SAFETY DATA SHEET

1. Identification

Product identifier: CL192 RED DELICIOUS APPLE DRY AIR FRESHENER

Other means of identification
SDS number: RE1000016142

Recommended restrictions
Product Use: Air Freshener
Restrictions on use: Not known.

Manufacturer/Importer/Distributor Information

Manufacturer
Company Name: CLAIRE MANUFACTURING COMPANY
Address: 1000 Integrism 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
Serious Eye Damage/Eye Irritation Category 2A
Specific Target Organ Toxicity - Single Exposure Category 31

Target Organs
1. Narcotic effect.

Environmental Hazards
Acute hazards to the aquatic environment Category 3
Label Elements

Hazard Symbol:

![Hazard Symbol]

Signal Word: Danger

Hazard Statement: Extremely flammable aerosol.
Causes serious eye irritation.
May cause drowsiness or dizziness.
Harmful to aquatic life.

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. Wash thoroughly after handling. Wear protective gloves/protective clothing/eye protection/face protection. Avoid breathing dust/fume/gas/mist/vapors/spray. Use only outdoors or in a well-ventilated area. Avoid release to the environment.

Response: IF INHALED: Remove person to fresh air and keep comfortable for breathing. 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. Call a POISON CENTER/doctor if you feel unwell.

Storage: Protect from sunlight. Do not expose to temperatures exceeding 50°C/122°F. Store in a well-ventilated place. Keep container tightly closed. 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>2-Propanone</td>
<td>67-64-1</td>
<td>50 - &lt;100%</td>
</tr>
<tr>
<td>Propane</td>
<td>74-98-6</td>
<td>10 - &lt;20%</td>
</tr>
<tr>
<td>Butane</td>
<td>106-97-8</td>
<td>10 - &lt;20%</td>
</tr>
<tr>
<td>Cyclohexanol, 2 -(1,1-dimethylethyl), 1-acetate</td>
<td>88-41-5</td>
<td>1 - &lt;5%</td>
</tr>
<tr>
<td>Cyclopenta[g]-2-benzopyran, 1,3,4,6,7,8-hexahydro-4,6,6,7,8-hexamethyl-</td>
<td>1222-05-5</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>Heptanal, 2-(phenylmethylene)-</td>
<td>122-40-7</td>
<td>0.1 - &lt;1%</td>
</tr>
<tr>
<td>Proprietary</td>
<td></td>
<td>0.1 - &lt;1%</td>
</tr>
<tr>
<td>Ethanol, 2,2'-2''-nitrilotris-</td>
<td>102-71-6</td>
<td>0 - &lt;0.1%</td>
</tr>
<tr>
<td>Ethanol, 2,2''-iminobis-</td>
<td>111-42-2</td>
<td>0 - &lt;0.1%</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. 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. 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:**
Avoid release to the environment. Prevent further leakage or spillage if safe to do so. Do not contaminate water sources or sewer.

### 7. Handling and storage

**Precautions for safe handling:**
Avoid contact with eyes. Wash hands thoroughly after 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.

**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 3.

### 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>2-Propanone</td>
<td>STEL</td>
<td>1,000 ppm 2,400 mg/m³</td>
<td>US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989)</td>
</tr>
<tr>
<td></td>
<td>STEL</td>
<td>750 ppm 1,780 mg/m³</td>
<td>US. California Code of Regulations, Title 8, Section 5155. Airborne Contaminants (09 2006)</td>
</tr>
<tr>
<td></td>
<td>PEL</td>
<td>1,000 ppm 2,400 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>AN ESL</td>
<td>2,000 ppb</td>
<td>US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (11 2016)</td>
</tr>
<tr>
<td></td>
<td>TWA</td>
<td>250 ppm</td>
<td>US. ACGIH Threshold Limit Values (03 2015)</td>
</tr>
<tr>
<td></td>
<td>TWA</td>
<td>750 ppm 1,800 mg/m³</td>
<td>US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989)</td>
</tr>
<tr>
<td>Ceiling</td>
<td></td>
<td>3,000 ppm</td>
<td>US. California Code of Regulations, Title 8, Section 5155. Airborne Contaminants (09 2006)</td>
</tr>
<tr>
<td></td>
<td>STEL</td>
<td>500 ppm</td>
<td>US. ACGIH Threshold Limit Values (03 2015)</td>
</tr>
<tr>
<td></td>
<td>TWA PEL</td>
<td>500 ppm 1,200 mg/m³</td>
<td>US. California Code of Regulations, Title 8, Section 5155. Airborne Contaminants (09 2006)</td>
</tr>
<tr>
<td></td>
<td>ST ESL</td>
<td>7,800 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>4,800 µg/m³</td>
<td>US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (11 2016)</td>
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<tr>
<td></td>
<td>TWA</td>
<td>750 ppm 1,800 mg/m³</td>
<td>US. Tennessee. OELs. Occupational Exposure Limits, Table Z1A (06 2008)</td>
</tr>
<tr>
<td></td>
<td>ST ESL</td>
<td>3,300 ppb</td>
<td>US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (11 2016)</td>
</tr>
<tr>
<td></td>
<td>REL</td>
<td>250 ppm 590 mg/m³</td>
<td>US. NIOSH: Pocket Guide to Chemical Hazards (2005)</td>
</tr>
<tr>
<td></td>
<td>STEL</td>
<td>1,000 ppm 2,400 mg/m³</td>
<td>US. Tennessee. OELs. Occupational Exposure Limits, Table Z1A (06 2008)</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></td>
<td>TWA</td>
<td>800 ppm 1,900 mg/m³</td>
<td>US. Tennessee. OELs. Occupational Exposure Limits, Table Z1A (06 2008)</td>
</tr>
<tr>
<td></td>
<td>STEL</td>
<td>1,000 ppm</td>
<td>US. ACGIH Threshold Limit Values (03 2018)</td>
</tr>
<tr>
<td></td>
<td>TWA</td>
<td>800 ppm 1,900 mg/m³</td>
<td>US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989)</td>
</tr>
<tr>
<td></td>
<td>AN ESL</td>
<td>3,000 ppb</td>
<td>US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (11 2016)</td>
</tr>
<tr>
<td></td>
<td>AN ESL</td>
<td>7,100 µg/m³</td>
<td>US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (11 2016)</td>
</tr>
<tr>
<td></td>
<td>TWA PEL</td>
<td>800 ppm 1,900 mg/m³</td>
<td>US. California Code of Regulations, Title 8, Section 5155. Airborne Contaminants (09 2006)</td>
</tr>
<tr>
<td></td>
<td>ST ESL</td>
<td>66,000 µg/m³</td>
<td>US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (11 2016)</td>
</tr>
</tbody>
</table>
### Biological Limit Values

<table>
<thead>
<tr>
<th>Chemical Identity</th>
<th>Exposure Limit Values</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-Propanone (acetone: Sampling time: End of shift.)</td>
<td>25 mg/l (Urine)</td>
<td>ACGIH BEL (03 2015)</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:** No data available.

**Respiratory Protection:** In case of inadequate ventilation use suitable respirator. Seek advice from local supervisor.
Hygiene measures: Avoid contact with eyes. Observe good industrial hygiene practices. When using do not smoke.

### 9. Physical and chemical properties

#### Appearance
- **Physical state:** liquid
- **Form:** Spray Aerosol
- **Color:** No data available.
- **Odor:** No data available.
- **Odor threshold:** No data available.
- **pH:** No data available.
- **Melting point/freezing point:** No data available.
- **Initial boiling point and boiling range:** No data available.
- **Flash Point:** -104.44 °C
- **Evaporation rate:** No data available.
- **Flammability (solid, gas):** No data available.

#### 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
- **Vapor pressure:** 4,136.8544 - 4,826.3301 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):**

- 2-Propanone: LD 50 (Rat): 5,800 mg/kg
- Cyclohexanol, 2-(1,1-dimethylethyl)-, 1-acetate: LD 50: > 2,000 mg/kg
- Cyclopenta[g]-2-benzopyran, 1,3,4,6,7,8-hexahydro-4,6,6,7,8,8-hexamethyl: LD 50 (Rat): > 4,640 mg/kg
- Octanal, 2-(phenylmethylene)-: LD 50: > 2,000 mg/kg
- Proprietary: LD 50: > 2,000 mg/kg
- Ethanol, 2,2',2"-nitrilotris-: LD 50 (Rat): 6,400 mg/kg
- Ethanol, 2,2'-iminobis-: LD 50 (Rat): 1,100 mg/kg

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

### Specified substance(s):

<table>
<thead>
<tr>
<th>Substance</th>
<th>LD50 (Rabbit)</th>
<th>LC50 (Rat)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-Propanone</td>
<td>&gt; 7,426 mg/kg</td>
<td></td>
</tr>
<tr>
<td>Cyclohexanol, 2-(1,1-dimethylethyl)-, 1-acetate</td>
<td>LC50: &gt; 2,000 mg/kg</td>
<td></td>
</tr>
<tr>
<td>Cyclopenta[g]-2-benzopyran, 1,3,4,6,7,8-hexahydro-4,6,7,8,8-hexamethyl-</td>
<td>LD50 (Rat): &gt; 10,000 mg/kg</td>
<td></td>
</tr>
<tr>
<td>Octanal, 2-(phenylmethylene)-</td>
<td>LD50: &gt; 2,000 mg/kg</td>
<td></td>
</tr>
<tr>
<td>Proprietary</td>
<td>LD50: &gt; 2,000 mg/kg</td>
<td></td>
</tr>
<tr>
<td>Ethanol, 2,2',2''-nitrilotris-</td>
<td>LD50 (Rabbit): &gt; 2,000 mg/kg</td>
<td></td>
</tr>
<tr>
<td>Ethanol, 2,2'-iminobis-</td>
<td>LD50: &gt; 2,000 mg/kg</td>
<td></td>
</tr>
</tbody>
</table>

### Inhalation

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

### Specified substance(s):

<table>
<thead>
<tr>
<th>Substance</th>
<th>LC50 (Rat)</th>
<th>LC50 (Mouse)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-Propanone</td>
<td>50.1 mg/l</td>
<td></td>
</tr>
<tr>
<td>Propane</td>
<td>LC50 (Mouse): 1,237 mg/l</td>
<td></td>
</tr>
<tr>
<td>Butane</td>
<td>LC50 (Mouse): 1,237 mg/l</td>
<td></td>
</tr>
<tr>
<td>Cyclohexanol, 2-(1,1-dimethylethyl)-, 1-acetate</td>
<td>LC50: &gt; 5 mg/l</td>
<td>LC50: &gt; 20 mg/l</td>
</tr>
<tr>
<td>Cyclopenta[g]-2-benzopyran, 1,3,4,6,7,8-hexahydro-4,6,7,8,8-hexamethyl-</td>
<td>LC50: &gt; 20 mg/l</td>
<td></td>
</tr>
<tr>
<td>Octanal, 2-(phenylmethylene)-</td>
<td>LC50: &gt; 20 mg/l</td>
<td></td>
</tr>
<tr>
<td>Proprietary</td>
<td>LC50: &gt; 5 mg/l</td>
<td>LC50: &gt; 20 mg/l</td>
</tr>
<tr>
<td>Ethanol, 2,2',2''-nitrilotris-</td>
<td>LC0 (Rat): 1.8 mg/m3</td>
<td>LC50: &gt; 5 mg/l</td>
</tr>
</tbody>
</table>
Ethanol, 2,2'-iminobis- LC 0 (Rat): 3.35 mg/l

Repeated dose toxicity
Product:
No data available.

Specified substance(s):
2-Propanone
NOAEL (Rat(Male), Oral, 13 Weeks): 10,000 ppm(m) Oral Experimental result, Key study

Propane
NOAEL (Rat(Female, Male), Inhalation, >= 28 d): 4,000 ppm(m) Inhalation Experimental result, Key study
LOAEL (Rat(Female, Male), Inhalation, >= 28 d): 12,000 ppm(m) Inhalation Experimental result, Key study

Butane
NOAEL (Rat(Female, Male), Inhalation, >= 28 d): 4,000 ppm(m) Inhalation Experimental result, Key study
LOAEL (Rat(Female, Male), Inhalation, >= 28 d): 12,000 ppm(m) Inhalation Experimental result, Key study

Cyclopenta[g]-2-benzopyran, 1,3,4,6,7,8-hexahydro-4,6,6,7,8,8-hexamethyl-
NOAEL (Rat(Female, Male), Oral, 13 Weeks): 150 mg/kg Oral Experimental result, Key study

Ethanol, 2,2',2''-nitrilotris-
NOAEL (Rat(Female, Male), Oral, 91 d): 1,000 mg/kg Oral Experimental result, Key study
NOAEL (Rat(Female, Male), Inhalation): 0.5 mg/l Inhalation Experimental result, Key study
NOAEL (Rat(Male), Dermal, 90 d): 125 mg/kg Dermal Experimental result, Key study
NOAEL (Rat(Female), Dermal, 90 d): 250 mg/kg Dermal Experimental result, Key study

Skin Corrosion/Irritation
Product:
No data available.

Specified substance(s):
2-Propanone
in vivo (Rabbit): Not irritant Experimental result, Supporting study

Cyclopenta[g]-2-benzopyran, 1,3,4,6,7,8-hexahydro-4,6,6,7,8,8-hexamethyl-
in vivo (Rabbit): Irritating Experimental result, Key study

Ethanol, 2,2',2''-nitrilotris-
in vivo (Rabbit): Not irritant Experimental result, Key study
Serious Eye Damage/Eye Irritation
Product: No data available.
Specified substance(s):
2-Propanone Irritating.
Rabbit, 24 hrs: Minimum grade of severe eye irritant

Respiratory or Skin Sensitization
Product: No data available.
Specified substance(s):
2-Propanone Skin sensitization:, in vivo (Guinea pig): Non sensitising
Cyclopenta[g]-2-benzopyran, 1,3,4,6,7,8-hexahydro-4,6,6,7,8,8-hexamethyl-
Ethanol, 2,2',2''- Skin sensitization:, in vivo (Guinea pig): Non sensitising
nitriolotris-
Ethanol, 2,2'-iminobis- Skin sensitization:, in vivo (Guinea pig): Non 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.
Specified substance(s):
2-Propanone Inhalation - vapor: Narcotic effect. - Category 3 with narcotic effects.

Specific Target Organ Toxicity - Repeated Exposure
Product: No data available.
Specified substance(s):
Ethanol, 2,2'-iminobis- Category 2
Target Organs
Specific Target Organ Toxicity - Single Exposure: Narcotic effect.

Aspiration Hazard
Product: No data available.

Specified substance(s):
Proprietary 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):
2-Propanone LC 50 (Oncorhynchus mykiss, 96 h): 5,540 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
Cyclohexanol, 2-(1,1-dimethylethyl)-, 1-acetate LC 50 (Fish, 96 h): < 10 mg/l
Cyclopenta[g]-2-benzopyran, 1,3,4,6,7,8-hexahydro-4,6,6,7,8-hexamethyl- LC 50 (Lepomis macrochirus, 96 h): 1.36 mg/l Experimental result, Key study
Octanal, 2-(phenylmethylene)- LC 50 (96 h): < 1 mg/l Review
Ethanol, 2,2',2''-nitrilotris- LC 50 (Pimephales promelas, 96 h): 11,800 mg/l Experimental result, Key study
Ethanol, 2,2'-iminobis- LC 50 (Pimephales promelas, 96 h): 1,370 mg/l Experimental result, Key study

Aquatic Invertebrates
Product: No data available.

Specified substance(s):
2-Propanone LC 50 (Daphnia pulex, 48 h): 8,800 mg/l Experimental result, Key study
Butane LC 50 (Daphnia sp., 48 h): 69.43 mg/l QSAR QSAR, Key study
Cyclopenta[g]-2-
benzopyran, 1,3,4,6,7,8-hexahydro-4,6,6,7,8,8-hexamethyl-

Ethanol, 2,2',2''-nitrilotris-

EC 50 (Ceriodaphnia dubia, 48 h): 609.88 mg/l Experimental result, Key study

Ethanol, 2,2'-iminobis-

EC 50 (Daphnia magna, 48 h): 55 mg/l Experimental result, Supporting study
EC 50 (Ceriodaphnia dubia, 48 h): 30.1 mg/l Experimental result, Key study

Chronic hazards to the aquatic environment:

Fish
Product: No data available.

Specified substance(s):
Cyclopenta[g]-2-benzopyran, 1,3,4,6,7,8-hexahydro-4,6,6,7,8,8-hexamethyl-

LC 50 (Lepomis macrochirus): 0.452 mg/l Experimental result, Key study
LOAEL (Pimephales promelas): 0.14 mg/l Experimental result, Key study

Octanal, 2-(phenylmethylene)-

NOEC (21 d): < 10 mg/l Review

Ethanol, 2,2'-iminobis-

NOAEL (Various): > 1 mg/l Estimated by calculation, Supporting study

Aquatic Invertebrates
Product: No data available.

Specified substance(s):
2-Propanone

LOAEL (Daphnia magna): 2,212 mg/l Experimental result, Key study
NOAEL (Daphnia magna): 2,212 mg/l Experimental result, Key study

Cyclopenta[g]-2-benzopyran, 1,3,4,6,7,8-hexahydro-4,6,6,7,8,8-hexamethyl-

NOAEL (Daphnia magna): 111 µg/l Experimental result, Key study
EC 50 (Daphnia magna): 282 µg/l Experimental result, Key study

Ethanol, 2,2',2''-nitrilotris-

NOAEL (Daphnia magna): 16 mg/l Experimental result, Key study
NOAEL (Daphnia magna): 125 mg/l Experimental result, Key study
NOAEL (Daphnia magna): 250 mg/l Experimental result, Key study

Ethanol, 2,2'-iminobis-

NOAEL (Daphnia magna): 0.78 mg/l Experimental result, Key study

Toxicity to Aquatic Plants
Product: No data available.

Persistence and Degradability

Biodegradation
Product: No data available.

Specified substance(s):
2-Propanone

90.9 % (28 d) Detected in water. Experimental result, Key study
<table>
<thead>
<tr>
<th>Substance</th>
<th>Bioaccumulative potential</th>
<th>Bioconcentration Factor (BCF)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Propane</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Butane</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cyclohexanol, 2-(1,1-dimethylethyl)-, 1-acetate</td>
<td>&lt; 70 % (10 d, Assessment)</td>
<td>60 % (28 d) Sediment Experimental result, Key study</td>
</tr>
<tr>
<td>Cyclopenta[g]-2-benzopyran, 1,3,4,6,7,8-hexahydro-4,6,6,7,8,8-hexamethyl-</td>
<td>100 % (3 d) Sediment Experimental result, Key study</td>
<td>93 % (28 d) Detected in water. Experimental result, Key study</td>
</tr>
</tbody>
</table>

**BOD/COD Ratio**

**Product:** No data available.

**Bioaccumulative potential**

**Bioconcentration Factor (BCF)**

**Product:** No data available.

**Specified substance(s):**

- 2-Propanone
- Cyclopenta[g]-2-benzopyran, 1,3,4,6,7,8-hexahydro-4,6,6,7,8,8-hexamethyl-
- Ethanol, 2,2',2''-nitrilotris-
- Ethanol, 2,2'-iminobis-

**Partition Coefficient n-octanol / water (log Kow)**

**Product:** No data available.

**Specified substance(s):**

- Ethanol, 2,2',2''-nitrilotris-

**Mobility in soil:** No data available.

**Known or predicted distribution to environmental compartments**
2-Propanone No data available.
Propane No data available.
Butane No data available.
Cyclohexanol, 2-(1,1-dimethylethyl)-, 1-acetate No data available.
Cyclopenta[g]2-benzopyran, 1,3,4,6,7,8-hexahydro-4,6,7,8,8-hexamethyl- No data available.
Octanal, 2-(phenylmethylene)- No data available.
Heptanal, 2-(phenylmethylene)- Proprietary No data available.
Ethanol, 2,2',2''-nitrilotris- No data available.
Ethanol, 2,2'-iminobis- No data available.

Other adverse effects: Harmful to aquatic organisms.

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**

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>2-Propanone</td>
<td>lbs. 5000</td>
</tr>
<tr>
<td>Propane</td>
<td>lbs. 100</td>
</tr>
<tr>
<td>Butane</td>
<td>lbs. 100</td>
</tr>
<tr>
<td>Ethanol, 2,2'-iminobis-</td>
<td>lbs. 100</td>
</tr>
</tbody>
</table>

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

**Hazard categories**

- Fire Hazard
- Immediate (Acute) Health Hazards
- Flammable aerosol
- Serious Eye Damage/Eye Irritation
- Specific Target Organ Toxicity - Single Exposure

**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>2-Propanone</td>
<td></td>
<td></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>2-Propanone</td>
<td>lbs. 5000</td>
</tr>
<tr>
<td>Propane</td>
<td>lbs. 100</td>
</tr>
<tr>
<td>Butane</td>
<td>lbs. 100</td>
</tr>
<tr>
<td>Propanoic acid, 2-methyl-, 2-phenoxyethyl ester</td>
<td>lbs. 100</td>
</tr>
<tr>
<td>Ethanol, 2,2'-iminobis-</td>
<td>lbs. 100</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>2-Propanone</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>Cyclohexanol, 2-(1,1-dimethylethyl) - 1-acetate</td>
<td>10000 lbs</td>
</tr>
<tr>
<td>Cyclopenta[g]-2-benzopyran, 1,3,4,6,7,8-hexahydro-4,6,6,7,8,8-hexamethyl-</td>
<td>10000 lbs</td>
</tr>
<tr>
<td>Octanal, 2-(phenylmethylene)-</td>
<td>10000 lbs</td>
</tr>
<tr>
<td>Heptanal, 2-(phenylmethylene)-</td>
<td>10000 lbs</td>
</tr>
<tr>
<td>Proprietary</td>
<td>10000 lbs</td>
</tr>
<tr>
<td>Ethanol, 2,2',2''-nitrilotris-</td>
<td>10000 lbs</td>
</tr>
<tr>
<td>Ethanol, 2,2'-iminobis-</td>
<td>10000 lbs</td>
</tr>
</tbody>
</table>

### 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):

### 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.

<table>
<thead>
<tr>
<th>Chemical Identity</th>
<th>Carcinogenic</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethanol, 2,2'-iminobis-</td>
<td>Carcinogenic</td>
<td>07 2012</td>
</tr>
</tbody>
</table>

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

### Chemical Identity

2-Propanone  
Propane  
Butane

**US. Massachusetts RTK - Substance List**

No ingredient regulated by MA Right-to-Know Law present.

**US. Pennsylvania RTK - Hazardous Substances**

### Chemical Identity

2-Propanone  
Propane  
Butane

**US. Rhode Island RTK**

No ingredient regulated by RI Right-to-Know Law present.

### International regulations

**Montreal protocol**

Not applicable

**Stockholm convention**

Not applicable
Rotterdam convention
Not applicable

Kyoto protocol
Not applicable

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: 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: Not in compliance with the inventory.
US TSCA Inventory: On or in compliance with the inventory
New Zealand Inventory of Chemicals: Not 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: Not in compliance with the inventory.

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

Issue Date: 05/15/2019
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.