SAFETY DATA SHEET

In accordance with 29 CFR 1910.1200

Product: Hawaiian Drink Flavor 345400
Version: 2

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

1.1 Product Identifier
Product identifier: Hawaiian Drink Flavor 345400
Other identifiers: None

1.2 Relevant identified uses of the substance or mixture and uses advised against
Product uses: Flavours

1.3 Details of the supplier of the safety data sheet
Company name: Perfumer's Apprentice
Company address: 170 Technology Circle
             Scotts Valley
             CA 95066
             USA
Contact: Elisabeth Hanson
E-Mail address: regulatory@perfumersapprentice.com
Company phone: +1 (831) 346 7234

1.4 Emergency telephone number
Emergency phone: +1 (831) 346 7234

Section 2. Hazards identification

2.1 Classification of the substance or mixture
Class and category of danger:
- Flammable Liquid, Hazard Category 3
- Sensitization - Skin Category 1A
- H226, Flammable liquid and vapour.
- H317, May cause an allergic skin reaction.

2.2 Label elements
Signal word: Warning
Hazard statements:
- H226, Flammable liquid and vapour.
- H317, May cause an allergic skin reaction.
Precautionary statements:
- P210, Keep away from heat, sparks, open flames and hot surfaces. - No smoking.
- P233, Keep container tightly closed.
- P241, Use explosion-proof electrical, ventilating and lighting equipment.
- P242, Use only non-sparking tools.
- P243, Take precautionary measures against static discharge.
- P261, Avoid breathing dust/fume/gas/mist/vapour/spray.
SAFETY DATA SHEET
In accordance with 29 CFR 1910.1200

Product: Hawaiian Drink Flavor 345400

Version: 2

P272, Contaminated work clothing should not be allowed out of the workplace.
P280, Wear protective gloves/eye protection/face protection.
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.
P321, Specific treatment (see...on this label).
P332/313, If skin irritation occurs: Get medical advice/attention.
P333/313, If skin irritation or rash occurs: Get medical advice/attention.
P363, Wash contaminated clothing before reuse.
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:

Other hazards: None

Section 3. Composition / Information on Ingredients

3.2 Mixtures

Contains:

<table>
<thead>
<tr>
<th>Name</th>
<th>CAS</th>
<th>EC</th>
<th>%</th>
<th>GHS Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Benzaldehyde</td>
<td>100-52-7</td>
<td>202-860-4</td>
<td>1.0-5%</td>
<td>FL 4-ATQ 4-ATI 4-EDI 2A-STO-SE 3 (RI);H227-H302-H319-H332-H335</td>
</tr>
<tr>
<td>Ethyl acetate</td>
<td>141-78-6</td>
<td>205-500-4</td>
<td>1.0-5%</td>
<td>FL 2-EDI 2A-STO-SE 3(NE);H225-H319-H336</td>
</tr>
<tr>
<td>Allyl hexanoate</td>
<td>123-68-2</td>
<td>204-642-4</td>
<td>0.1-&lt;1%</td>
<td>FL 4-ATO 3-ATD 3-ATI 3;H227-H301-H311-H331</td>
</tr>
<tr>
<td>d-Limonene</td>
<td>5989-27-5</td>
<td>227-813-5</td>
<td>0.1-&lt;1%</td>
<td>FL 3-SCI 2-SS 1B-1H;A1;H226-H304-H315-H317</td>
</tr>
<tr>
<td>beta-Pinene</td>
<td>127-91-3</td>
<td>204-872-5</td>
<td>&lt;0.1%</td>
<td>FL 3-SCI 2-SS 1B-1H;H226-H304-H315-H317</td>
</tr>
<tr>
<td>p-Mentha-1,4-diene</td>
<td>99-85-4</td>
<td>202-794-6</td>
<td>&lt;0.1%</td>
<td>FL 3-AP 1;H226-H304</td>
</tr>
<tr>
<td>Myrcene</td>
<td>123-35-3</td>
<td>204-622-5</td>
<td>&lt;0.1%</td>
<td>FL 3-SCI 2-EDI 2A-1H;H226-H304-H315-H319</td>
</tr>
<tr>
<td>alpha-Pinene</td>
<td>80-56-8</td>
<td>201-291-9</td>
<td>&lt;0.1%</td>
<td>FL 3-SCI 2-SS 1B-1H;H226-H304-H315-H317</td>
</tr>
<tr>
<td>Terpinolene</td>
<td>586-62-9</td>
<td>209-578-0</td>
<td>&lt;0.1%</td>
<td>FL 4-SS 1B-1H;H227-H304-H317</td>
</tr>
</tbody>
</table>

The exact percentage concentrations of components are being withheld as a trade secret.

Substances with Community workplace exposure limits, not listed above:
SAFETY DATA SHEET
In accordance with 29 CFR 1910.1200

Product:
Hawaiian Drink Flavor 345400

Version:
2

<table>
<thead>
<tr>
<th>Name</th>
<th>CAS</th>
<th>EC</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethyl acetate</td>
<td>141-78-8</td>
<td>205-500-4</td>
<td>&lt;5%</td>
</tr>
<tr>
<td>Propylene glycol</td>
<td>57-55-6</td>
<td>200-338-0</td>
<td>90-99%</td>
</tr>
</tbody>
</table>

Section 4. First-aid measures

4.1 Description of first aid measures

IF ON SKIN: Wash with plenty of soap and water.
IF ON SKIN (or hair): Remove/take off immediately all contaminated clothing. Rinse skin with water/shower.

4.2 Most important symptoms and effects, both acute and delayed

May cause an allergic skin reaction.

4.3 Indication of any immediate medical attention and special treatment needed

Specific treatment (see...on this label).

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.

5.3 Advice for firefighters:

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.
SAFETY DATA SHEET
In accordance with 29 CFR 1910.1200

Product: Hawaiian Drink Flavor 345400
Version: 2

Section 7. Handling and storage

7.1 Precautions for safe handling:
Keep away from heat, sparks, open flames and hot surfaces. - No smoking.

7.2 Conditions for safe storage, including any Incompatibilities:
Use only non-sparking tools. Take precautionary measures against static discharge.

7.3 Specific end use(s):
Flavours: Use in accordance with good manufacturing and industrial hygiene practices.

Section 8. Exposure controls/personal protection

8.1 Control parameters

Workplace exposure limits:

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>CAS</th>
<th>EC</th>
<th>Description</th>
<th>ppm</th>
<th>mg/m³</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethyl acetate</td>
<td>141-78-6</td>
<td>205-500-4</td>
<td>Long-term exposure limit (8-hour TWA reference period)</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td></td>
<td>205-500-4</td>
<td>Short-term exposure limit (15-minute reference period)</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Propylene glycol</td>
<td>57-55-6</td>
<td>200-338-0</td>
<td>Long-term exposure limit (8-hour TWA reference period)</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td></td>
<td>200-338-0</td>
<td>Short-term exposure limit (15-minute reference period)</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

8.2 Exposure Controls

Eye / Skin Protection
Wear protective gloves/eye protection/face protection

Respiratory Protection
Ensure adequate and ongoing ventilation is maintained in order to prevent build up of excessive vapour and to ensure occupational exposure limits are adhered to. If appropriate, and depending on your patterns and volumes of use, the following engineering controls may be required as additional protective measures: a) Isolate mixing rooms and other areas where this material is used or openly handled. Maintain these areas under negative air pressure relative to the rest of the plant. b) Employ the use of Personal protective equipment - an approved, properly fitted respirator with organic vapour cartridges or canisters and particulate filters. c) Use local exhaust ventilation around open tanks and other open sources of potential exposures in order to avoid excessive inhalation, including places where this material is openly weighed or measured. In addition, use general dilution ventilation of the work area to eliminate or reduce possible worker exposures. d) Use closed systems for transferring and processing this material. Also refer to Sections 2 and 7.
SAFETY DATA SHEET
In accordance with 29 CFR 1910.1200

Product: Hawaiian Drink Flavor 345400
Version: 2

Section 9. Physical and chemical properties

9.1 Information on basic physical and chemical properties
Appearance: Not determined
Odour: Not determined
pH: Not determined
Initial boiling point / range: Not determined
Flash point: 47.78 °C
Vapour pressure: Not determined
Relative density: 1.0260
Solubility(ies): Not determined
9.2 Other information: None available

Section 10. Stability and reactivity

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

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 29 CFR 1910.1200.

May cause an allergic skin reaction.
Assumed Toxicity Value (LD50 or ATE) for Acute Oral Toxicity: >5000
Assumed Toxicity Value (LD50 or ATE) for Acute Dermal Toxicity: >5000
Assumed Toxicity Value (LC50 or ATE) for Acute Inhalation Toxicity: Not Available
SAFETY DATA SHEET
In accordance with 29 CFR 1910.1200

Product: Hawaiian Drink Flavor 345400
Version: 2

Inhalation Route: Not Available

Information about hazardous ingredients in the mixture

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>CAS</th>
<th>EC</th>
<th>LD50/ATE Oral</th>
<th>LD50/ATE Dermal</th>
<th>LC50/ATE Inhalation</th>
<th>LC50 Route</th>
</tr>
</thead>
<tbody>
<tr>
<td>Allyl hexanoate</td>
<td>123-68-2</td>
<td>204-642-4</td>
<td>300</td>
<td>300</td>
<td>3</td>
<td>Vapour</td>
</tr>
<tr>
<td>Benzaldehyde</td>
<td>100-52-7</td>
<td>202-860-4</td>
<td>1430</td>
<td>Not available</td>
<td>1.5</td>
<td>Dust/mist</td>
</tr>
</tbody>
</table>

Refer to Sections 2 and 3 for additional information.

Section 12. Ecological information

12.1 Toxicity: Not available
12.2 Persistence and degradability: Not available
12.3 Bioaccumulative potential: Not available
12.4 Mobility in soil: Not available
12.5 Results of PBT and vPvB assessment:
This substance does not meet the PBT/vPvB criteria of REACH, annex XIII.
12.6 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

DOT Proper Shipping Name: This product has been reclassified as non-flammable in accordance with DOT CFR 49 [§173.120(a)(3)].
DOT Hazard Class: Not Applicable
UN/NA Number: Not Available
LAND TRANSPORT (Canadian TDG):
ADR/RID Shipping Name:
UN Number:
Hazard Class:
MARINE TRANSPORT (IMDG/IMO): Not Applicable
AIR TRANSPORT (ICAO/IATA): ICAO/IATA Shipping Name:
UN number: UN1197
14.2 UN Proper Shipping Name: EXTRACTS, FLAVOURING, LIQUID
14.3 Transport hazard class(es):
14.4. Packing Group: III
14.5 Environmental hazards: Not environmentally hazardous for transport

Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code: Not applicable
SAFETY DATA SHEET
In accordance with 29 CFR 1910.1200

Product: Hawaiian Drink Flavor 345400
Version: 2

Section 15. Regulatory Information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

None additional

15.2 Chemical Safety Assessment

A Chemical Safety Assessment has not been carried out for this product.

Section 16. Other Information

Key to revisions:

2.1 Classification of the substance or mixture

Key to abbreviations:

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>AH 1</td>
<td>Aspiration Hazard Category 1</td>
</tr>
<tr>
<td>ATD 3</td>
<td>Acute Toxicity - Dermal Category 3</td>
</tr>
<tr>
<td>ATI 3</td>
<td>Acute Toxicity - Inhalation Category 3</td>
</tr>
<tr>
<td>ATI 4</td>
<td>Acute Toxicity - Inhalation Category 4</td>
</tr>
<tr>
<td>ATO 3</td>
<td>Acute Toxicity - Oral Category 3</td>
</tr>
<tr>
<td>ATO 4</td>
<td>Acute Toxicity - Oral Category 4</td>
</tr>
<tr>
<td>EDI 2A</td>
<td>Eye Damage / Irritation Category 2A</td>
</tr>
<tr>
<td>FL 2</td>
<td>Flammable Liquid, Hazard Category 2</td>
</tr>
<tr>
<td>FL 3</td>
<td>Flammable Liquid, Hazard Category 3</td>
</tr>
<tr>
<td>FL 4</td>
<td>Flammable Liquid, Hazard Category 4</td>
</tr>
<tr>
<td>H225</td>
<td>Highly flammable liquid and vapour.</td>
</tr>
<tr>
<td>H226</td>
<td>Flammable liquid and vapour.</td>
</tr>
<tr>
<td>H227</td>
<td>Combustible liquid.</td>
</tr>
<tr>
<td>H301</td>
<td>Toxic if swallowed.</td>
</tr>
<tr>
<td>H302</td>
<td>Harmful if swallowed.</td>
</tr>
<tr>
<td>H304</td>
<td>May be fatal if swallowed and enters airways.</td>
</tr>
<tr>
<td>H311</td>
<td>Toxic in contact with skin.</td>
</tr>
<tr>
<td>H315</td>
<td>Causes skin irritation.</td>
</tr>
<tr>
<td>H317</td>
<td>May cause an allergic skin reaction.</td>
</tr>
<tr>
<td>H319</td>
<td>Causes serious eye irritation.</td>
</tr>
<tr>
<td>H331</td>
<td>Toxic if inhaled.</td>
</tr>
<tr>
<td>H332</td>
<td>Harmful if inhaled.</td>
</tr>
<tr>
<td>H335</td>
<td>May cause respiratory irritation.</td>
</tr>
<tr>
<td>H336</td>
<td>May cause drowsiness or dizziness.</td>
</tr>
<tr>
<td>P210</td>
<td>Keep away from heat, sparks, open flames and hot surfaces. - No smoking.</td>
</tr>
<tr>
<td>P233</td>
<td>Keep container tightly closed.</td>
</tr>
<tr>
<td>P240</td>
<td>Ground/bond container and receiving equipment.</td>
</tr>
</tbody>
</table>

Perfumer's Apprentice, 170 Technology Circle, Scotts Valley, CA, 95066, USA