

SAFETY DATA SHEET

In accordance with 29 CFR 1910.1200

Product: Lime Terpene Booster 232T27

Version: 1

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

1.1 Product Identifier

Product identifier: Lime Terpene Booster 232T27

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: Sensitization - Skin Category 1
H317, May cause an allergic skin reaction.

2.2 Label elements

Signal word: Warning

Hazard statements: H317, May cause an allergic skin reaction.

Precautionary statements: P261, Avoid breathing vapour or dust.
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.
P333/313, If skin irritation or rash occurs: Get medical advice/attention.
P363, Wash contaminated clothing before reuse.
P501, Dispose of contents/container to approved disposal site, in accordance with local regulations.

SAFETY DATA SHEET

In accordance with 29 CFR 1910.1200

Product: Lime Terpene Booster 232T27

Version: 1

Pictograms:



Other hazards: None

Section 3. Composition / information on ingredients

3.2 Mixtures

Contains:

| Name | CAS | EC | % | GHS Classification |
|--------------------|-----------|-----------|---------|--|
| d-Limonene | 5989-27-5 | 227-813-5 | 1-<5% | FL 3-SCI 2-SS 1B-AH 1;H226-H304-H315-H317 |
| p-Mentha-1,4-diene | 99-85-4 | 202-794-6 | 1-<5% | FL 3-AH 1;H226-H304 |
| Terpinolene | 586-62-9 | 209-578-0 | 0.1-<1% | FL 4-SS 1B-AH 1;H227-H304-H317 |
| beta-Pinene | 127-91-3 | 204-872-5 | 0.1-<1% | FL 3-SCI 2-SS 1B-AH 1;H226-H304-H315-H317 |
| Citral | 5392-40-5 | 226-394-6 | 0.1-<1% | SCI 2-EDI 2A-SS 1B;H315-H317-H319 |
| p-Cymene | 99-87-6 | 202-796-7 | 0.1-<1% | FL 3-AH 1;H226-H304 |
| alpha-Pinene | 80-56-8 | 201-291-9 | 0.1-<1% | FL 3-SCI 2-SS 1B-AH 1;H226-H304-H315-H317 |
| l-beta.-Bisabolene | 495-61-4 | | 0.1-<1% | SCI 2-SS 1B-AH 1;H304-H315-H317 |
| p-Mentha-1,3-diene | 99-86-5 | 202-795-1 | 0.1-<1% | FL 3-ATO 4-AH 1;H226-H302-H304 |
| Myrcene | 123-35-3 | 204-622-5 | <0.1% | FL 3-SCI 2-EDI 2A-AH 1;H226-H304-H315-H319 |

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

Substances with Community workplace exposure limits, not listed above:

Not Applicable

Section 4. First-aid measures

4.1 Description of first aid measures

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

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

None expected, see Section 4.1 for further information.

SAFETY DATA SHEET

In accordance with 29 CFR 1910.1200

Product: Lime Terpene Booster 232T27

Version: 1

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. 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):

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

SAFETY DATA SHEET

In accordance with 29 CFR 1910.1200

Product: Lime Terpene Booster 232T27

Version: 1

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

pH: Not determined

Initial boiling point / range: Not determined

Flash point: > 93.33 °C

Vapour pressure: Not determined

Relative density: 0.9440

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.

SAFETY DATA SHEET

In accordance with 29 CFR 1910.1200

Product: Lime Terpene Booster 232T27

Version: 1

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: | Not Applicable |
| Assumed Toxicity Value (LC50 or ATE) for Acute Inhalation Toxicity: | Not Available |
| Inhalation Route: | Not Available |

Information about hazardous ingredients in the mixture

Not Applicable

Refer to Sections 2 and 3 for additional information.

Section 12. Ecological information

12.1 Toxicity:

Harmful 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

SAFETY DATA SHEET

In accordance with 29 CFR 1910.1200

Product: Lime Terpene Booster 232T27

Version: 1

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: UN3082
14.2 UN Proper Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (d-Limonene, Terpinolene)
14.3 Transport hazard class(es): 9
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: SS 1=22.94%

Total Fractional Values: SS 1=4.36

Key to revisions:

Not applicable

Key to abbreviations:

| Abbreviation | Meaning |
|--------------|-------------------------------------|
| AH 1 | Aspiration Hazard Category 1 |
| ATO 4 | Acute Toxicity - Oral Category 4 |
| EDI 2A | Eye Damage / Irritation Category 2A |
| FL 3 | Flammable Liquid, Hazard Category 3 |
| FL 4 | Flammable Liquid, Hazard Category 4 |
| H226 | Flammable liquid and vapour. |

SAFETY DATA SHEET

In accordance with 29 CFR 1910.1200

Product: Lime Terpene Booster 232T27

Version: 1

| | |
|--------------|--|
| H227 | Combustible liquid. |
| H302 | Harmful if swallowed. |
| H304 | May be fatal if swallowed and enters airways. |
| H315 | Causes skin irritation. |
| H317 | May cause an allergic skin reaction. |
| H319 | Causes serious eye irritation. |
| 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. |
| P270 | Do not eat, drink or smoke when using this product. |
| 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. |
| 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. |
| P305/351/338 | IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. |
| 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. |
| 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 2 | Skin Corrosion / Irritation Category 2 |
| SS 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.