

SAFETY DATA SHEET

In accordance with UN GHS latest edition

Product: Strawberry Flavor Concentrate 232V01

Version: 1

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

1.1 Product Identifier

Product identifier: Strawberry Flavor Concentrate 232V01(Contains:2-Methylbutyric acid, 4-Hydroxy-2,5-dimethyl-3(2H)-furanone, Methyl cinnamate, d-Limonene)

Other identifiers: None

1.2 Relevant identified uses of the substance of 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: (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

Class and category of danger: Flammable Liquid, Hazard Category 3
Acute Toxicity - Oral Category 4
Skin Corrosion / Irritation Category 1B
Eye Damage / Irritation Category 1
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.
H302, Harmful if swallowed.
H304, May be fatal if swallowed and enters airways.
H314, Causes severe skin burns and eye damage.
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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H317, May cause an allergic skin reaction.
H410, Very toxic to aquatic life with long lasting effects.

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.
P260, Do not breathe 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.
P301/330/331, If swallowed: Rinse mouth. Do not induce vomiting.
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.
P333/313, If skin irritation or rash occurs: Get medical advice/attention.
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.

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Pictograms:



2.3 Other hazards

Other hazards: None

Section 3. Composition / information on ingredients

3.2 Mixtures

Contains:

Name	CAS	%	GHS Classification
d-Limonene	5989-27-5	40-50%	Flam. Liq. 3-Skin Irrit. 2-Skin Sens. 1B-Asp. Tox 1-Aquatic Acute 1-Aquatic Chronic 1;H226-H304-H315-H317-H410
2-Methylbutyric acid	116-53-0	1-10%	Flam. Liq. 4-Acute Tox. 4-Acute Tox. 4-Skin Corr. 1B-Eye Dam. 1;H302-H227-H312-H314
4-Hydroxy-2,5-dimethyl-3(2H)-furanone	3658-77-3	1-10%	Acute Tox. 4-Eye Dam. 1-Skin Sens. 1A;H302-H317-H318
Ethyl methylphenylglycidate	77-83-8	1-10%	Skin Irrit. 2-Eye Irrit. 2-STOT SE 3;H315-H319-H335
Geraniol	106-24-1	1-10%	Flam. Liq. 4-Acute Tox. 5-Skin Irrit. 2-Eye Dam. 1-Eye Irrit. 2A-Skin Sens. 1-Aquatic Acute 3;H227-H303-H315-H317-H318-H319-H402
Hexyl alcohol	111-27-3	1-10%	Flam. Liq. 3-Acute Tox. 4-Acute Tox. 4-Eye Irrit. 2A;H226-H302-H312-H319
Methyl cinnamate	103-26-4	1-10%	Acute Tox. 5-Skin Sens. 1B;H303-H317
cis-3-Hexenol	928-96-1	1-10%	Flam. Liq. 3-Eye Irrit. 2A;H226-H319

Substances with workplace exposure limits, not listed above:

Not Applicable

Section 4. First-aid measures

4.1 Description of first aid measures

- Inhalation:** IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
- Eye exposure:** IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- Skin exposure:** IF ON SKIN (or hair): Remove/take off immediately all contaminated clothing. Rinse skin with water/shower.
- Ingestion:** IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
If swallowed: Rinse mouth. Do not induce vomiting.

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4.2 Most important symptoms and effects, both acute and delayed

Harmful if swallowed.

May be fatal if swallowed and enters airways.

Causes severe skin burns and eye damage.

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.

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.

Do not eat, drink or smoke when using this product.

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.

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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:	36.67 °C
Evaporation rate:	Not determined
Flammability (solid, gas):	Not determined
Upper/lower flammability or explosive limits:	Product does not present an explosion hazard
Vapour pressure:	Not determined
Vapour density:	Not determined
Relative density:	Not determined
Solubility(ies):	Not determined
Partition coefficient: n-octanol/water:	Not determined
Auto-ignition temperature:	Not determined
Decomposition temperature:	Not determined
Viscosity:	Not determined
Explosive properties:	Not expected
Oxidising properties:	Not expected

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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 UN GHS.

Acute Toxicity:	Acute Toxicity - Oral Category 4
Acute Toxicity Oral	>5000
Acute Toxicity Dermal	>5000
Acute Toxicity Inhalation	Not Available
Skin corrosion/irritation:	Skin Corrosion / Irritation Category 1B
Serious eye damage/irritation:	Eye Damage / Irritation Category 1
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

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

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4-Hydroxy-2,5-dimethyl-3(2H)-furanone	3658-77-3	2500	Not available	Not available	Not available
Geraniol	106-24-1	3600	Not available	Not available	Not available
Hexyl alcohol	111-27-3	500	1750	Not available	Not available
Methyl cinnamate	103-26-4	2610	Not available	Not available	Not available

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 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	UN2920	CORROSIVE LIQUID, FLAMMABLE, N. O.S. (2-Methylbutyric acid, d-Limonene)	8	3	II
IMDG	UN2920	CORROSIVE LIQUID, FLAMMABLE, N. O.S. (2-Methylbutyric acid, d-Limonene) MARINE POLLUTANT	8	3	II
ADR,RID,ADN	UN2920	CORROSIVE LIQUID, FLAMMABLE, N. O.S. (2-Methylbutyric acid, d-Limonene)	8	3	II
ICAO TI	UN2920	CORROSIVE LIQUID, FLAMMABLE, N. O.S. (2-Methylbutyric acid, d-Limonene)	8	3	II

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

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

Not applicable

Section 15. Regulatory information

None additional

Section 16. Other information

Concentration % Limits:

EH A1=52.08% EH A2=5.21% EH A3=0.52050802% EH C1=52.08% EH C2=5.21% EH C3=0.52083333% EH C4=52.08% SCI 1=71.43% SCI 1B=71.43% SCI 1C=71.43% SCI 2=8.06% SCI 3=0.80645161% EDI 1=23.08% EDI 2A=7.19% SS 1=2.08% AH 1=20.83%

Total Fractional Values:

EH A1=1.92 EH A2=19.20 EH A3=192.12 EH C1=1.92 EH C2=19.20 EH C3=192.00 EH C4=1.92 SCI 1=1.40 SCI 1B=1.40 SCI 1C=1.40 SCI 2=12.40 SCI 3=124.00 EDI 1=4.33 EDI 2A=13.90 SS 1=48.00 AH 1=4.80

Key to revisions:

Not applicable

Key to abbreviations:

Abbreviation	Meaning
Acute Tox. 4	Acute Toxicity - Oral Category 4
Acute Tox. 4	Acute Toxicity - Dermal Category 4
Acute Tox. 5	Acute Toxicity - Oral Category 5
Aquatic Acute 1	Hazardous to the Aquatic Environment - Acute Hazard Category 1
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
Asp. Tox 1	Aspiration Hazard Category 1
Eye Dam. 1	Eye Damage / Irritation Category 1
Eye Irrit. 2	Eye Damage / Irritation Category 2
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.
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.

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H319	Causes serious eye irritation.
H335	May cause respiratory irritation.
H402	Harmful to aquatic life.
H410	Very 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.
P271	Use only outdoors or in a well-ventilated area.
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.
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.
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.
P403/233	Store in a well-ventilated place. Keep container tightly closed.
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.
STOT SE 3	Specific Target Organ Toxicity (Single Exposure) Category 3

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Skin Corr. 1B	Skin Corrosion / Irritation Category 1B
Skin Irrit. 2	Skin Corrosion / Irritation Category 2
Skin Sens. 1	Sensitization - Skin Category 1
Skin Sens. 1A	Sensitization - Skin Category 1A
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.