# SAFETY DATA SHEET

In accordance with UN GHS latest edition

**Product:** Compare to aroma GREEN APPLE JOLLY RANCHER ® F21666

**Version:** 4

## Section 1. Identification of the substance or the mixture and of the supplier

### 1.1 Product Identifier

**Product identifier:** Compare to aroma GREEN APPLE JOLLY RANCHER ® F21666(Contains:2,4-Dimethyl-3-cyclohexen-1-carboxaldehyde, Isocyclocitral, alpha-Hexylcinnamaldehyde)

**Other identifiers:** 1429334

### 1.2 Relevant identified uses of the substance of mixture and uses advised against

**Product uses:** Fragrances

### 1.3 Details of the supplier of the safety data sheet

**Company name:** Aromatic Fragrances International

**Company address:** 85 Wansley Drive SE
Cartersville, GA 30121
USA

**Contact:** Regulatory Affairs

**E-Mail address:** regulatory@afi-usa.com

**Company phone:** 770-334-3906

### 1.4 Emergency telephone number

**Emergency phone:** +1 888 360 3639

## Section 2. Hazards identification

### 2.1 Classification of the substance or mixture

**Class and category of danger:** Flammable Liquid, Hazard Category 4
Skin Corrosion / Irritation Category 3
Sensitization - Skin Category 1
Hazardous to the Aquatic Environment - Acute Hazard Category 2
Hazardous to the Aquatic Environment - Long-term Hazard Category 2
H227, Combustible liquid.
H316, Causes mild skin irritation.
H317, May cause an allergic skin reaction.
H411, Toxic to aquatic life with long lasting effects.

### 2.2 Label elements

**Signal word:** Warning

**Hazard statements:** H227, Combustible liquid.
H316, Causes mild skin irritation.
H317, May cause an allergic skin reaction.
H411, Toxic to aquatic life with long lasting effects.

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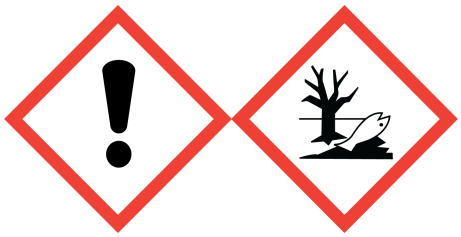
**Precautionary statements:**

P210, Keep away from heat, sparks, open flames and hot surfaces. - No smoking.
P273, Avoid release to the environment.
P280, Wear protective gloves/eye protection/face protection.
P261, Avoid breathing vapour or dust.
P272, Contaminated work clothing should not be allowed out of the workplace.
P302/352, IF ON SKIN: Wash with plenty of soap and water.
P333/313, If skin irritation or rash occurs: Get medical advice/attention.
P370/378, In case of fire: Use carbon dioxide, dry chemical, foam for extinction.
P363, Wash contaminated clothing before reuse.
P391, Collect spillage.
P403/235, Store in a well-ventilated place. Keep cool.
P501, Dispose of contents/container to approved disposal site, in accordance with local regulations.

**Pictograms:**



### 2.3 Other hazards

**Other hazards:**

Hydrocarbon Concentration %: 0.0000%
Substance does not meet the criteria for PBT or vPvB according to Regulation (EC) No 17 1207/2006, Annex XIII.

## Section 3. Composition / information on ingredients

### 3.2 Mixtures

**Contains:**

| Name | CAS | % | GHS Classification |
|---|---|---|---|
| Diethyl phthalate | 84-66-2 | 10-<20% | Aquatic Acute 3;H402 |
| alpha-Hexylcinnamaldehyde | 101-86-0 | 10-<20% | Acute Tox. 5-Skin Irrit. 3-Skin Sens. 1B-Aquatic Acute 1-Aquatic Chronic 2;H303-H316-H317-H400-H411 |
| 2-tert-Butylcyclohexyl acetate | 88-41-5 | 10-<20% | Acute Tox. 5-Skin Irrit. 3-Aquatic Acute 2-Aquatic Chronic 2;H303-H316-H411 |
| alpha,alpha-Dimethylphenethyl butyrate | 10094-34-5 | 5-<10% | Aquatic Acute 2-Aquatic Chronic 2;H411 |
| gamma-Undecalactone | 104-67-6 | 5-<10% | Aquatic Acute 2-Aquatic Chronic 3;H401-H412 |
| Dihydromyrcenol | 18479-58-8 | 1-<5% | Flam. Liq. 4-Acute Tox. 5-Skin Irrit. 2-Eye Irrit. 2A-STOT SE 3-Aquatic Acute 3;H227-H303-H315-H319-H336-H402 |
| 1,3,4,6,7,8-Hexahydro-4,6,6,7,8,8-hexamethylcyclopenta-gamma-2-benzopyran | 1222-05-5 | 1-<5% | Skin Irrit. 3-Aquatic Acute 1-Aquatic Chronic 1;H316-H410 |

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| | | | |
|---|---|---|---|
| Isoamyl acetate | 123-92-2 | 1-<5% | Flam. Liq. 3-Aquatic Acute 3;H226-H402 |
| 2-Phenoxyethyl isobutyrate | 103-60-6 | 1-<5% | Skin Irrit. 3-Aquatic Acute 3;H316-H402 |
| Hexyl acetate | 142-92-7 | 1-<5% | Flam. Liq. 3-Skin Irrit. 3-Aquatic Acute 2;H226-H316-H401 |
| 1,1-Dimethyl-2-phenylethyl acetate | 151-05-3 | 1-<5% | Acute Tox. 5-Aquatic Acute 2;H303-H401 |
| Isocyclocitral | 1335-66-6 | 1-<5% | Flam. Liq. 4-Acute Tox. 5-Skin Irrit. 2-Eye Irrit. 2A-Skin Sens. 1B-Aquatic Acute 2-Aquatic Chronic 3;H227-H303-H315-H319-H317-H401-H412 |
| 2,4-Dimethyl-3-cyclohexen-1-carboxaldehyde | 68039-49-6 | 1-<5% | Flam. Liq. 4-Acute Tox. 5-Skin Irrit. 2-Skin Sens. 1B-Aquatic Acute 2-Aquatic Chronic 2;H227-H303-H315-H317-H411 |
| Ethyl hexanoate | 123-66-0 | 0.1-<1% | Flam. Liq. 3-Skin Irrit. 2-Aquatic Acute 2;H226-H315-H401 |
| Allyl (3-methylbutoxy)acetate | 67634-00-8 | 0.1-<1% | Flam. Liq. 4-Acute Tox. 4-Acute Tox. 2-Skin Irrit. 2-Aquatic Acute 2;H227-H302-H315-H330-H401 |
| 2-Methyl-3-(p-isopropylphenyl) propionaldehyde | 103-95-7 | 0.1-<1% | Flam. Liq. 4-Acute Tox. 5-Skin Irrit. 2-Skin Sens. 1B-Repr. 2-Aquatic Acute 2-Aquatic Chronic 3;H227-H303-H315-H317-H361-H401-H412 |
| Eugenol | 97-53-0 | 0.1-<1% | Acute Tox. 5-Skin Irrit. 3-Eye Irrit. 2A-Skin Sens. 1B-Aquatic Acute 2;H303-H316-H319-H317-H401 |

**Substances with workplace exposure limits, not listed above:**

Not Applicable

## Section 4. First-aid measures

### 4.1 Description of first aid measures

**Inhalation:** Remove from exposure site to fresh air, keep at rest, and obtain medical attention.

**Eye exposure:** Flush immediately with water for at least 15 minutes. Contact physician if symptoms persist.

**Skin exposure:** IF ON SKIN: Wash with plenty of soap and water.

**Ingestion:** Rinse mouth with water and obtain medical attention.

### 4.2 Most important symptoms and effects, both acute and delayed

Causes mild skin irritation.

May cause an allergic skin reaction.

### 4.3 Indication of any immediate medical attention and special treatment needed

None expected, see Section 4.1 for further information.

## Section 5: Firefighting measures

### 5.1 Extinguishing media

Suitable media: Carbon dioxide, Dry chemical, Foam.

### 5.2 Special hazards arising from the substance or mixture

In case of fire, may be liberated: Carbon monoxide, Unidentified organic compounds.

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**5.3 Advice for fire fighters:**

In case of insufficient ventilation, wear suitable respiratory equipment.

## Section 6. Accidental release measures

**6.1 Personal precautions, protective equipment and emergency procedures:**

Avoid inhalation. Avoid contact with skin and eyes. See protective measures under Section 7 and 8.

**6.2 Environmental precautions:**

Keep away from drains, surface and ground water, and soil.

**6.3 Methods and material for containment and cleaning up:**

Remove ignition sources. Provide adequate ventilation. Avoid excessive inhalation of vapours. Contain spillage immediately by use of sand or inert powder. Dispose of according to local regulations.

**6.4 Reference to other sections:**

Also refer to sections 8 and 13.

## Section 7. Handling and storage

**7.1 Precautions for safe handling:**

Keep away from heat, sparks, open flames and hot surfaces. - No smoking. Use personal protective equipment as required. Use in accordance with good manufacturing and industrial hygiene practices. Use in areas with adequate ventilation Do not eat, drink or smoke when using this product.

**7.2 Conditions for safe storage, including any incompatibilities:**

Store in a well-ventilated place. Keep container tightly closed. Keep cool. Ground/bond container and receiving equipment. Use explosion-proof electrical, ventilating and lighting equipment. Use only non-sparking tools. Take precautionary measures against static discharge.

**7.3 Specific end use(s):**

Fragrances: Use in accordance with good manufacturing and industrial hygiene practices.

## Section 8. Exposure controls/personal protection

**8.1 Control parameters**

**Workplace exposure limits:** Not Applicable

**8.2 Exposure Controls**

**Eye / Skin Protection**

Wear protective gloves/eye protection/face protection

**Respiratory Protection**

Under normal conditions of use and where adequate ventilation is available to prevent build up of excessive vapour, this material should not require special engineering controls. However, in conditions of high or prolonged use, or high temperature or other conditions which increase exposure, the following engineering controls can be used to minimise

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exposure to personnel: a) Increase ventilation of the area with local exhaust ventilation. b) Personnel can use an approved, appropriately fitted respirator with organic vapour cartridge or canisters and particulate filters. c) Use closed systems for transferring and processing this material.

Also refer to Sections 2 and 7.

## Section 9. Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

| | |
|---|---|
| **Appearance:** | Free flowing liquid without sediment |
| **Odour:** | Characteristic |
| **Odour threshold:** | Not determined |
| **Melting point / freezing point:** | Not determined |
| **Boiling point or initial boiling point and boiling range:** | Not determined |
| **Flammability:** | Not determined |
| **Lower and upper explosion limit:** | Not determined |
| **Flash point:** | 62 °C |
| **Auto-ignition temperature:** | Not determined |
| **Decomposition temperature:** | Not relevant |
| **pH:** | Not determined |
| **Kinematic viscosity:** | Not determined |
| **Solubility:** | Not determined |
| **Partition coefficient: n-octanol/water (log value):** | Not determined |
| **Vapour pressure:** | Not determined |
| **Density and/or relative density:** | 0.9520 - 0.9820 |
| **Relative vapour density:** | Not determined |
| **Particle characteristics:** | Not determined |

### 9.2 Other information:

| | |
|---|---|
| Flash Point (Fahrenheit): | 143 °F |
| Refractive Index @ 20C: | 1.4680 - 1.4780 |
| Color Range: | 2 Very Pale Yellow - Colorless |
| Calculated VOC: | 31.09 |

## Section 10. Stability and reactivity

### 10.1 Reactivity:

Presents no significant reactivity hazard, by itself or in contact with water.

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**10.2 Chemical stability:**

Good stability under normal storage conditions.

**10.3 Possibility of hazardous reactions:**

Not expected under normal conditions of use.

**10.4 Conditions to avoid:**

Avoid extreme heat.

**10.5 Incompatible materials:**

Avoid contact with strong acids, alkalis or oxidising agents.

**10.6 Hazardous decomposition products:**

Not expected.

## Section 11. Toxicological information

**11.1 Information on toxicological effects**

This mixture has not been tested as a whole for health effects. The health effects have been calculated using the methods outlined in UN GHS.

| | |
|---|---|
| **Acute Toxicity:** | Based on available data the classification criteria are not met. |
| Acute Toxicity Oral | >5000 |
| Acute Toxicity Dermal | Not Applicable |
| Acute Toxicity Inhalation | Not Available |
| **Skin corrosion/irritation:** | Skin Corrosion / Irritation Category 3 |
| **Serious eye damage/irritation:** | Based on available data the classification criteria are not met. |
| **Respiratory or skin sensitisation:** | Sensitization - Skin Category 1 |
| **Germ cell mutagenicity:** | Based on available data the classification criteria are not met. |
| **Carcinogenicity:** | Based on available data the classification criteria are not met. |
| **Reproductive toxicity:** | Based on available data the classification criteria are not met. |
| **STOT-single exposure:** | Based on available data the classification criteria are not met. |
| **STOT-repeated exposure:** | Based on available data the classification criteria are not met. |
| **Aspiration hazard:** | Based on available data the classification criteria are not met. |

**Information about hazardous ingredients in the mixture**

| Ingredient | CAS | LD50/ATE Oral (mg/kg) | LD50/ATE Dermal (mg/kg) | LC50/ATE Inhalation | LC50 Route |
|---|---|---|---|---|---|
| 1,1-Dimethyl-2-phenylethyl acetate | 151-05-3 | 3300 | | | |
| 2,4-Dimethyl-3-cyclohexen-1-carboxaldehyde | 68039-49-6 | 2330 | | | |
| 2-tert-Butylcyclohexyl acetate | 88-41-5 | 4600 | | | |

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| | | | | | |
|---|---|---|---|---|---|
| Allyl (3-methylbutoxy) acetate | 67634-00-8 | 500 | | 0.46 | Dust/mist mg/l |
| Dihydromyrcenol | 18479-58-8 | 3020 | | | |
| Isocyclocitral | 1335-66-6 | 3220 | | | |
| alpha-Hexylcinnamaldehyde | 101-86-0 | 3100 | | | |

Refer to Sections 2 and 3 for additional information.

## Section 12. Ecological information

**12.1 Toxicity:**

Toxic to aquatic life with long lasting effects.

**12.2 Persistence and degradability:** Not available

**12.3 Bioaccumulative potential:** Not available

**12.4 Mobility in soil:** Not available

**12.5 Other adverse effects:** Not available

## Section 13. Disposal considerations

**13.1 Waste treatment methods:**

Dispose of in accordance with local regulations. Avoid disposing into drainage systems and into the environment. Empty containers should be taken to an approved waste handling site for recycling or disposal.

## Section 14. Transport information

| | 14.1 UN number: | 14.2 UN Proper Shipping Name: | 14.3 Transport hazard class (es): | Sub Risk: | 14.4 Packing Group: |
|---|---|---|---|---|---|
| **UN Model Regulations** | UN3082 | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (1,3,4,6,7,8-Hexahydro-4,6,6,7,8,8-hexamethylcyclopenta-gamma-2-benzopyran, alpha-Hexylcinnamaldehyde) | 9 | - | III |
| **IMDG** | UN3082 | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (1,3,4,6,7,8-Hexahydro-4,6,6,7,8,8-hexamethylcyclopenta-gamma-2-benzopyran, alpha-Hexylcinnamaldehyde) MARINE POLLUTANT | 9 | - | III |

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| | | | | | |
|---|---|---|---|---|---|
| **ADR,RID,ADN** | UN3082 | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (1,3,4,6,7,8-Hexahydro-4,6,6,7,8,8-hexamethylcyclopenta-gamma-2-benzopyran, alpha-Hexylcinnamaldehyde) | 9 | - | III |
| **ICAO TI** | UN3082 | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (1,3,4,6,7,8-Hexahydro-4,6,6,7,8,8-hexamethylcyclopenta-gamma-2-benzopyran, alpha-Hexylcinnamaldehyde) | 9 | - | III |

**14.5 Environmental hazards:** This is classified as an environmentally hazardous substance under the UN Model Regulations. This is classified as a Marine Pollutant under the IMDG Code.

**14.6 Special precautions for user:** None additional

**14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code:**

Not applicable

## Section 15. Regulatory information

**Components listed on California's SB312**

| Name | CAS | % |
|---|---|---|
| alpha-Hexylcinnamaldehyde | 101-86-0 | 10-<20% |
| 2-Phenoxyethyl isobutyrate | 103-60-6 | 1-<5% |
| Eugenol | 97-53-0 | 0.1-<1% |

## Section 16. Other information

**Concentration % Limits:** SCI 3=8.11% SS 1=7.28% EH A2=11.84% EH A3=1.17% EH C2=32.35% EH C3=3.21% EH C4=55.26%

**Total Fractional Values:** SCI 3=12.34 SS 1=13.74 EH A2=8.45 EH A3=85.71 EH C2=3.09 EH C3=31.18 EH C4=1.81

**Key to revisions:**

Hazardous Ingredients declard in a GHS Product Identifier

Hazardous Ingredients disclosed in a GHS Safety Data Sheet with banded concentrations

**Key to abbreviations:**

| Abbreviation | Meaning |
|---|---|
| Acute Tox. 2 | Acute Toxicity - Inhalation Category 2 |
| Acute Tox. 4 | Acute Toxicity - Oral Category 4 |

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| | |
|---|---|
| Acute Tox. 5 | Acute Toxicity - Oral Category 5 |
| Aquatic Acute 1 | Hazardous to the Aquatic Environment - Acute Hazard Category 1 |
| Aquatic Acute 2 | Hazardous to the Aquatic Environment - Acute Hazard Category 2 |
| Aquatic Acute 3 | Hazardous to the Aquatic Environment - Acute Hazard Category 3 |
| Aquatic Chronic 1 | Hazardous to the Aquatic Environment - Long-term Hazard Category 1 |
| Aquatic Chronic 2 | Hazardous to the Aquatic Environment - Long-term Hazard Category 2 |
| Aquatic Chronic 3 | Hazardous to the Aquatic Environment - Long-term Hazard Category 3 |
| Eye Irrit. 2A | Eye Damage / Irritation Category 2A |
| Flam. Liq. 3 | Flammable Liquid, Hazard Category 3 |
| Flam. Liq. 4 | Flammable Liquid, Hazard Category 4 |
| H226 | Flammable liquid and vapour. |
| H227 | Combustible liquid. |
| H302 | Harmful if swallowed. |
| H303 | May be harmful if swallowed. |
| H315 | Causes skin irritation. |
| H316 | Causes mild skin irritation. |
| H317 | May cause an allergic skin reaction. |
| H319 | Causes serious eye irritation. |
| H330 | Fatal if inhaled. |
| H336 | May cause drowsiness or dizziness. |
| H361 | Suspected of damaging fertility or the unborn child (exposure route). |
| H400 | Very toxic to aquatic life. |
| H401 | Toxic to aquatic life. |
| H402 | Harmful to aquatic life. |
| H410 | Very toxic to aquatic life with long lasting effects. |
| H411 | Toxic to aquatic life with long lasting effects. |
| H412 | Harmful to aquatic life with long lasting effects. |
| P202 | Do not handle until all safety precautions have been read and understood. |
| P210 | Keep away from heat, sparks, open flames and hot surfaces. - No smoking. |
| P233 | Keep container tightly closed. |
| P240 | Ground/bond container and receiving equipment. |
| P241 | Use explosion-proof electrical, ventilating and lighting equipment. |
| P242 | Use only non-sparking tools. |
| P243 | Take precautionary measures against static discharge. |
| P260 | Do not breathe vapour or dust. |
| P261 | Avoid breathing vapour or dust. |
| P264 | Wash hands and other contacted skin thoroughly after handling. |
| P270 | Do not eat, drink or smoke when using this product. |
| P271 | Use only outdoors or in a well-ventilated area. |
| P272 | Contaminated work clothing should not be allowed out of the workplace. |

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| | |
|---|---|
| P273 | Avoid release to the environment. |
| P280 | Wear protective gloves/eye protection/face protection. |
| P284 | Wear respiratory protection. |
| P301/312 | IF SWALLOWED: call a POISON CENTER or doctor/physician if you feel unwell. |
| P302/352 | IF ON SKIN: Wash with plenty of soap and water. |
| P303/361/353 | IF ON SKIN (or hair): Remove/take off immediately all contaminated clothing. Rinse skin with water/shower. |
| P304/340 | IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. |
| P305/351/338 | IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. |
| P308/313 | IF exposed or concerned: Get medical advice/attention. |
| P310 | Immediately call a POISON CENTER or doctor/physician. |
| P312 | Call a POISON CENTRE or doctor/physician if you feel unwell. |
| P330 | Rinse mouth. |
| P332/313 | If skin irritation occurs: Get medical advice/attention. |
| P333/313 | If skin irritation or rash occurs: Get medical advice/attention. |
| P337/313 | If eye irritation persists: Get medical advice/attention. |
| P362 | Take off contaminated clothing and wash before reuse. |
| P363 | Wash contaminated clothing before reuse. |
| P370/378 | In case of fire: Use carbon dioxide, dry chemical, foam for extinction. |
| P391 | Collect spillage. |
| P403/233/235 | Store in a well-ventilated place. Keep container tightly closed. Keep cool. |
| P403/235 | Store in a well-ventilated place. Keep cool. |
| P405 | Store locked up. |
| P501 | Dispose of contents/container to approved disposal site, in accordance with local regulations. |
| Repr. 2 | Toxic to Reproduction Category 2 |
| STOT SE 3 | Specific Target Organ Toxicity (Single Exposure) Category 3 |
| Skin Irrit. 2 | Skin Corrosion / Irritation Category 2 |
| Skin Irrit. 3 | Skin Corrosion / Irritation Category 3 |
| Skin Sens. 1B | Sensitization - Skin Category 1B |

The information in this safety data sheet is to the best of our knowledge true and accurate but all data, instructions, recommendations and/or suggestions are made without guarantee.