SAFETY DATA SHEET

1. Identification

Product identifier: GRAPEFRUIT & BERGAMOT METERED AIR FRESHENER

Other means of identification
SDS number: RE1000004541

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
Serious Eye Damage/Eye Irritation Category 2A
Skin sensitizer Category 1
Toxic to reproduction Category 2
Specific Target Organ Toxicity - Single Exposure Category 3

Target Organs
1. Narcotic effect.

Environmental Hazards
Acute hazards to the aquatic environment Category 3

Label Elements

Hazard Symbol:

Signal Word: Danger
Hazard Statement: Extremely flammable aerosol. Causes serious eye irritation. May cause an allergic skin reaction. Suspected of damaging fertility or the unborn child. 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. Contaminated work clothing should not be allowed out of the workplace. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Use personal protective equipment as required. 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. IF ON SKIN: Wash with plenty of water/# If skin irritation or rash occurs: Get medical advice/attention. Call a POISON CENTER/doctor if you feel unwell. 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. Store in a well-ventilated place. Keep container tightly closed.

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>Terpenes and Terpenoids, sweet orange-oil</td>
<td>68647-72-3</td>
<td>1 - &lt;2.5%</td>
</tr>
<tr>
<td>Oils, orange, sweet</td>
<td>8008-57-9</td>
<td>0.1 - &lt;1%</td>
</tr>
<tr>
<td>Benzene propanal, 4-(1,1-dimethylpropyl)-a-methyl-</td>
<td>80-54-6</td>
<td>0.1 - &lt;1%</td>
</tr>
<tr>
<td>Benzonic acid, 2-hydroxy-, phenylmethyl ester</td>
<td>118-58-1</td>
<td>0.1 - &lt;1%</td>
</tr>
<tr>
<td>Cyclopenta[g]i:2-benzopyran, 1,3,4,6,7,8-hexahydro-4,6,7,8,8-hexamethyl-</td>
<td>1222-05-5</td>
<td>0.1 - &lt;1%</td>
</tr>
<tr>
<td>Acetic acid, phenylmethyl ester</td>
<td>140-11-4</td>
<td>0.1 - &lt;1%</td>
</tr>
<tr>
<td>Proprietary Fragrance</td>
<td></td>
<td>0.1 - &lt;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: 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: 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. 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:
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:
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. Do not handle until all safety precautions have been read and understood. Obtain special instructions before use. Use personal protective equipment as required. Avoid contact with eyes, skin, and clothing.

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. Store locked up. 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>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>REL</td>
<td>250 ppm 590 mg/m³</td>
<td>US. NIOSH: Pocket Guide to Chemical Hazards (2005)</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>
</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)</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.

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<table>
<thead>
<tr>
<th>Metric</th>
<th>Value</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Acetic acid, phenylmethyl ester</strong></td>
<td>ST ESL 610 µg/m³</td>
<td>US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (11 2016)</td>
</tr>
<tr>
<td><strong>ST ESL 100 ppb</strong></td>
<td>ST ESL 610 µg/m³</td>
<td>US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (11 2016)</td>
</tr>
<tr>
<td><strong>AN ESL 10 ppb</strong></td>
<td>AN ESL 610 µg/m³</td>
<td>US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (11 2016)</td>
</tr>
<tr>
<td><strong>Acetic acid, phenylmethyl ester</strong></td>
<td>TWA PEL 10 ppm</td>
<td>US. California Code of Regulations, Title 8, Section 5155. Airborne Contaminants (09 2006)</td>
</tr>
<tr>
<td><strong>ST ESL 610 µg/m³</strong></td>
<td>TWA PEL 5 mg/m³</td>
<td>US. California Code of Regulations, Title 8, Section 5155. Airborne Contaminants (09 2006)</td>
</tr>
<tr>
<td><strong>AN ESL 5 µg/m³</strong></td>
<td>AN ESL 7 µg/m³</td>
<td>US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (11 2016)</td>
</tr>
<tr>
<td><strong>Ethanol, 2,2''-iminobis-</strong></td>
<td>REL 3 ppm</td>
<td>US. NIOSH: Pocket Guide to Chemical Hazards (2005)</td>
</tr>
<tr>
<td><strong>Ethanol, 2,2''-iminobis-</strong></td>
<td>TWA 3 ppm</td>
<td>US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989)</td>
</tr>
<tr>
<td><strong>Ethanol, 2,2''-iminobis-</strong></td>
<td>TWA PEL 0.46 ppm</td>
<td>US. California Code of Regulations, Title 8, Section 5155. Airborne Contaminants (09 2006)</td>
</tr>
<tr>
<td><strong>Ethanol, 2,2''-iminobis-</strong></td>
<td>TWA PEL 1 mg/m³</td>
<td>US. California Code of Regulations, Title 8, Section 5155. Airborne Contaminants (09 2006)</td>
</tr>
<tr>
<td><strong>Ethanol, 2,2''-iminobis-</strong></td>
<td>ST ESL 97 µg/m³</td>
<td>US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (11 2016)</td>
</tr>
<tr>
<td><strong>Ethanol, 2,2''-iminobis-</strong></td>
<td>TWA 3 ppm</td>
<td>US. Tennessee. OELs. Occupational Exposure Limits, Table Z1A (06 2008)</td>
</tr>
</tbody>
</table>
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: Avoid contact with eyes. Observe good industrial hygiene practices. When using do not smoke. Do not handle until all safety precautions have been read and understood. Obtain special instructions before use. Contaminated work clothing should not be allowed out of the workplace. Avoid contact with skin.

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: -104.4 °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: 3,102.6407 - 4,481.5922 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

- Terpenes and Terpenoids, sweet orange-oil
  - LD 50: > 2,000 mg/kg

- Oils, orange, sweet
  - LD 50: > 2,000 mg/kg

- Benzenepropanal, 4-(1,1-dimethylethyl)-a-methyl-
  - LD 50 (Rat): 1,390 mg/kg

- Benzoic acid, 2-hydroxy-, phenylmethyl ester
  - LD 50 (Rat): 3,031 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
<table>
<thead>
<tr>
<th>Substance/Fragment</th>
<th>Acute Oral Toxicity (Rat)</th>
<th>Acute Oral Toxicity (Rabbit)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acetic acid, phenylmethyl ester</td>
<td>LD 50: &gt; 2,000 mg/kg</td>
<td></td>
</tr>
<tr>
<td>Proprietary Fragrance</td>
<td>LD 50: &gt; 2,000 mg/kg</td>
<td></td>
</tr>
</tbody>
</table>

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

**Specified substance(s):**
- 2-Propanone
  - LD 50 (Rabbit): > 7,426 mg/kg
- Terpenes and Terpenoids, sweet orange-oil
  - LD 50: > 2,000 mg/kg
- Oils, orange, sweet
  - LD 50: > 2,000 mg/kg
- Benzenepropanal, 4-(1,1-dimethylethyl)-a-methyl-
  - LD 50 (Rabbit): > 2,000 mg/kg
- Benzoic acid, 2-hydroxy-, phenylmethyl ester
  - LD 50 (Rabbit): > 2,000 mg/kg
- Cyclopenta[g]-2-benzopyran, 1,3,4,6,7,8-hexahydro-4,6,6,7,8,8-hexamethyl-
  - LD 50 (Rabbit): > 10,000 mg/kg
- Acetic acid, phenylmethyl ester
  - LD 50 (Rabbit): > 5 g/kg
- Proprietary Fragrance
  - LD 50: > 2,000 mg/kg

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

**Specified substance(s):**
- 2-Propanone
  - LC 50 (Rat): 50.1 mg/l
  - LC 50: > 5 mg/l
- Propane
  - LC 50 (Mouse): 1,237 mg/l
- Butane
  - LC 50 (Mouse): 1,237 mg/l
- Terpenes and Terpenoids, sweet orange-oil
  - LC 50: > 5 mg/l
  - LC 50: > 20 mg/l
- Oils, orange, sweet
  - LC 50: > 5 mg/l
  - LC 50: > 20 mg/l
- Cyclopenta[g]-2-benzopyran, 1,3,4,6,7,8-hexahydro-4,6,6,7,8,8-hexamethyl-
  - LC 50: > 5 mg/l
  - LC 50: > 20 mg/l
- Acetic acid, phenylmethyl ester
  - LC Lo (Rat): > 0.766 mg/l
- Proprietary Fragrance
  - LC 50: > 5 mg/l
  - LC 50: > 20 mg/l
Repeated dose toxicity

Product:

Specified substance(s):
- 2-Propanone
- Propane
- Butane
- Benzenepropanal, 4-(1,1-dimethylethyl)-a-methyl-
- Benzoic acid, 2-hydroxy-, phenylmethyl ester
- Cyclopenta[g]-2-benzopyran, 1,3,4,6,7,8-hexahydro-4,6,7,8,8-hexamethyl-
- Acetic acid, phenylmethyl ester

No data available.

NOAEL (Rat(Male), Oral, 13 Weeks): 10,000 ppm(m) Oral Experimental result, Key study
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
NOAEL (Rat(Female, Male), Oral, 30 d): 5 mg/kg Oral Other, Key study
NOAEL (Rat(Male), Dermal, 5 d): 1,000 mg/kg Dermal Other, Key study
NOAEL (Rat(Female, Male), Oral, 30 d): 25 mg/kg Oral Experimental result, Key study
NOAEL (Rat(Female, Male), Oral, 102-131 d): 360 mg/kg Oral Read-across from supporting substance (structural analogue or surrogate), Key study
NOAEL (Rat(Female, Male), Oral, 30 d): 25 mg/kg Oral Experimental result, Key study
NOAEL (Rat(Female, Male), Oral, 30 d): 90 mg/kg Oral Experimental result, Supporting study
NOAEL (Rat(Male), Oral, 13 Weeks): 480 mg/kg Oral Experimental result, Supporting study
NOAEL (Rat(Female, Male), Oral, 13 Weeks): 900 mg/kg Oral Experimental result, Supporting study

Skin Corrosion/Irritation

Product:

Specified substance(s):
- 2-Propanone
- Benzenepropanal, 4-(1,1-dimethylethyl)-a-methyl-
- Benzoic acid, 2-hydroxy-, phenylmethyl ester
- Cyclopenta[g]-2-benzopyran, 1,3,4,6,7,8-hexahydro-4,6,7,8,8-hexamethyl-
- Acetic acid, phenylmethyl ester

No data available.

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

Serious Eye Damage/Eye irritation

Product:

Specified substance(s):
- 2-Propanone

No data available.

Irritating.
Rabbit, 24 hrs: Minimum grade of severe eye irritant

Respiratory or Skin Sensitization
Product: No data available.

Specified substance(s):
- 2-Propanone
- Benzenepropanal, 4-(1,1-dimethylethyl)-a-methyl-
- Cyclopenta[g]-2-benzopyran, 1,3,4,6,7,8-hexahydro-
- 4,6,6,7,8,8-hexamethyl-
- Acetic acid, phenylmethyl ester

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

Specified substance(s):
- Benzenepropanal, 4-(1,1-dimethylethyl)-a-methyl-

Suspected of damaging fertility or the unborn child.

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.

Target Organs
Specific Target Organ Toxicity - Single Exposure: Narcotic effect.

Aspiration Hazard
Product: No data available.

Specified substance(s):
- Terpenes and Terpenoids, sweet orange-oil
- Oils, orange, sweet
- Proprietary Fragrance

May be fatal if swallowed and enters airways.
May be fatal if swallowed and enters airways.
May be fatal if swallowed and enters airways.
Other effects: No data available.

### 12. Ecological information

**Ecotoxicity:**

**Acute hazards to the aquatic environment:**

<table>
<thead>
<tr>
<th>Product</th>
<th>Specified substance(s)</th>
<th>LC 50 (Oncorhynchus mykiss, 96 h):</th>
<th>Experimental result, Key study</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fish</td>
<td>2-Propanone</td>
<td>5,540 mg/l</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Propane</td>
<td>147.54 mg/l</td>
<td>QSAR, Key study</td>
</tr>
<tr>
<td></td>
<td>Butane</td>
<td>147.54 mg/l</td>
<td>QSAR, Key study</td>
</tr>
<tr>
<td></td>
<td>Terpenes and Terpenoids, sweet orange-oil</td>
<td>&lt; 10 mg/l</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Oils, orange, sweet</td>
<td>&lt; 1 mg/l</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Benzenepropanal, 4-(1,1-dimethylethyl)-a-methyl-</td>
<td>NOAEL (Danio rerio, 96 h): 1.28 mg/l</td>
<td>Experimental result, Key study</td>
</tr>
<tr>
<td></td>
<td>Benzoic acid, 2-hydroxy-, phenylmethyl ester</td>
<td>LC 50 (Danio rerio, 96 h): 1.03 mg/l</td>
<td>Experimental result, Key study</td>
</tr>
<tr>
<td></td>
<td>Cyclopenta[g]-2-benzopyran, 1,3,4,6,7,8-hexahydro-4,6,6,7,8,8-hexamethyl-</td>
<td>LC 50 (Lepomis macrochirus, 96 h): 1.36 mg/l</td>
<td>Experimental result, Key study</td>
</tr>
<tr>
<td></td>
<td>Acetic acid, phenylmethyl ester</td>
<td>LC 50 (Oryzias latipes, 96 h): 4 mg/l</td>
<td>Other, Key study</td>
</tr>
</tbody>
</table>

**Aquatic Invertebrates**

| Product | Specified substance(s) | LC 50 (Daphnia pulex, 48 h): | Experimental result, Key study |
|---------|------------------------|----------------------------------|
|         | 2-Propanone | 8,800 mg/l | |
|         | Butane | 69.43 mg/l | QSAR, Key study |
|         | Benzenepropanal, 4-(1,1-dimethylethyl)-a-methyl- | EC 50 (Daphnia magna, 48 h): 9.84 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 |
|         | Cyclopenta[g]-2-benzopyran, 1,3,4,6,7,8-hexahydro-4,6,6,7,8,8-hexamethyl- | NOAEL (Daphnia magna, 48 h): 0.894 mg/l | Experimental result, Key study |
|         | Acetic acid, phenylmethyl ester | EC 50 (Daphnia magna, 48 h): 0.885 mg/l | Experimental result, Not specified |
|         | | EC 50 (Daphnia magna, 48 h): 17 mg/l | Experimental result, Key study |
Chronic hazards to the aquatic environment:

**Fish**

**Product:**

**Specified substance(s):**

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

No data available.

**Aquatic Invertebrates**

**Product:**

**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

**Toxicity to Aquatic Plants**

**Product:**

No data available.

**Persistence and Degradability**

**Biodegradation**

**Product:**

**Specified substance(s):**

2-Propanone

90.9 % (28 d) Detected in water. Experimental result, Key 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

Terpenes and Terpenoids, sweet orange-oil

< 70 %

Oils, orange, sweet

< 70 % (10 d, Assessment)

Benzenepropanal, 4-(1,1-dimethylethyl)-a-methyl-

80.7 % (28 d) Detected in water. Experimental result, Key study

Benzoic acid, 2-hydroxy-, phenylmethyl ester

93 % (28 d) Detected in water. Experimental result, Key study

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

60 % (28 d) Sediment Experimental result, Key study

Acetic acid, phenylmethyl ester

100 % (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):
2-Propanone Haddock, adult, Bioconcentration Factor (BCF): 0.69 Aquatic sediment Experimental result, Not specified
Benzenepropanal, 4-(1,1-dimethylethyl)-a-methyl- Bioconcentration Factor (BCF): 274.3 Aquatic sediment Estimated by calculation, Key study
Benzoic acid, 2-hydroxy-, phenylmethyl ester Bioconcentration Factor (BCF): 311 Aquatic sediment QSAR, Supporting study
Cyclopenta[g]-2-benzopyran, 1,3,4,6,7,8-hexahydro-4,6,6,7,8,8-hexamethyl- Lepomis macrochirus, Bioconcentration Factor (BCF): 1,550 Aquatic sediment Experimental result, Key study
Acetic acid, phenylmethyl ester Bioconcentration Factor (BCF): 8 Aquatic sediment Estimated by calculation, Key study

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

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.
Terpenes and Terpenoids, sweet orange-oil No data available.
Oils, orange, sweet No data available.
Benzenepropanal, 4-(1,1-dimethylethyl)-a-methyl- No data available.
Benzoic acid, 2-hydroxy-, phenylmethyl ester No data available.
Cyclopenta[g]-2-benzopyran, 1,3,4,6,7,8-hexahydro-4,6,6,7,8,8-hexamethyl- No data available.
Acetic acid, phenylmethyl ester No data available.
Proprietary Fragrance 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

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):

<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
- Delayed (Chronic) Health Hazard
- Flammable aerosol
- Serious Eye Damage/Eye Irritation
- Skin sensitizer
- Toxic to reproduction
- 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>
<tr>
<td>Terpenes and</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Terpenoids, sweet</td>
<td></td>
<td></td>
</tr>
<tr>
<td>orange-oil</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

SARA 304 Emergency Release Notification

<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>lbs. 5000</td>
<td></td>
</tr>
<tr>
<td>Propane</td>
<td>lbs. 100</td>
<td></td>
</tr>
<tr>
<td>Butane</td>
<td>lbs. 100</td>
<td></td>
</tr>
<tr>
<td>Terpenes and</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Terpenoids, sweet</td>
<td></td>
<td></td>
</tr>
<tr>
<td>orange-oil</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Propanoic acid, 2-methyl-, 2-phenoxyethyl ester</td>
<td>lbs. 100</td>
<td></td>
</tr>
<tr>
<td>Ethanol, 2,2’-iminobis-</td>
<td>lbs. 100</td>
<td></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>Terpenes and Terpenoids, sweet orange-oil</td>
<td>10000 lbs</td>
</tr>
<tr>
<td>Oils, orange, sweet</td>
<td>10000 lbs</td>
</tr>
<tr>
<td>Benzenepropanal, 4-(1,1-dimethylethyl)-a-methyl-Benzoic acid, 2-hydroxy-, phenymlmethy</td>
<td>10000 lbs</td>
</tr>
<tr>
<td>Cyclopenta[g]-2-benzopyran, 1,3,4,6,7,8-hexahydro-4,6,7,8,6-hexamethyl-</td>
<td>10000 lbs</td>
</tr>
<tr>
<td>Acetic acid, phenylmethyler</td>
<td>10000 lbs</td>
</tr>
<tr>
<td>Proprietary Fragrance</td>
<td>10000 lbs</td>
</tr>
</tbody>
</table>
Ethanol, 2,2',2''-nitrilotris- 10000 lbs
Ethanol, 2,2''-iminebis-  10000 lbs

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.

Ethanol, 2,2''-iminebis- Carcinogenic. 07 2012

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

**Chemical Identity**
2-Propanone
Propane
Butane
Terpenes and Terpenoids, sweet orange-oil

**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**
2-Propanone
Terpenes and
Terpenoids, sweet
orange-oil

**Stockholm convention**
2-Propanone
Terpenes and
Terpenoids, sweet
orange-oil

**Rotterdam convention**
2-Propanone
Terpenes and
Terpenoids, sweet
orange-oil

**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: On or in compliance with the inventory

Korea Existing Chemicals Inv. (KECI): On or 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: 08/22/2019

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.