Hazardous Substances (40 CFR 117.3)
US State Regulations

US. California Proposition 65
No ingredient requiring a warning under CA Prop 65.
US. New Jersey Worker and Community Right-to-Know Act

**Chemical Identity**
Ethene, 1,2-dichloro-, (1E)-

**US. Massachusetts RTK - Substance List**
No ingredient regulated by MA Right-to-Know Law present.

**US. Pennsylvania RTK - Hazardous Substances**

**Chemical Identity**
Ethene, 1,2-dichloro-, (1E)-

**US. Rhode Island RTK**
No ingredient regulated by RI Right-to-Know Law present.

### International regulations

**Montreal protocol**
Ethane, 1,1,1,2-tetrafluoro- Group I Annex F

**Stockholm convention**
Not applicable

**Rotterdam convention**
Not applicable

**Kyoto protocol**
Inventory Status:

- Australia AICS: Not in compliance with the inventory.
- Canada DSL Inventory List: On or in compliance with the inventory
- EINECS, ELINCS or NLP: Not in compliance with the inventory.
- Japan (ENCS) List: Not in compliance with the inventory.
- China Inv. Existing Chemical Substances: On or in compliance with the inventory
- Korea Existing Chemicals Inv. (KECI): Not in compliance with the inventory.
- Canada NDSL Inventory: Not in compliance with the inventory.
- Philippines PICCS: On or in compliance with the inventory
- US TSCA Inventory: On or in compliance with the inventory
- New Zealand Inventory of Chemicals: On or in compliance with the inventory
- Japan ISHL Listing: Not in compliance with the inventory.
- Japan Pharmacopoeia Listing: Not in compliance with the inventory.
- Mexico INSQ: Not in compliance with the inventory.
- Ontario Inventory: Not in compliance with the inventory.
- Taiwan Chemical Substance Inventory: On or in compliance with the inventory

16. Other information, including date of preparation or last revision

- Issue Date: 07/25/2019
- Revision Information: No data available.
- Version #: 1.0
- Further Information: No data available.
- Disclaimer: This information is provided without warranty. The information is believed to be correct. This information should be used to make an independent determination of the methods to safeguard workers and the environment.