SAFETY DATA SHEET

1. Identification

Product identifier: CLEAN BREEZE HEAVY DUTY ODOR NEUTRALIZER

Other means of identification
SDS number: RE1000011815

Recommended restrictions
Product use: Air Freshener
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
Flammable aerosol Category 1

Health Hazards
Skin sensitizer Category 1
Aspiration Hazard Category 1

Environmental Hazards
Acute hazards to the aquatic environment Category 3
Chronic hazards to the aquatic environment Category 3

Label Elements

Hazard Symbol:

Signal Word: Danger
Hazard Statement: Extremely flammable aerosol.  
May cause an allergic skin reaction.  
May be fatal if swallowed and enters airways.  
Harmful to aquatic life with long lasting effects.

Precautionary Statements

Prevention: 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. Avoid breathing dust/fume/gas/mist/vapors/spray. Contaminated work clothing should not be allowed out of the workplace. Wear protective gloves/protective clothing/eye protection/face protection. Avoid release to the environment.

Response: IF ON SKIN: Wash with plenty of water/ If skin irritation or rash occurs: Get medical advice/attention. IF SWALLOWED: Immediately call a POISON CENTER/doctor/# Do NOT induce vomiting. Specific treatment (see on this label). Wash contaminated clothing before reuse.

Storage: Protect from sunlight. Do not expose to temperatures exceeding 50°C/122°F. Store locked up.

Disposal: Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

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>Distillates (petroleum), hydrotreated light</td>
<td>64742-47-8</td>
<td>10 - &lt;20%</td>
</tr>
<tr>
<td>Propane</td>
<td>74-98-6</td>
<td>5 - &lt;10%</td>
</tr>
<tr>
<td>Butane</td>
<td>106-97-8</td>
<td>1 - &lt;5%</td>
</tr>
<tr>
<td>Ethanone, 1-(1,2,3,4,5,6,7,8-octahydro-2,3,8,8-tetramethyl-2-napththalenyl)-</td>
<td>54464-57-2</td>
<td>0.1 - &lt;1%</td>
</tr>
<tr>
<td>Cyclohexene, 1-methyl-4-(1-methylenehexyl), (4R)-</td>
<td>5989-27-5</td>
<td>0.1 - &lt;1%</td>
</tr>
<tr>
<td>Octanal, 2-(phenylmethylene)-</td>
<td>101-86-0</td>
<td>0.1 - &lt;1%</td>
</tr>
<tr>
<td>Benzoic acid, 2-hydroxy-, phenethyl ester</td>
<td>118-58-1</td>
<td>0.1 - &lt;1%</td>
</tr>
<tr>
<td>Benzene, 1,1'-oxybis-</td>
<td>101-84-8</td>
<td>0.1 - &lt;1%</td>
</tr>
<tr>
<td>2,6-Octadien-1-ol, 3,7-dimethyl-,(2E)-</td>
<td>106-24-1</td>
<td>0.1 - &lt;1%</td>
</tr>
<tr>
<td>Bicyclo[3,1.1]heptane, 6,6-dimethyl-2-methylene-</td>
<td>127-91-3</td>
<td>0.1 - &lt;0.25%</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 physician or poison control center immediately. Rinse mouth. Never give liquid to an unconscious person. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs.

Inhalation: Move to fresh air.

Skin Contact: If skin irritation occurs: Get medical advice/attention. Destroy or thoroughly clean contaminated shoes. Immediately remove contaminated clothing and shoes and wash skin with soap and plenty of water. If skin irritation or an allergic skin reaction develops, get medical attention.

Eye contact: Any material that contacts the eye should be washed out immediately with water. If easy to do, remove contact lenses. If eye irritation persists: Get medical advice/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. See Section 8 of the SDS for Personal Protective Equipment. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Keep unauthorized personnel away.

Methods and material for containment and cleaning up:
Stop the flow of material, if this is without risk. Absorb with sand or other inert absorbent.

Notification Procedures:
ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Stop leak if you can do so without risk.

Environmental Precautions:
Avoid release to the environment. Prevent further leakage or spillage if safe to do so.

7. Handling and storage

Precautions for safe handling:
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. Avoid contact with eyes, skin, and clothing. Wash hands thoroughly after handling.

Conditions for safe storage, including any incompatibilities:
Store locked up. 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

Occupational Exposure Limits

<table>
<thead>
<tr>
<th>Chemical Identity</th>
<th>Type</th>
<th>Exposure Limit Values</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Distillates (petroleum), hydrotreated light - Non-aerosol. - as total hydrocarbon vapor</td>
<td>TWA</td>
<td>200 mg/m3</td>
<td>US. ACGIH Threshold Limit Values (2008)</td>
</tr>
<tr>
<td>Distillates (petroleum), hydrotreated light</td>
<td>REL</td>
<td>100 mg/m3</td>
<td>US. NIOSH: Pocket Guide to Chemical Hazards (2005)</td>
</tr>
<tr>
<td>Distillates (petroleum), hydrotreated light - Non-aerosol. - as total hydrocarbon vapor</td>
<td>TWA</td>
<td>200 mg/m3</td>
<td>US. ACGIH Threshold Limit Values (2008)</td>
</tr>
<tr>
<td>Distillates (petroleum), hydrotreated light</td>
<td>ST ESL</td>
<td>3,500 µg/m3</td>
<td>US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (11 2016)</td>
</tr>
<tr>
<td></td>
<td>AN ESL</td>
<td>350 µg/m3</td>
<td>US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (11 2016)</td>
</tr>
<tr>
<td>Propane</td>
<td>REL</td>
<td>1,000 ppm, 1,800 mg/m3</td>
<td>US. NIOSH: Pocket Guide to Chemical Hazards (2005)</td>
</tr>
<tr>
<td></td>
<td>PEL</td>
<td>1,000 ppm, 1,800 mg/m3</td>
<td>US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)</td>
</tr>
<tr>
<td></td>
<td>TWA PEL</td>
<td>1,000 ppm, 1,800 mg/m3</td>
<td>US. California Code of Regulations, Title 8, Section 5155. Airborne Contaminants (09 2006)</td>
</tr>
<tr>
<td></td>
<td>TWA</td>
<td>1,000 ppm, 1,800 mg/m3</td>
<td>US. Tennessee. OELs. Occupational Exposure Limits, Table Z1A (06 2008)</td>
</tr>
<tr>
<td></td>
<td>TWA</td>
<td>1,000 ppm, 1,800 mg/m3</td>
<td>US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989)</td>
</tr>
<tr>
<td>Butane</td>
<td>REL</td>
<td>800 ppm, 1,900 mg/m3</td>
<td>US. NIOSH: Pocket Guide to Chemical Hazards (2005)</td>
</tr>
<tr>
<td>Substance</td>
<td>TWA</td>
<td>STEL</td>
<td>Source</td>
</tr>
<tr>
<td>-----------------------------------------------</td>
<td>---------</td>
<td>---------</td>
<td>------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Benzene, 1,1'-oxybis- Vapors.</td>
<td>800 ppm</td>
<td>1,900 mg/m3</td>
<td>US. Tennessee. OELs. Occupational Exposure Limits, Table Z1A (06 2008)</td>
</tr>
<tr>
<td>1,1'-oxybis- Vapors.</td>
<td>1,000 ppm</td>
<td></td>
<td>US. ACGIH Threshold Limit Values (03 2018)</td>
</tr>
<tr>
<td>TWA</td>
<td>800 ppm</td>
<td>1,900 mg/m3</td>
<td>US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989)</td>
</tr>
<tr>
<td>AN ESL</td>
<td>3,000 ppb</td>
<td></td>
<td>US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (11 2016)</td>
</tr>
<tr>
<td>AN ESL</td>
<td>7,100 µg/m3</td>
<td></td>
<td>US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (11 2016)</td>
</tr>
<tr>
<td>TWA PEL</td>
<td>800 ppm</td>
<td>1,900 mg/m3</td>
<td>US. California Code of Regulations, Title 8, Section 5155. Airborne Contaminants (09 2006)</td>
</tr>
<tr>
<td>ST ESL</td>
<td>66,000 µg/m3</td>
<td></td>
<td>US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (11 2016)</td>
</tr>
<tr>
<td>ST ESL</td>
<td>28,000 ppb</td>
<td></td>
<td>US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (11 2016)</td>
</tr>
<tr>
<td>Benzene, 1,1'-oxybis- Vapors.</td>
<td>2 ppm</td>
<td></td>
<td>US. ACGIH Threshold Limit Values (03 2018)</td>
</tr>
<tr>
<td>TWA</td>
<td>1 ppm</td>
<td></td>
<td>US. ACGIH Threshold Limit Values (03 2018)</td>
</tr>
<tr>
<td>PEL</td>
<td>1 ppm</td>
<td>7 mg/m3</td>
<td>US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)</td>
</tr>
<tr>
<td>TWA PEL</td>
<td>1 ppm</td>
<td>7 mg/m3</td>
<td>US. California Code of Regulations, Title 8, Section 5155. Airborne Contaminants (09 2006)</td>
</tr>
<tr>
<td>REL</td>
<td>1 ppm</td>
<td>7 mg/m3</td>
<td>US. NIOSH: Pocket Guide to Chemical Hazards (2005)</td>
</tr>
<tr>
<td>TWA</td>
<td>1 ppm</td>
<td>7 mg/m3</td>
<td>US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989)</td>
</tr>
<tr>
<td>Benzene, 1,1'-oxybis- Vapors.</td>
<td>ST ESL</td>
<td>70 µg/m3</td>
<td>US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (11 2016)</td>
</tr>
<tr>
<td>AN ESL</td>
<td>7 µg/m3</td>
<td></td>
<td>US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (11 2016)</td>
</tr>
<tr>
<td>Benzene, 1,1'-oxybis- Vapors.</td>
<td>1 ppm</td>
<td>7 mg/m3</td>
<td>US. Tennessee. OELs. Occupational Exposure Limits, Table Z1A (06 2008)</td>
</tr>
<tr>
<td>Benzene, 1,1'-oxybis- Vapors.</td>
<td>ST ESL</td>
<td>10 ppb</td>
<td>US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (11 2016)</td>
</tr>
<tr>
<td>AN ESL</td>
<td>1 ppb</td>
<td></td>
<td>US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (11 2016)</td>
</tr>
<tr>
<td>Bicyclo[3.1.1]heptane, 6,6-dimethyl-2-methylene</td>
<td>AN ESL</td>
<td>63 ppb</td>
<td>US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (11 2016)</td>
</tr>
<tr>
<td>AN ESL</td>
<td>350 µg/m3</td>
<td></td>
<td>US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (11 2016)</td>
</tr>
<tr>
<td>ST ESL</td>
<td>3,500 µg/m3</td>
<td></td>
<td>US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (11 2016)</td>
</tr>
<tr>
<td>ST ESL</td>
<td>630 ppb</td>
<td></td>
<td>US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (11 2016)</td>
</tr>
<tr>
<td>TWA</td>
<td>20 ppm</td>
<td></td>
<td>US. ACGIH Threshold Limit Values (2008)</td>
</tr>
<tr>
<td>Ammonium hydroxide ((NH4)(OH))</td>
<td>AN ESL</td>
<td>92 µg/m3</td>
<td>US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (11 2016)</td>
</tr>
<tr>
<td>ST ESL</td>
<td>180 µg/m3</td>
<td></td>
<td>US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (11 2016)</td>
</tr>
<tr>
<td>STEL</td>
<td>35 ppm</td>
<td></td>
<td>US. ACGIH Threshold Limit Values (2008)</td>
</tr>
<tr>
<td>TWA</td>
<td>25 ppm</td>
<td></td>
<td>US. ACGIH Threshold Limit Values (2008)</td>
</tr>
<tr>
<td>TWA PEL</td>
<td>25 ppm</td>
<td>18 mg/m3</td>
<td>US. California Code of Regulations, Title 8, Section 5155. Airborne Contaminants (09 2006)</td>
</tr>
</tbody>
</table>
### STEL

<table>
<thead>
<tr>
<th>STEL</th>
<th>35 ppm</th>
<th>27 mg/m³</th>
<th>US. California Code of Regulations, Title 8, Section 5155. Airborne Contaminants (09 2006)</th>
</tr>
</thead>
<tbody>
<tr>
<td>STEL</td>
<td>35 ppm</td>
<td>27 mg/m³</td>
<td>US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989)</td>
</tr>
<tr>
<td>STEL</td>
<td>35 ppm</td>
<td>27 mg/m³</td>
<td>US. NIOSH: Pocket Guide to Chemical Hazards (2005)</td>
</tr>
<tr>
<td>REL</td>
<td>25 ppm</td>
<td>18 mg/m³</td>
<td>US. NIOSH: Pocket Guide to Chemical Hazards (2005)</td>
</tr>
<tr>
<td>PEL</td>
<td>50 ppm</td>
<td>35 mg/m³</td>
<td>US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)</td>
</tr>
</tbody>
</table>

### Appropriate Engineering Controls

No data available.

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

**General information:** Use personal protective equipment as required. Personal protection equipment should be chosen according to the CEN standards and in discussion with the supplier of the personal protective equipment.

**Eye/face protection:** Wear goggles/face shield.

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

**Other:** Wear chemical-resistant gloves, footwear, and protective clothing appropriate for the risk of exposure. Contact health and safety professional or manufacturer for specific information.

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

**Hygiene measures:** When using do not smoke. Observe good industrial hygiene practices. Contaminated work clothing should not be allowed out of the workplace. Avoid contact with skin.

### 9. Physical and chemical properties

**Appearance**

<table>
<thead>
<tr>
<th>Physical state:</th>
<th>liquid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Form:</td>
<td>Spray Aerosol</td>
</tr>
<tr>
<td>Color:</td>
<td>No data available.</td>
</tr>
<tr>
<td>Odor:</td>
<td>No data available.</td>
</tr>
<tr>
<td>Odor threshold:</td>
<td>No data available.</td>
</tr>
<tr>
<td>pH:</td>
<td>No data available.</td>
</tr>
<tr>
<td>Melting point/freezing point:</td>
<td>No data available.</td>
</tr>
<tr>
<td>Initial boiling point and boiling range:</td>
<td>No data available.</td>
</tr>
<tr>
<td>Flash Point:</td>
<td>-104.44 °C</td>
</tr>
<tr>
<td>Evaporation rate:</td>
<td>No data available.</td>
</tr>
<tr>
<td>Flammability (solid, gas):</td>
<td>No data available.</td>
</tr>
</tbody>
</table>

**Upper/lower limit on flammability or explosive limits**

| Flammability limit - upper (%) | No data available. |
| Flammability limit - lower (%) | No data available. |
| Explosive limit - upper (%)   | No data available. |
Explosive limit - lower (%): No data available.

Vapor pressure: 6,205.2815 - 6,894.7572 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:**
Not classified for acute toxicity based on available data.

**Specified substance(s):**
- **Distillates (petroleum), hydrotreated light**
  - LD 50 (Rat): > 5,000 mg/kg

- **Ethanone, 1- (1,2,3,4,5,6,7,8-octahydro-2,3,8,8-tetramethyl-2-naphthalenyl)-**
  - LD 50: > 2,000 mg/kg

- **Cyclohexene, 1-methyl-4- (1-methylene)-, (4R)-**
  - LD 50 (Rat): > 2,000 mg/kg

- **Octanal, 2- (phenylmethylene)-**
  - LD 50: > 2,000 mg/kg

- **Benzoic acid, 2-hydroxy-, phenylmethyl ester**
  - LD 50 (Rat): 3,031 mg/kg

- **Benzene, 1,1’-oxybis-**
  - LD 50 (Rat): 2.83 g/kg

- **2,6-Octadien-1-ol, 3,7-dimethyl-, (2E)-**
  - LD 50 (Rat): 3,600 mg/kg

- **Bicyclo[3.1.1]heptane, 6,6-dimethyl-2-methylene-**
  - LD 50 (Rat): 3,700 mg/kg

**Dermal Product:**
Not classified for acute toxicity based on available data.

**Specified substance(s):**
- **Distillates (petroleum), hydrotreated light**
  - LD 50 (Rabbit): > 2,000 mg/kg

- **Ethanone, 1- (1,2,3,4,5,6,7,8-octahydro-2,3,8,8-tetramethyl-2-naphthalenyl)-**
  - LD 50: > 2,000 mg/kg

- **Cyclohexene, 1-methyl-4- (1-methylene)-, (4R)-**
  - LD 50 (Rabbit): > 5,000 mg/kg

- **Octanal, 2- (phenylmethylene)-**
  - LD 50: > 2,000 mg/kg

- **Benzoic acid, 2-hydroxy-, phenylmethyl ester**
  - LD 50 (Rabbit): > 2,000 mg/kg

- **Benzene, 1,1’-oxybis-**
  - LD 50 (Rabbit): > 7,940 mg/kg

- **2,6-Octadien-1-ol, 3,7-dimethyl-, (2E)-**
  - LD 50 (Rabbit): > 5,000 mg/kg

- **Bicyclo[3.1.1]heptane, 6,6-dimethyl-2-methylene-**
  - LD 50 (Rabbit): > 5,000 mg/kg
**6,6-dimethyl-2-methylene-**

**Inhalation**

**Product:** Not classified for acute toxicity based on available data.

**Specified substance(s):**

<table>
<thead>
<tr>
<th>Substance</th>
<th>LC 50:</th>
<th>LC 50:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Distillates (petroleum), hydrotreated light</td>
<td>&gt; 5 mg/l</td>
<td>&gt; 20 mg/l</td>
</tr>
<tr>
<td>Propane</td>
<td>LC 50 (Mouse): 1,237 mg/l</td>
<td></td>
</tr>
<tr>
<td>Butane</td>
<td>LC 50 (Mouse): 1,237 mg/l</td>
<td></td>
</tr>
<tr>
<td>Ethanone, 1- (1,2,3,4,5,6,7,8-octahydro-2,3,8,8-tetramethyl-2-naphthalenyl)</td>
<td>LC 50: &gt; 5 mg/l</td>
<td>LC 50: &gt; 20 mg/l</td>
</tr>
<tr>
<td>Cyclohexene, 1-methyl-4-(1-methylphenylethyl)-, (4R)-</td>
<td>LC 50: &gt; 20 mg/l</td>
<td>LC 50: &gt; 5 mg/l</td>
</tr>
<tr>
<td>Octanal, 2- (phenylmethylene)</td>
<td>LC 50: &gt; 20 mg/l</td>
<td></td>
</tr>
<tr>
<td>Benzene, 1,1'-oxybis-</td>
<td>LC 50: &gt; 20 mg/l</td>
<td></td>
</tr>
<tr>
<td>2,6-Octadien-1-ol, 3,7-dimethyl-, (2E)-</td>
<td>LC 50: &gt; 20 mg/l</td>
<td>LC 50: &gt; 5 mg/l</td>
</tr>
</tbody>
</table>

**Repeated dose toxicity**

**Product:** No data available.

**Specified substance(s):**

<table>
<thead>
<tr>
<th>Substance</th>
<th>NOAEL (Female, Male), Inhalation: &gt;= 24 mg/m3 Inhalation Experimental result, Key study</th>
<th>NOAEL (Female, Male), Inhalation, &gt;= 28 d: 4,000 ppm(m) Inhalation Experimental result, Key study</th>
<th>NOAEL (Female, Male), Inhalation, &gt;= 28 d: 12,000 ppm(m) Inhalation Experimental result, Key study</th>
</tr>
</thead>
<tbody>
<tr>
<td>Distillates (petroleum), hydrotreated light</td>
<td>NOAEL (Female, Male), Inhalation, &gt;= 28 d: 4,000 ppm(m) Inhalation Experimental result, Key study</td>
<td>NOAEL (Female, Male), Inhalation, &gt;= 28 d: 12,000 ppm(m) Inhalation Experimental result, Key study</td>
<td></td>
</tr>
<tr>
<td>Propane</td>
<td>NOAEL (Female, Male), Inhalation, &gt;= 28 d: 4,000 ppm(m) Inhalation Experimental result, Key study</td>
<td>NOAEL (Female, Male), Inhalation, &gt;= 28 d: 12,000 ppm(m) Inhalation Experimental result, Key study</td>
<td></td>
</tr>
<tr>
<td>Butane</td>
<td>NOAEL (Female, Male), Inhalation, &gt;= 28 d: 4,000 ppm(m) Inhalation Experimental result, Key study</td>
<td>NOAEL (Female, Male), Inhalation, &gt;= 28 d: 12,000 ppm(m) Inhalation Experimental result, Key study</td>
<td></td>
</tr>
<tr>
<td>Benzene, 1,1'-oxybis-</td>
<td>NOAEL (Female, Male), Inhalation, &gt;= 28 d: 4,000 ppm(m) Inhalation Experimental result, Key study</td>
<td>NOAEL (Female, Male), Inhalation, &gt;= 28 d: 12,000 ppm(m) Inhalation Experimental result, Key study</td>
<td></td>
</tr>
<tr>
<td>Cyclohexene, 1-methyl-4-(1-methylphenylethyl)-, (4R)-</td>
<td>NOAEL (Female, Male), Oral, 112 - 196 d: &gt; 550 mg/kg Oral Experimental result, Key study</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Benzene, 1,1'-oxybis-</td>
<td>NOAEL (Female, Male), Oral, 112 - 196 d: &gt; 550 mg/kg Oral Experimental result, Key study</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2,6-Octadien-1-ol, 3,7-dimethyl-, (2E)-</td>
<td>NOAEL (Female, Male), Dermal: 300 mg/kg Dermal Experimental result, Key study</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**SDS_US - RE1000011815**
Bicyclo[3.1.1]heptane, 6,6-dimethyl-2-methylene-

result, Key study
LOAEL (Rat(Male), Inhalation, 14 Weeks): 25 ppm(m) Inhalation Read-across from supporting substance (structural analogue or surrogate), Key study
NOAEL (Rat(Female), Inhalation, 14 Weeks): 200 ppm(m) Inhalation Read-across from supporting substance (structural analogue or surrogate), Key study

Skin Corrosion/Irritation
Product:

Specified substance(s):
Distillates (petroleum), hydrotreated light

in vivo (Rabbit): Not irritant Experimental result, Key study

Cyclohexene, 1-methyl-4-(1-methylethenyl)-, (4R)-
in vivo (Rabbit): Not irritant Experimental result, Key study

Benzoic acid, 2-hydroxy-, phenylmethyl ester

in vivo (Rabbit): Not irritant Experimental result, Weight of Evidence study

Benzene, 1,1'-oxybis-
in vivo (Rabbit): Not irritant Experimental result, Key study

2,6-Octadien-1-ol, 3,7-dimethyl-, (2E)-
in vivo (Rabbit): Irritating Experimental result, Key study

Bicyclo[3.1.1]heptane, 6,6-dimethyl-2-methylene-

In vitro (Human): Irritating Experimental result, Key study

Serious Eye Damage/Eye Irritation
Product:

Specified substance(s):

Distillates (petroleum), hydrotreated light

Rabbit, 24 - 72 hrs: Not irritating

Cyclohexene, 1-methyl-4-(1-methylethenyl)-, (4R)-

Rabbit, 24 - 72 hrs: Not irritating

Benzene, 1,1'-oxybis-

Rabbit, 48 - 72 hrs: Irritating.

Bicyclo[3.1.1]heptane, 6,6-dimethyl-2-methylene-

Rabbit, 24 - 72 hrs: Not irritating

Respiratory or Skin Sensitization
Product:

Specified substance(s):

Distillates (petroleum), hydrotreated light

Skin sensitization:, in vivo (Guinea pig): Non sensitising
Benzene, 1,1'-oxybis-
Bicyclo[3.1.1]heptane,
6,6-dimethyl-2-
methylene-

Skin sensitization:, in vivo (Guinea pig): Non sensitising
Skin sensitization:, in vivo (Human): Non sensitising
Skin sensitization:, in vivo (Guinea pig): Sensitising

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.

Specified substance(s):
Distillates (petroleum), hydrotreated light
May be fatal if swallowed and enters airways.

Other effects: No data available.

12. Ecological information

Ecotoxicity:

Acute hazards to the aquatic environment:

Fish
Product: No data available.

Specified substance(s):
Distillates (petroleum), hydrotreated light
LC 50 (Rainbow trout,donaldson trout (Oncorhynchus mykiss), 96 h): 2.9
hydrotreated light  mg/l Mortality
NOAEL (Oncorhynchus mykiss, 96 h): 2 mg/l Experimental result, Key study

Propane  LC 50 (Various, 96 h): 147.54 mg/l QSAR QSAR, Key study

Butane  LC 50 (Various, 96 h): 147.54 mg/l QSAR QSAR, Key study

Cyclohexene, 1-methyl-4-(1-methylethenyl)-, (4R)-  EC 50 (Pimephales promelas, 96 h): 688 µg/l Experimental result, Key study

Octanal, 2-(phenylmethylene)-  LC 50 (96 h): < 1 mg/l Review

Benzoic acid, 2-hydroxy-, phenylmethyl ester  LC 50 (Danio rerio, 96 h): 1.03 mg/l Experimental result, Key study

Benzene, 1,1'-oxybis-  LC 50 (Oncorhynchus mykiss, 96 h): 4.2 mg/l Experimental result, Key study

2,6-Octadien-1-ol, 3,7-dimethyl-, (2E)-  LC 0 (Danio rerio, 96 h): 10 mg/l Experimental result, Key study
LC 50 (Danio rerio, 96 h): +/- 22 mg/l Experimental result, Key study

Bicyclo[3.1.1]heptane, 6,6-dimethyl-2-methylene-  LC 50 (Pimephales promelas, 96 h): 502 µg/l Experimental result, Supporting study

Aquatic Invertebrates
Product:  No data available.

Specified substance(s):
Distillates (petroleum), hydrotreated light  EC 50 (Daphnia magna, 24 h): 4.6 mg/l Experimental result, Key study
NOAEL (Daphnia magna, 48 h): 0.3 mg/l Experimental result, Key study
EC 50 (Daphnia magna, 48 h): 1.4 mg/l Experimental result, Key study

Butane  LC 50 (Daphnia sp., 48 h): 69.43 mg/l QSAR QSAR, Key study

Cyclohexene, 1-methyl-4-(1-methylethenyl)-, (4R)-  EC 50 (Daphnia magna, 48 h): 0.36 mg/l Experimental result, Key study
NOAEL (Daphnia magna, 48 h): 0.074 mg/l Experimental result, Key study
EC 50 (Daphnia magna, 48 h): 0.894 mg/l Experimental result, Key study

Benzoic acid, 2-hydroxy-, phenylmethyl ester  EC 50 (Daphnia magna, 48 h): 1.16 mg/l Experimental result, Key study
NOAEL (Daphnia magna, 48 h): 0.074 mg/l Experimental result, Key study

Benzene, 1,1'-oxybis-  LC 50 (Daphnia magna, 48 h): 1.7 mg/l Experimental result, Supporting study

2,6-Octadien-1-ol, 3,7-dimethyl-, (2E)-  EC 50 (Daphnia magna, 48 h): 10.8 mg/l Experimental result, Key study

Bicyclo[3.1.1]heptane, 6,6-dimethyl-2-methylene-  EC 50 (Daphnia magna, 48 h): 1,250 µg/l Experimental result, Supporting study

Chronic hazards to the aquatic environment:

Fish
Product:  No data available.

Specified substance(s):
Distillates (petroleum), hydrotreated light  NOAEL (Oncorhynchus mykiss): 0.098 mg/l QSAR QSAR, Key study
Octanal, 2-(phenylmethylene)-

**Aquatic Invertebrates**

**Product:** No data available.

**Specified substance(s):**
- NOEC (21 d): < 10 mg/l Review
- Distillates (petroleum), hydrotreated light
- Ethanone, 1-(1,2,3,4,5,6,7,8-octahydro-2,3,8,8-tetramethyl-2-naphthalenyl)-
- Cyclohexene, 1-methyl-4-(1-methylthienyl)-, (4R)-

**Toxicity to Aquatic Plants**

**Product:** No data available.

**Persistence and Degradability**

**Biodegradation**

**Product:** No data available.

**Specified substance(s):**
- NOAEL (Daphnia magna): 1.2 mg/l Experimental result, Key study
- EC 50 (Daphnia magna): 0.81 mg/l Experimental result, Key study
- EC 50 : < 10 mg/l estimation
- NOAEL (Freshwater invertebrates, species frequently include Daphnia magna or Daphnia pulex): 0.115 mg/l QSAR QSAR, Weight of Evidence study

**Toxicity to Aquatic Plants**

**Product:** No data available.

**Biodegradation**

**Product:** No data available.

**Specified substance(s):**
- NOAEL (Daphnia magna): 1.2 mg/l Experimental result, Key study
- EC 50 (Daphnia magna): 0.81 mg/l Experimental result, Key study
- EC 50 : < 10 mg/l estimation
- NOAEL (Freshwater invertebrates, species frequently include Daphnia magna or Daphnia pulex): 0.115 mg/l QSAR QSAR, Weight of Evidence study

**Toxicity to Aquatic Plants**

**Product:** No data available.

**Persistence and Degradability**

**Biodegradation**

**Product:** No data available.

**Specified substance(s):**
- 61 % Detected in water. Experimental result, Supporting study
- Propane 100 % (385.5 h) Detected in water. Experimental result, Key study
- 50 % (3.19 d) Detected in water. QSAR, Weight of Evidence study
- Butane 100 % (385.5 h) Detected in water. Experimental result, Key study
- 50 % (3.19 d) Detected in water. QSAR, Weight of Evidence study
- Cyclohexene, 1-methyl-4-(1-methylthienyl)-, (4R)- 80 % (28 d) Detected in water. Read-across from supporting substance (structural analogue or surrogate), Key study
- Benzoic acid, 2-hydroxy-, phenylmethyl ester 93 % (28 d) Detected in water. Experimental result, Key study
- Benene, 1,1’-oxybis- 76 % Detected in water. Experimental result, Key study
- 2,6-Octadien-1-ol, 3,7-dimethyl-, (2E)- 90 - 100 % (3 d) Detected in water. Experimental result, Key study
- 94 % (28 d) Detected in water. Experimental result, Supporting study
- Bicyclo[3.1.1]heptane, 6,6-dimethyl-2-methylene- 76 % (28 d) Detected in water. Experimental result, Key study

**BOD/COD Ratio**

**Product:** No data available.

**Bioaccumulative potential**

**Bioconcentration Factor (BCF)**

**Product:** No data available.
Specified substance(s):
- Cyclohexene, 1-methyl-4-(1-methylethenyl)-, (4R)-
  Bioconcentration Factor (BCF): 864.8 Aquatic sediment QSAR, Key study
- Benzoic acid, 2-hydroxy-, phenylmethyl ester
  Bioconcentration Factor (BCF): 311 Aquatic sediment QSAR, Supporting study
- Benzene, 1,1'-oxybis-
  Oncorhynchus mykiss, Bioconcentration Factor (BCF): 200 Aquatic sediment Experimental result, Key study
- Bicyclo[3.1.1]heptane, 6,6-dimethyl-2-methylene-
  Bioconcentration Factor (BCF): 1,163 Aquatic sediment QSAR, Key study

Partition Coefficient n-octanol / water (log Kow)
Product: No data available.
Specified substance(s):
- Cyclohexene, 1-methyl-4-(1-methylethenyl)-, (4R)-
  Log Kow: 4.34 - 4.46 25 °C No Experimental result, Supporting study
- 2,6-Octadien-1-ol, 3,7-dimethyl-,(2E)-
  Log Kow: 2.6 25 °C

Mobility in soil: No data available.

Known or predicted distribution to environmental compartments
Distillates (petroleum), hydrotreated light No data available.
Propane No data available.
Butane No data available.
Ethanone, 1-(1,2,3,4,5,6,7,8-octahydro-2,3,8,8-tetramethyl-2-naphthalenyl)- No data available.
Cyclohexene, 1-methyl-4-(1-methylethenyl)-, (4R)- No data available.
Octan, 2-(phenylmethylene)- No data available.
Benzoic acid, 2-hydroxy-, phenylmethyl ester No data available.
Benzene, 1,1'-oxybis-2,6-Octadien-1-ol, 3,7-dimethyl-, (2E)- No data available.
Bicyclo[3.1.1]heptane, 6,6-dimethyl-2-methylene- No data available.

Other adverse effects: Harmful to aquatic life with long lasting effects.

13. Disposal considerations

Disposal instructions: Discharge, treatment, or disposal may be subject to national, state, or local laws.
Contaminated Packaging: No data available.
14. Transport information

DOT
UN Number: UN 1950
UN Proper Shipping Name: Aerosols, flammable
Transport Hazard Class(es): Class: 2.1
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, flammable
Transport Hazard Class(es): Class: 2
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, flammable
Transport Hazard Class(es): Class: 2.1
Label(s): –
Packing Group: –
Environmental Hazards: No
Marine Pollutant: No
Special precautions for user: Not regulated.

15. Regulatory information

US Federal Regulations

Restrictions on use: Not known.

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):
Chemical Identity | Reportable quantity
--- | ---
Propane | lbs. 100
Butane | lbs. 100
Ammonium hydroxide | lbs. 1000

**Chemical Identity Reportable quantity**

**Hazard categories**
- Fire Hazard
- Immediate (Acute) Health Hazards
- Flammable aerosol
- Skin sensitizer
- Aspiration Hazard

**Superfund Amendments and Reauthorization Act of 1986 (SARA)**

**SARA 302 Extremely Hazardous Substance**

<table>
<thead>
<tr>
<th>Chemical Identity</th>
<th>Reportable quantity</th>
<th>Threshold Planning Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Distillates (petroleum), hydrotreated light</td>
<td>lbs. 100</td>
<td>10000 lbs</td>
</tr>
</tbody>
</table>

**SARA 304 Emergency Release Notification**

<table>
<thead>
<tr>
<th>Chemical Identity</th>
<th>Reportable quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Distillates (petroleum), hydrotreated light</td>
<td>lbs. 100</td>
</tr>
<tr>
<td>Propane</td>
<td>lbs. 100</td>
</tr>
<tr>
<td>Butane</td>
<td>lbs. 100</td>
</tr>
</tbody>
</table>
| Ammonium hydroxide | lbs. 1000
((NH4)(OH)) |

**SARA 311/312 Hazardous Chemicals**

<table>
<thead>
<tr>
<th>Chemical Identity</th>
<th>Threshold Planning Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Distillates (petroleum), hydrotreated light</td>
<td>10000 lbs</td>
</tr>
<tr>
<td>Propane</td>
<td>10000 lbs</td>
</tr>
<tr>
<td>Butane</td>
<td>10000 lbs</td>
</tr>
<tr>
<td>Ethanone, 1-(1,2,3,4,5,6,7,8-octahydro-2,3,8,8-tetramethyl-2-naphthalenyl)-cychlohexene, 1-methyl-4-(1-methylethynyl)-, (4R)-</td>
<td>10000 lbs</td>
</tr>
<tr>
<td>Octanal, 2-(phenylmethylene)-benzoic acid, 2-hydroxy-, phenylmethyl ester</td>
<td>10000 lbs</td>
</tr>
</tbody>
</table>
| Benzene, 1,1'-oxybis-2,6-Octadien-1-ol, 3,7-dimethyl-, (2E)-bicyclo[3.1.1]heptane, 6,6-dimethyl-2-methylene-ammonium hydroxide | 10000 lbs
((NH4)(OH)) |

**SARA 313 (TRI Reporting)**
None present or none present in regulated quantities.

**Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130):**

SDS_US - RE1000011815
Clean Water Act Section 311 Hazardous Substances (40 CFR 117.3)
US State Regulations

**US. California Proposition 65**
This product contains chemical(s) known to the State of California to cause cancer and/or to cause birth defects or other reproductive harm.

1,6-Octadiene, 7-methyl-3-methylene- Carcinogenic. 03 2015

**US. New Jersey Worker and Community Right-to-Know Act**

**Chemical Identity**
Distillates (petroleum), hydrotreated light
Propane
Butane

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

**US. Pennsylvania RTK - Hazardous Substances**

**Chemical Identity**
Distillates (petroleum), hydrotreated light
Propane
Butane

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

**International regulations**

**Montreal protocol**
Distillates (petroleum), hydrotreated light

**Stockholm convention**
Distillates (petroleum), hydrotreated light

**Rotterdam convention**
Distillates (petroleum), hydrotreated light

**Kyoto protocol**
Inventory Status:

Australia AICS: On or 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: Not 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: On or 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: 08/15/2019

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.