

SAFETY DATA SHEET

In accordance with 29 CFR 1910.1200

Product: Prickly Pear Concentrate 233C36

Version: 2

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

1.1 Product Identifier

Product identifier: Prickly Pear Concentrate 233C36

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
Skin Corrosion / Irritation Category 2
Eye Damage / Irritation Category 2A
Sensitization - Skin Category 1
H226, Flammable liquid and vapour.
H315, Causes skin irritation.
H317, May cause an allergic skin reaction.
H319, Causes serious eye irritation.

2.2 Label elements

Signal word: Warning

Hazard statements: H226, Flammable liquid and vapour.
H315, Causes skin irritation.
H317, May cause an allergic skin reaction.
H319, Causes serious eye irritation.

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Precautionary statements:

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.
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.
P280, Wear protective gloves/eye protection/face protection.
P303/361/353, IF ON SKIN (or hair): Remove/take off immediately all contaminated clothing. Rinse skin with water/shower.
P305/351/338, IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
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.
P370/378, In case of fire: Use carbon dioxide, dry chemical, foam for extinction.
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:

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| Name | CAS | EC | % | GHS Classification |
|-------------------------------|------------|-----------|---------|---|
| cis-3-Hexenol | 928-96-1 | 213-192-8 | 10-<20% | FL 3-EDI 2A;H226-H319 |
| Ethyl acetate | 141-78-6 | 205-500-4 | 5-<10% | FL 2-EDI 2A-STO-SE 3(NE);H225-H319-H336 |
| 2-Methylbutyric acid | 116-53-0 | 204-145-2 | 1-<5% | FL 4-ATO 4-ATD 4-SCI 1B-EDI 1;H227-H302-H312-H314 |
| Ethyl lactate | 97-64-3 | 202-598-0 | 1-<5% | FL 3-EDI 1-STO-SE 3(RI);H226-H318-H335 |
| Isobutyl acetate | 110-19-0 | 203-745-1 | 1-<5% | FL 2-STO-SE 3(NE);H225-H336 |
| Geranyl acetate | 105-87-3 | 203-341-5 | 0.1-<1% | SCI 2-SS 1B;H315-H317 |
| dL-Limonene (racemic) | 138-86-3 | 205-341-0 | <0.1% | FL 3-SCI 2-SS 1B-AH 1;H226-H304-H315-H317 |
| beta-Caryophyllene | 87-44-5 | 201-746-1 | <0.1% | AH 1;H304 |
| 3,7-Dimethyl-1,3,6-octatriene | 13877-91-3 | 237-641-2 | <0.1% | FL 3-AH 1;H226-H304 |

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

Substances with Community workplace exposure limits, not listed above:

| Name | CAS | EC | % |
|------------------|----------|-----------|-------|
| Ethyl acetate | 141-78-6 | 205-500-4 | 1-10% |
| Isobutyl acetate | 110-19-0 | 203-745-1 | 1-5% |

Section 4. First-aid measures

4.1 Description of first aid measures

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

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

4.2 Most important symptoms and effects, both acute and delayed

Causes skin irritation.

May cause an allergic skin reaction.

Causes serious eye irritation.

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.

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.

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:

| Ingredient | CAS | EC | Description | ppm | mg/m ³ | Reference |
|---------------|----------|-----------|--|-----|-------------------|-----------|
| Ethyl acetate | 141-78-6 | 205-500-4 | Long-term exposure limit (8-hour TWA reference period) | - | - | - |
| | | | Short-term exposure limit (15-minute reference period) | - | - | - |

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| | | | | | | |
|------------------|----------|-----------|--|---|---|---|
| Isobutyl acetate | 110-19-0 | 203-745-1 | Long-term exposure limit (8-hour TWA reference period) | - | - | - |
| | | | Short-term exposure limit (15-minute reference period) | - | - | - |

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.

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: | 30.56 °C |
| Vapour pressure: | Not determined |
| Relative density: | 0.8820 |
| 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.

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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.

Causes skin irritation.

May cause an allergic skin reaction.

Causes serious eye irritation.

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

Inhalation Route: Not Available

Information about hazardous ingredients in the mixture

| Ingredient | CAS | EC | LD50/ATE Oral | LD50/ATE Dermal | LC50/ATE Inhalation | LC50 Route |
|----------------------|----------|-----------|---------------|-----------------|---------------------|---------------|
| 2-Methylbutyric acid | 116-53-0 | 204-145-2 | 1760 | 1600 | Not available | Not available |

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

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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: UN1197
14.2 UN Proper Shipping Name: EXTRACTS, FLAVOURING, 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: SCI 2=25.00% EDI 1=37.50% EDI 2=9.90%

Total Fractional Values: SCI 2=4.00 EDI 1=2.67 EDI 2=10.10

Key to revisions:

2.1 Classification of the substance or mixture

Key to abbreviations:

| Abbreviation | Meaning |
|--------------|------------------------------------|
| AH 1 | Aspiration Hazard Category 1 |
| ATD 4 | Acute Toxicity - Dermal Category 4 |

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| | |
|--------------|--|
| ATO 4 | Acute Toxicity - Oral Category 4 |
| EDI 1 | Eye Damage / Irritation Category 1 |
| EDI 2A | Eye Damage / Irritation Category 2A |
| FL 2 | Flammable Liquid, Hazard Category 2 |
| FL 3 | Flammable Liquid, Hazard Category 3 |
| FL 4 | Flammable Liquid, Hazard Category 4 |
| H225 | Highly flammable liquid and vapour. |
| H226 | Flammable liquid and vapour. |
| H227 | Combustible liquid. |
| H302 | Harmful if swallowed. |
| H304 | May be fatal if swallowed and enters airways. |
| H312 | Harmful in contact with skin. |
| H314 | Causes severe skin burns and eye damage. |
| H315 | Causes skin irritation. |
| H317 | May cause an allergic skin reaction. |
| H318 | Causes serious eye damage. |
| H319 | Causes serious eye irritation. |
| H335 | May cause respiratory irritation. |
| H336 | May cause drowsiness or dizziness. |
| 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. |
| 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. |
| 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. |
| P312 | Call a POISON CENTRE or doctor/physician if you feel unwell. |
| P330 | Rinse mouth. |

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| | |
|--------------|--|
| P331 | Do not induce vomiting. |
| 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. |
| 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. |
| SCI 1B | Skin Corrosion / Irritation Category 1B |
| SCI 2 | Skin Corrosion / Irritation Category 2 |
| SS 1B | Sensitization - Skin Category 1B |
| STO-SE 3(NE) | Specific Target Organ Toxicity (Single Exposure) Category 3 |
| STO-SE 3(RI) | Specific Target Organ Toxicity (Single Exposure) Category 3 |

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.