

SAFETY DATA SHEET

In accordance with REACH Regulation EC No.1907/2006

Product: Yuzu Oil 233683-84-6

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Version:

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

1.1 Product Identifier

Product identifier:Yuzu Oil 233683-84-6(Contains:Thymol, alpha-Pinene, beta-Pinene, d-Limonene)Other identifiers:None

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: | Perfumer's Apprentice |
|--------------------------------|---|
| Company address: | 170 Technology Circle Scotts Valley CA 95066 USA |
| Contact: | Elisabeth Hanson |
| E-Mail address: | regulatory@perfumersapprentice.com |
| Company phone: | (831)316-7137 |
| 1.4 Emergency telephone number | |
| Emergency phone: | ChemTel:1(800)255-3924, 01(813)248-0585 MIS6760377 |

Section 2. Hazards identification

2.1 Classification of the substance or mixture

Classification under Regulation (EC) No 1272/2008

| Class and category of danger: | Flammable Liquid, Hazard Category 3 |
|----------------------------------|--|
| dungen | Skin Corrosion / Irritation Category 2 |
| | Sensitization - Skin Category 1 |
| | Aspiration Hazard Category 1 |
| | Hazardous to the Aquatic Environment - Acute Hazard Category 1 |
| | Hazardous to the Aquatic Environment - Long-term Hazard Category 1 |
| | H226, Flammable liquid and vapour. |
| | H304, May be fatal if swallowed and enters airways. |
| | H315, Causes skin irritation. |
| | H317, May cause an allergic skin reaction. |
| | H410, Very toxic to aquatic life with long lasting effects. |
| 2.2 Label elements | |

Signal word: Danger



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| Product: | Yuzu C | Dil 233683-84-6 |
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| | | |
| Hazard stater | nents: | H226, Flammable liquid and vapour. |
| | | H304, May be fatal if swallowed and enters airways. |
| | | H315, Causes skin irritation. |
| | | H317, May cause an allergic skin reaction. |
| | | H410, Very toxic to aquatic life with long lasting effects. |
| Supplementa Information: | I | EUH208, Contains Terpinolene. May produce an allergic reaction. |
| Precautionary | y | P210, Keep away from heat, sparks, open flames and hot surfaces No smoking. |
| statements: | | 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. |
| | | P261, Avoid breathing vapour or dust. |
| | | P264, Wash hands and other contacted skin thoroughly after handling. |
| | | P272, Contaminated work clothing should not be allowed out of the workplace. |
| | | P273, Avoid release to the environment. |
| | | P280, Wear protective gloves/eye protection/face protection. |
| | | P301/310, IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician. |
| | | P303/361/353, IF ON SKIN (or hair): Remove/take off immediately all contaminated clothing. Rinse skin with water/shower. P331, Do not induce vomiting. |
| | | P333/313, If skin irritation or rash occurs: Get medical advice/attention. |
| | | P362, Take off contaminated clothing and wash before reuse. |
| | | P370/378, In case of fire: Use carbon dioxide, dry chemical, foam for extinction. |
| | | P391, Collect spillage. |
| | | 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. |
| Pictograms: | | |

Other hazards:

None



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Section 3. Composition / information on ingredients

3.2 Mixtures

Contains:

| Name | CAS | EC | REACH Registration No. | % | Classification for (CLP) 1272/2008 |
|--------------------|-----------|-----------|---------------------------|--------|--|
| d-Limonene | 5989-27-5 | 227-813-5 | | 50-75% | Flam. Liq. 3-Skin Irrit. 2-Skin Sens. 1B-Asp. Tox 1-Aquatic Acute 1- Aquatic Chronic 1; H226-H304-H315- H317-H410,- |
| p-Mentha-1,4-diene | 99-85-4 | 202-794-6 | | 10-20% | Flam. Liq. 3-Asp. Tox 1;H226-H304,- |
| Myrcene | 123-35-3 | 204-622-5 | | 1-5% | Flam. Liq. 3-Skin Irrit. 2-Eye Irrit. 2-Asp. Tox 1;H226-H304-H315- H319,- |
| alpha-Pinene | 80-56-8 | 201-291-9 | | 1-5% | Flam. Liq. 3-Skin Irrit. 2-Skin Sens. 1B-Asp. Tox 1-Aquatic Acute 1- Aquatic Chronic 1; H226-H304-H315- H317-H410,- |
| beta-Pinene | 127-91-3 | 204-872-5 | | 1-5% | Flam. Liq. 3-Skin Irrit. 2-Skin Sens. 1B-Asp. Tox 1-Aquatic Acute 1- Aquatic Chronic 1; H226-H304-H315- H317-H410,- |
| Terpinolene | 586-62-9 | 209-578-0 | | <1% | Skin Sens. 1B-Asp. Tox 1-Aquatic Acute 1- Aquatic Chronic 1; H304-H317-H410 |
| Thymol | 89-83-8 | 201-944-8 | | <1% | Acute Tox. 4-Skin Corr. 1B-Eye Dam. 1-Aquatic Chronic 2;H302-H314- H411,- |

Substances with Community workplace exposure limits:

Not Applicable

Substances that are persistent, bioaccumulative and toxic or very persistent and very bioaccumulative, greater than 0.1%:

Not Applicable

Section 4. First-aid measures

4.1 Description of first aid measures

IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.

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 be fatal if swallowed and enters airways. Causes skin irritation.

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



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May cause an allergic skin reaction.

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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.

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.

7.2 Conditions for safe storage, including any incompatibilities:

Ground/bond container and receiving equipment.

Use only non-sparking tools.

Take precautionary measures against static discharge.



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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 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: | Not determined |
| Odour: | Not determined |
| Odour threshold: | Not determined |
| pH: | Not determined |
| Melting point / freezing point: | Not determined |
| Initial boiling point / range: | Not determined |
| Flash point: | 53 °C |
| Evaporation rate: | Not determined |
| Flammability (solid, gas): | Not determined |
| | |
| Upper/lower flammability or explosive limits: | Product does not present an explosion hazard |
| Upper/lower flammability or explosive limits: Vapour pressure: | Product does not present an explosion hazard Not determined |
| | |
| Vapour pressure: | Not determined |
| Vapour pressure: Vapour density: | Not determined |
| Vapour pressure: Vapour density: Relative density: | Not determined Not determined 0.8420 - 0.8500 |
| Vapour pressure: Vapour density: Relative density: Solubility(ies): | Not determined Not determined 0.8420 - 0.8500 Not determined |
| Vapour pressure: Vapour density: Relative density: Solubility(ies): Partition coefficient: n-octanol/water: | Not determined Not determined 0.8420 - 0.8500 Not determined Not determined |
| Vapour pressure: Vapour density: Relative density: Solubility(ies): Partition coefficient: n-octanol/water: Auto-ignition temperature: | Not determined Not determined 0.8420 - 0.8500 Not determined Not determined Not determined |



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| erties: | Not expected |
| erties: | Not expected |
| nation: | None available |
| | Section 10. Stability and reactivity |
| (| erties: erties: |

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 Regulation (EC) No 1272/2008 (CLP).

| 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 2 |
| 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: | Aspiration Hazard Category 1 |

Information about hazardous ingredients in the mixture



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Not Applicable

Refer to Sections 2 and 3 for additional information.

Section 12. Ecological information

12.1 Toxicity:

Very 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 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

| 14.1 UN number: | UN1169 |
|------------------------------------|---|
| 14.2 UN Proper Shipping Name: | EXTRACTS, AROMATIC, LIQUID |
| 14.3 Transport hazard class(es): | 3 |
| Sub Risk: | - |
| 14.4. Packing Group: | III |
| 14.5 Environmental hazards: | This is an environmentally hazardous substance. |
| 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

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

Concentration % Limits:

EH A1=39.12% EH C1=39.12% EH C2=3.91% EH C3=0.39123631% EH C4=39.12% SCI 2=13.16% EDI 2=76.92% SS 1=1.82% AH 1=10.46%



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Total Fractional Values:

EH A1=2.56 EH C1=2.56 EH C2=25.56 EH C3=255.60 EH C4=2.56 SCI 2=7.60 EDI 2=1.30 SS 1=55.00 AH 1=9.56

Key to revisions:

Not applicable

Key to abbreviations:

| Abbreviation | Meaning |
|-------------------|--|
| Acute Tox. 4 | Acute Toxicity - Oral Category 4 |
| Aquatic Acute 1 | Hazardous to the Aquatic Environment - Acute Hazard Category 1 |
| 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 |
| Asp. Tox 1 | Aspiration Hazard Category 1 |
| Eye Dam. 1 | Eye Damage / Irritation Category 1 |
| Eye Irrit. 2 | Eye Damage / Irritation Category 2 |
| Flam. Liq. 3 | Flammable Liquid, Hazard Category 3 |
| H226 | Flammable liquid and vapour. |
| H302 | Harmful if swallowed. |
| H304 | May be fatal if swallowed and enters airways. |
| H314 | Causes severe skin burns and eye damage. |
| H315 | Causes skin irritation. |
| H317 | May cause an allergic skin reaction. |
| H319 | Causes serious eye irritation. |
| H410 | Very toxic to aquatic life with long lasting effects. |
| H411 | Toxic to aquatic life with long lasting effects. |
| 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. |
| P272 | Contaminated work clothing should not be allowed out of the workplace. |
| P273 | Avoid release to the environment. |
| P280 | Wear protective gloves/eye protection/face protection. |
| P301/310 | IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician. |
| P301/312 | IF SWALLOWED: call a POISON CENTER or doctor/physician if you feel unwell. |
| P301/330/331 | If swallowed: Rinse mouth. Do not induce vomiting. |
| P302/352 | IF ON SKIN: Wash with plenty of soap and water. |



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| 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. |
| P310 | Immediately call a POISON CENTER or doctor/physician. |
| P330 | Rinse mouth. |
| P331 | Do not induce vomiting. |
| 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. |
| P403/235 | 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. |
| Skin Corr. 1B | Skin Corrosion / Irritation Category 1B |
| Skin Irrit. 2 | Skin Corrosion / Irritation Category 2 |
| 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.