

SAFETY DATA SHEET

In accordance with 29 CFR 1910.1200

Product: Blueberry Concentrate 232W42

Version: 2

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

1.1 Product Identifier

Product identifier: Blueberry Concentrate 232W42

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 1
Sensitization - Skin Category 1
Carcinogenicity Category 2
H226, Flammable liquid and vapour.
H315, Causes skin irritation.
H317, May cause an allergic skin reaction.
H318, Causes serious eye damage.
H351, Suspected of causing cancer (exposure route).

2.2 Label elements

Signal word: Danger

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

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H318, Causes serious eye damage.
H351, Suspected of causing cancer (exposure route).

Precautionary statements:

P202, Do not handle until all safety precautions have been read and understood.
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.
P308/313, IF exposed or concerned: Get medical advice/attention.
P310, Immediately call a POISON CENTER or doctor/physician.
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.
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

Section 3. Composition / information on ingredients

3.2 Mixtures

Contains:

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Name	CAS	EC	%	GHS Classification
Ethyl isovalerate	108-64-5	203-602-3	20-<50%	FL 3-SCI 2;H226-H315
Linalool	78-70-6	201-134-4	10-<20%	FL 4-SCI 2-EDI 2A;H227-H315-H319
Acetic acid	64-19-7	200-580-7	1-<5%	FL 3-SCI 1A-EDI 1;H226-H314
Benzaldehyde	100-52-7	202-860-4	1-<5%	FL 4-ATO 4-ATI 4-EDI 2A-STO-SE 3 (RI);H227-H302-H319-H332-H335
Ethyl acetate	141-78-6	205-500-4	1-<5%	FL 2-EDI 2A-STO-SE 3(NE);H225-H319-H336
Furfural	98-01-1	202-627-7	1-<5%	FL 4-ATO 3-ATD 4-ATI 2-SCI 2-EDI 2A-CAR 2-STO-SE 3(RI);H227-H301-H312-H315-H319-H330-H335-H351
Linalyl acetate	115-95-7	204-116-4	1-<5%	FL 4-SCI 2-EDI 2A;H227-H315-H319
Geraniol	106-24-1	203-377-1	0.1-<1%	SCI 2-EDI 1-SS 1;H315-H317-H318
Geranyl acetate	105-87-3	203-341-5	0.1-<1%	SCI 2-SS 1B;H315-H317
d-Limonene	5989-27-5	227-813-5	0.1-<1%	FL 3-SCI 2-SS 1B-AH 1;H226-H304-H315-H317
beta-Pinene	127-91-3	204-872-5	<0.1%	FL 3-SCI 2-SS 1B-AH 1;H226-H304-H315-H317
p-Mentha-1,4-diene	99-85-4	202-794-6	<0.1%	FL 3-AH 1;H226-H304
Myrcene	123-35-3	204-622-5	<0.1%	FL 3-SCI 2-EDI 2A-AH 1;H226-H304-H315-H319
alpha-Pinene	80-56-8	201-291-9	<0.1%	FL 3-SCI 2-SS 1B-AH 1;H226-H304-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
Terpinolene	586-62-9	209-578-0	<0.1%	FL 4-SS 1B-AH 1;H227-H304-H317

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	4.00%
Furfural	98-01-1	202-627-7	4.00%

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.

IF exposed or concerned: Get medical advice/attention.

Immediately call a POISON CENTER or doctor/physician.

4.2 Most important symptoms and effects, both acute and delayed

Causes skin irritation.

May cause an allergic skin reaction.

Causes serious eye damage.

Suspected of causing cancer (exposure route).

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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.

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:

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)	-	-	-
Furfural	98-01-1	202-627-7	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: 28.33 °C

Vapour pressure: Not determined

Relative density: 0.8820

Solubility(ies): Not determined

9.2 Other information: None available

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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.

Causes skin irritation.

May cause an allergic skin reaction.

Causes serious eye damage.

Suspected of causing cancer (exposure route).

Assumed Toxicity Value (LD50 or ATE) for Acute Oral Toxicity:	2074
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
Benzaldehyde	100-52-7	202-860-4	1430	Not available	1.5	Dust/mist
Furfural	98-01-1	202-627-7	100	1100	1	Vapour

Refer to Sections 2 and 3 for additional information.

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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

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: Not environmentally hazardous for transport

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=10.19% EDI 1=66.36% EDI 2=13.10% SS 1=19.21% CAR 2=2.50%

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Total Fractional Values: SCI 2=9.81 EDI 1=1.51 EDI 2=7.63 SS 1=5.21 CAR 2=40.00

Key to revisions:

- 14.1. UN number
- 14.2. UN proper shipping name
- 14.3. Transport hazard class(es)
- 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
ATI 2	Acute Toxicity - Inhalation Category 2
ATI 4	Acute Toxicity - Inhalation Category 4
ATO 3	Acute Toxicity - Oral Category 3
ATO 4	Acute Toxicity - Oral Category 4
CAR 2	Carcinogenicity Category 2
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.
H301	Toxic if swallowed.
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.
H330	Fatal if inhaled.
H332	Harmful if inhaled.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.
H351	Suspected of causing cancer (exposure route).
P202	Do not handle until all safety precautions have been read and understood.
P210	Keep away from heat, sparks, open flames and hot surfaces. - No smoking.
P233	Keep container tightly closed.

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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.
P284	Wear respiratory 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.
P308/313	IF exposed or concerned: Get medical advice/attention.
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.
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 1A	Skin Corrosion / Irritation Category 1A
SCI 2	Skin Corrosion / Irritation Category 2
SS 1	Sensitization - Skin Category 1
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.