

## SECTION 1: Identification

### 1.1. Identification

Product form : Mixture  
Product name : KIWI STRAWBERRY SOLVENT FREE TERPENE FLAVOR  
Product code : TPBL180

### 1.2. Recommended use and restrictions on use

### 1.3. Supplier

EXTRACT CONSULTANTS, LLC.  
TERPENES - FLAVORS - BASES  
PO BOX 11433, DENVER, CO 80211  
www.extractconsultants.com  
INFORMATION: 1-888-541-9089

### 1.4. Emergency telephone number

Emergency number : CHEMTREC - USA: 800-424-9300 International: +1 703-527-3887 / 1-800-424-9300  
CCN 13010

## SECTION 2: Hazard(s) identification

### 2.1. Classification of the substance or mixture

#### GHS US classification

|  |   |
|--|---|
| Flammable liquids Category 3                 | Flammable liquid and vapor                          |
| Skin corrosion/irritation Category 2         | Causes skin irritation                              |
| Serious eye damage/eye irritation Category 2 | Causes serious eye irritation                       |
| Skin sensitization, Category 1               | May cause an allergic skin reaction                 |
| Reproductive toxicity Category 2             | Suspected of damaging fertility or the unborn child |
| Aspiration hazard Category 1                 | May be fatal if swallowed and enters airways        |

### 2.2. GHS Label elements, including precautionary statements

#### GHS US labeling

Hazard pictograms (GHS US) :



Signal word (GHS US) :

Danger

Hazard statements (GHS US) :

Flammable liquid and vapor  
May be fatal if swallowed and enters airways  
Causes skin irritation  
May cause an allergic skin reaction  
Causes serious eye irritation  
Suspected of damaging fertility or the unborn child

Precautionary statements (GHS US) :

Obtain special instructions before use.  
Do not handle until all safety precautions have been read and understood.  
Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.  
Keep container tightly closed.  
Ground/Bond container and receiving equipment.  
Use explosion-proof electrical/ventilating/lighting equipment.  
Use only non-sparking tools.  
Take precautionary measures against static discharge.  
Avoid breathing dust/fume/gas/mist/vapors/spray.  
Wash hands, forearms and face thoroughly after handling.  
Contaminated work clothing must not be allowed out of the workplace.  
Wear protective gloves/protective clothing/eye protection/face protection.  
If swallowed: Immediately call a poison center or doctor.  
If on skin: Wash with plenty of water.  
If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with

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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.

Specific treatment (see supplemental first aid instruction on this label).

Do NOT induce vomiting.

If skin irritation occurs: Get medical advice/attention.

If skin irritation or rash occurs: Get medical advice/attention.

If eye irritation persists: Get medical advice/attention.

Take off contaminated clothing and wash it before reuse.

Wash contaminated clothing before reuse.

In case of fire: Use media other than water to extinguish.

Store in a well-ventilated place. Keep cool.

Store locked up.

Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

### 2.3. Other hazards which do not result in classification

No additional information available

### 2.4. Unknown acute toxicity (GHS US)

Not applicable

## SECTION 3: Composition/Information on ingredients

### 3.1. Substances

Not applicable

### 3.2. Mixtures

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| Name               | Product identifier  | %       | GHS US classification   |
|--------------------|---------------------|---------|---|
| D-LIMONENE         | (CAS-No.) 5989-27-5 | 25 – 50 | Flam. Liq. 3, H226<br>Skin Irrit. 2, H315<br>Skin Sens. 1B, H317<br>Asp. Tox. 1, H304                               |
| LINALOOL           | (CAS-No.) 78-70-6   | 5 – 10  | Flam. Liq. 4, H227<br>Skin Irrit. 2, H315<br>Eye Irrit. 2A, H319<br>Skin Sens. 1B, H317                             |
| L-ALPHA-PINENE     | (CAS-No.) 7785-26-4 | 5 – 10  | Flam. Liq. 3, H226<br>Acute Tox. 4 (Oral), H302<br>Skin Irrit. 2, H315<br>Skin Sens. 1B, H317<br>Asp. Tox. 1, H304  |
| BETA-PINENES       | (CAS-No.) 127-91-3  | 1 – 5   | Flam. Liq. 3, H226<br>Skin Irrit. 2, H315<br>Skin Sens. 1B, H317<br>Asp. Tox. 1, H304                               |
| GAMMA-TERPINENE    | (CAS-No.) 99-85-4   | 1 – 5   | Flam. Liq. 3, H226<br>Repr. 2, H361<br>Asp. Tox. 1, H304  |
| BETA CARYOPHYLLENE | (CAS-No.) 87-44-5   | 1 – 5   | Skin Sens. 1B, H317<br>Asp. Tox. 1, H304  |
| MYRCENE            | (CAS-No.) 123-35-3  | 1 – 5   | Flam. Liq. 3, H226<br>Skin Irrit. 2, H315<br>Eye Irrit. 2A, H319<br>Asp. Tox. 1, H304                               |
| Isoamyl alcohol    | (CAS-No.) 123-51-3  | 1 – 5   | Flam. Liq. 3, H226<br>Acute Tox. 4 (Inhalation), H332<br>Skin Irrit. 2, H315<br>Eye Dam. 1, H318<br>STOT SE 3, H335 |
| MYRCENE            | (CAS-No.) 123-35-3  | 1 – 5   | Flam. Liq. 3, H226<br>Skin Irrit. 2, H315<br>Eye Irrit. 2A, H319<br>Asp. Tox. 1, H304                               |
| ETHYL PROPIONATE   | (CAS-No.) 105-37-3  | 1 – 5   | Flam. Liq. 2, H225<br>Skin Irrit. 2, H315<br>Eye Irrit. 2B, H320<br>STOT SE 3, H335                                 |
| CITRAL             | (CAS-No.) 5392-40-5 | 0.1 – 1 | Skin Irrit. 2, H315<br>Eye Irrit. 2A, H319<br>Skin Sens. 1, H317<br>STOT RE 2, H373                                 |
| P-CYMENE           | (CAS-No.) 99-87-6   | 0.1 – 1 | Flam. Liq. 3, H226<br>Acute Tox. 3 (Inhalation:vapour), H331<br>Repr. 2, H361<br>Asp. Tox. 1, H304                  |

Full text of hazard classes and H-statements : see section 16

### SECTION 4: First-aid measures

#### 4.1. Description of first aid measures

- First-aid measures general : Call a physician immediately.
- First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing.
- First-aid measures after skin contact : Rinse skin with water/shower. Remove/Take off immediately all contaminated clothing. If skin irritation or rash occurs: Get medical advice/attention.
- First-aid measures after eye contact : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
- First-aid measures after ingestion : Do not induce vomiting. Call a physician immediately.

#### 4.2. Most important symptoms and effects (acute and delayed)

- Symptoms/effects after skin contact : Irritation. May cause an allergic skin reaction.
- Symptoms/effects after eye contact : Eye irritation.
- Symptoms/effects after ingestion : Risk of lung edema.

#### 4.3. Immediate medical attention and special treatment, if necessary

Treat symptomatically.

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### SECTION 5: Fire-fighting measures

#### 5.1. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media : Water spray. Dry powder. Foam. Carbon dioxide.

#### 5.2. Specific hazards arising from the chemical

Fire hazard : Flammable liquid and vapor.

Reactivity : Flammable liquid and vapor.

#### 5.3. Special protective equipment and precautions for fire-fighters

Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

### SECTION 6: Accidental release measures

#### 6.1. Personal precautions, protective equipment and emergency procedures

##### 6.1.1. For non-emergency personnel

Emergency procedures : Ventilate spillage area. No open flames, no sparks, and no smoking. Avoid contact with skin and eyes. Avoid breathing dust/fume/gas/mist/vapors/spray.

##### 6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

#### 6.2. Environmental precautions

Avoid release to the environment.

#### 6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Take up liquid spill into absorbent material. Notify authorities if product enters sewers or public waters.

Other information : Dispose of materials or solid residues at an authorized site.

#### 6.4. Reference to other sections

For further information refer to section 13.

### SECTION 7: Handling and storage

#### 7.1. Precautions for safe handling

Precautions for safe handling : Ensure good ventilation of the work station. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Ground/bond container and receiving equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Flammable vapors may accumulate in the container. Use explosion-proof equipment. Wear personal protective equipment. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Avoid contact with skin and eyes. Avoid breathing dust/fume/gas/mist/vapors/spray.

Hygiene measures : Wash contaminated clothing before reuse. Contaminated work clothing should not be allowed out of the workplace. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

#### 7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Ground/bond container and receiving equipment.

Storage conditions : Store in a well-ventilated place. Keep cool. Keep container tightly closed. Store locked up.

### SECTION 8: Exposure controls/personal protection

#### 8.1. Control parameters

|  |  |
|--|--|
| <b>KIWI STRAWBERRY SOLVENT FREE TERPENE FLAVOR</b> |  |
| No additional information available                |  |
| <b>BETA-PINENES (127-91-3)</b>                     |  |
| <b>USA - ACGIH - Occupational Exposure Limits</b>  |  |
| Local name   | β-Pimene   |
| ACGIH OEL TWA [ppm]                                | 20 ppm   |
| Remark (ACGIH)                                     | TLV® Basis: Lung irr. Notations: DSEN; A4 (Not classifiable as a Human Carcinogen) |
| Regulatory reference                               | ACGIH 2022   |

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|   |   |
|---|---|
| <b>GAMMA-TERPINENE (99-85-4)</b>                  |   |
| No additional information available               |   |
| <b>LINALOOL (78-70-6)</b>                         |   |
| No additional information available               |   |
| <b>MYRCENE (123-35-3)</b>                         |   |
| No additional information available               |   |
| <b>D-LIMONENE (5989-27-5)</b>                     |   |
| No additional information available               |   |
| <b>MYRCENE (123-35-3)</b>                         |   |
| No additional information available               |   |
| <b>P-CYMENE (99-87-6)</b>                         |   |
| No additional information available               |   |
| <b>CITRAL (5392-40-5)</b>                         |   |
| <b>USA - ACGIH - Occupational Exposure Limits</b> |   |
| Local name  | Citral  |
| ACGIH OEL TWA [ppm]                               | 5 ppm (IFV - Inhalable fraction and vapor)  |
| Remark (ACGIH)                                    | TLV® Basis: Body weight eff; URT irr; eye dam. Notations: Skin; DSEN; A4 (Not classifiable as a Human Carcinogen) |
| Regulatory reference                              | ACGIH 2021  |
| <b>L-ALPHA-PINENE (7785-26-4)</b>                 |   |
| No additional information available               |   |
| <b>BETA CARYOPHYLLENE (87-44-5)</b>               |   |
| No additional information available               |   |
| <b>ETHYL PROPIONATE (105-37-3)</b>                |   |
| No additional information available               |   |
| <b>Isoamyl alcohol (123-51-3)</b>                 |   |
| No additional information available               |   |

### 8.2. Appropriate engineering controls

Appropriate engineering controls : Ensure good ventilation of the work station.  
Environmental exposure controls : Avoid release to the environment.

### 8.3. Individual protection measures/Personal protective equipment

#### Hand protection:

Protective gloves

#### Eye protection:

Safety glasses

#### Skin and body protection:

Wear suitable protective clothing

#### Respiratory protection:

[In case of inadequate ventilation] wear respiratory protection.



## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

Physical state : Liquid

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|   |  |
|---|--|
| Color   | : COLORLESS TO PALE YELLOW                 |
| Odor  | : CHARACTERISTIC, MATCHING RETAINER SAMPLE |
| Odor threshold                                  | : No data available                        |
| pH  | : No data available                        |
| Melting point                                   | : Not applicable                           |
| Freezing point                                  | : No data available                        |
| Boiling point                                   | : No data available                        |
| Flash point                                     | : 45 °C                                    |
| Relative evaporation rate (butyl acetate=1)     | : No data available                        |
| Flammability (solid, gas)                       | : Not applicable.                          |
| Vapor pressure                                  | : No data available                        |
| Relative vapor density at 20°C                  | : No data available                        |
| Relative density                                | : 0.8643 (0.8543 – 0.8743)                 |
| Solubility                                      | : Insoluble.                               |
| Partition coefficient n-octanol/water (Log Pow) | : No data available                        |
| Auto-ignition temperature                       | : No data available                        |
| Decomposition temperature                       | : No data available                        |
| Viscosity, kinematic                            | : No data available                        |
| Viscosity, dynamic                              | : No data available                        |
| Explosion limits                                | : No data available                        |
| Explosive properties                            | : No data available                        |
| Oxidizing properties                            | : No data available                        |

### 9.2. Other information

Refractive index : 1.4578 (1.4478 – 1.4678)

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

Flammable liquid and vapor.

### 10.2. Chemical stability

Stable under normal conditions.

### 10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

### 10.4. Conditions to avoid

Avoid contact with hot surfaces. Heat. No flames, no sparks. Eliminate all sources of ignition.

### 10.5. Incompatible materials

No additional information available

### 10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

|                             |                  |
|-----------------------------|------------------|
| Acute toxicity (oral)       | : Not classified |
| Acute toxicity (dermal)     | : Not classified |
| Acute toxicity (inhalation) | : Not classified |

| BETA-PINENES (127-91-3)   |                        |
|---------------------------|------------------------|
| LD50 oral rat             | 4700 mg/kg (Rat, Oral) |
| ATE US (oral)             | 4700 mg/kg body weight |
| GAMMA-TERPINENE (99-85-4) |                        |
| ATE US (oral)             | 3850 mg/kg body weight |
| LINALOOL (78-70-6)        |                        |
| ATE US (oral)             | 2790 mg/kg body weight |

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| <b>MYRCENE (123-35-3)</b> |  |
|---------------------------|--|
| LD50 oral rat             | > 11390 mg/kg body weight Animal: rat  |
| LD50 dermal rabbit        | > 5000 mg/kg body weight Animal: rabbit, Guideline: OECD Guideline 402 (Acute Dermal Toxicity) |

| <b>D-LIMONENE (5989-27-5)</b> |   |
|-------------------------------|---|
| LD50 oral rat                 | > 2000 mg/kg body weight (OECD 423: Acute Oral Toxicity – Acute Toxic Class Method, Rat, Female, Experimental value, Oral, 14 day(s)) |
| LD50 dermal rabbit            | > 5000 mg/kg body weight (Equivalent or similar to OECD 402, 24 h, Rabbit, Read-across, Dermal, 7 day(s))                             |

| <b>MYRCENE (123-35-3)</b> |  |
|---------------------------|--|
| LD50 oral rat             | > 11390 mg/kg body weight Animal: rat  |
| LD50 dermal rabbit        | > 5000 mg/kg body weight Animal: rabbit, Guideline: OECD Guideline 402 (Acute Dermal Toxicity) |

| <b>P-CYMENE (99-87-6)</b> |  |
|---------------------------|--|
| LD50 oral rat             | 4750 mg/kg (Rat, Male / female, Experimental value, Oral, 14 day(s)) |
| LD50 dermal rabbit        | > 5000 mg/kg (Rabbit, Experimental value, Dermal, 14 day(s))         |
| LC50 Inhalation - Rat     | > 9.7 mg/l (5 h, Rat, Experimental value, Inhalation)                |
| ATE US (oral)             | 4750 mg/kg body weight   |
| ATE US (vapors)           | 3 mg/l/4h  |

| <b>CITRAL (5392-40-5)</b> |  |
|---------------------------|--|
| LD50 oral rat             | ≈ 6800 mg/kg body weight Animal: rat                             |
| LD50 dermal rat           | > 2000 mg/kg body weight Animal: rat, Remarks on results: other: |
| ATE US (dermal)           | 2250 mg/kg body weight   |

| <b>L-ALPHA-PINENE (7785-26-4)</b> |                       |
|-----------------------------------|-----------------------|
| ATE US (oral)                     | 500 mg/kg body weight |

| <b>Isoamyl alcohol (123-51-3)</b> |                        |
|-----------------------------------|------------------------|
| ATE US (oral)                     | 4000 mg/kg body weight |
| ATE US (dermal)                   | 3216 mg/kg body weight |
| ATE US (gases)                    | 4500 ppmV/4h           |
| ATE US (vapors)                   | 11 mg/l/4h             |
| ATE US (dust, mist)               | 1.5 mg/l/4h            |

|                                   |  |
|-----------------------------------|--|
| Skin corrosion/irritation         | : Causes skin irritation.              |
| Serious eye damage/irritation     | : Causes serious eye irritation.       |
| Respiratory or skin sensitization | : May cause an allergic skin reaction. |
| Germ cell mutagenicity            | : Not classified                       |
| Carcinogenicity                   | : Not classified                       |

| <b>MYRCENE (123-35-3)</b> |                                      |
|---------------------------|--------------------------------------|
| IARC group                | 2B - Possibly carcinogenic to humans |

| <b>D-LIMONENE (5989-27-5)</b> |                      |
|-------------------------------|----------------------|
| IARC group                    | 3 - Not classifiable |

| <b>MYRCENE (123-35-3)</b> |                                      |
|---------------------------|--------------------------------------|
| IARC group                | 2B - Possibly carcinogenic to humans |

| <b>CITRAL (5392-40-5)</b>                |   |
|--|---|
| NOAEL (chronic,oral,animal/male,2 years) | 60 mg/kg body weight Animal: mouse, Animal sex: male, Guideline: OECD Guideline 453 (Combined Chronic Toxicity / Carcinogenicity Studies), Remarks on results: other: |

Reproductive toxicity : Suspected of damaging fertility or the unborn child.

STOT-single exposure : Not classified

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| ETHYL PROPIONATE (105-37-3) |                                   |
|-----------------------------|-----------------------------------|
| STOT-single exposure        | May cause respiratory irritation. |

| Isoamyl alcohol (123-51-3) |                                   |
|----------------------------|-----------------------------------|
| STOT-single exposure       | May cause respiratory irritation. |

STOT-repeated exposure : Not classified

| MYRCENE (123-35-3)                            |  |
|---|--|
| LOAEL (oral,rat,90 days)                      | 250 mg/kg body weight Animal: rat, Guideline: OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity Study in Rodents)                       |
| NOAEL (subchronic,oral,animal/male,90 days)   | 500 mg/kg body weight Animal: mouse, Animal sex: male, Guideline: OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity Study in Rodents)   |
| NOAEL (subchronic,oral,animal/female,90 days) | 250 mg/kg body weight Animal: mouse, Animal sex: female, Guideline: OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity Study in Rodents) |

| MYRCENE (123-35-3)                            |  |
|---|--|
| LOAEL (oral,rat,90 days)                      | 250 mg/kg body weight Animal: rat, Guideline: OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity Study in Rodents)                       |
| NOAEL (subchronic,oral,animal/male,90 days)   | 500 mg/kg body weight Animal: mouse, Animal sex: male, Guideline: OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity Study in Rodents)   |
| NOAEL (subchronic,oral,animal/female,90 days) | 250 mg/kg body weight Animal: mouse, Animal sex: female, Guideline: OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity Study in Rodents) |

| CITRAL (5392-40-5)                          |   |
|---|---|
| LOAEC (inhalation,rat,gas,90 days)          | 68 ppm Animal: rat, Animal sex: female  |
| NOAEL (oral,rat,90 days)                    | 100 mg/kg body weight Animal: rat, Guideline: OECD Guideline 453 (Combined Chronic Toxicity / Carcinogenicity Studies)                    |
| NOAEC (inhalation,rat,gas,90 days)          | 34 ppm Animal: rat, Animal sex: female  |
| NOAEL (subchronic,oral,animal/male,90 days) | 60 mg/kg body weight Animal: mouse, Animal sex: male, Guideline: OECD Guideline 453 (Combined Chronic Toxicity / Carcinogenicity Studies) |
| STOT-repeated exposure                      | May cause damage to organs through prolonged or repeated exposure.  |

Aspiration hazard : May be fatal if swallowed and enters airways.

Viscosity, kinematic : No data available

Symptoms/effects after skin contact : Irritation. May cause an allergic skin reaction.

Symptoms/effects after eye contact : Eye irritation.

Symptoms/effects after ingestion : Risk of lung edema.

## SECTION 12: Ecological information

### 12.1. Toxicity

Ecology - general : The product is not considered harmful to aquatic organisms or to cause long-term adverse effects in the environment.

| BETA-PINENES (127-91-3) |  |
|-------------------------|--|
| LC50 - Fish [1]         | 0.557 mg/l (OECD 203: Fish, Acute Toxicity Test, 96 h, Cyprinus carpio, Semi-static system, Fresh water, Weight of evidence, Other isomer)               |
| ErC50 algae             | 0.826 mg/l (OECD 201: Alga, Growth Inhibition Test, 48 h, Pseudokirchneriella subcapitata, Static system, Fresh water, Weight of evidence, Other isomer) |

| MYRCENE (123-35-3)   |   |
|----------------------|---|
| EC50 - Crustacea [1] | 1.47 mg/l Test organisms (species): Daphnia magna |

| D-LIMONENE (5989-27-5) |   |
|------------------------|---|
| LC50 - Fish [1]        | 720 µg/l (Equivalent or similar to OECD 203, 96 h, Pimephales promelas, Flow-through system, Fresh water, Experimental value)               |
| EC50 - Crustacea [1]   | 0.307 mg/l (OECD 202: Daphnia sp. Acute Immobilisation Test, 48 h, Daphnia magna, Semi-static system, Fresh water, Experimental value, GLP) |
| LC50 - Fish [2]        | 702 µg/l Test organisms (species): Pimephales promelas  |
| EC50 - Crustacea [2]   | 0.51 mg/l Test organisms (species): Daphnia magna   |



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| <b>D-LIMONENE (5989-27-5)</b>       |  |
|-------------------------------------|--|
| ErC50 algae                         | 0.32 mg/l (OECD 201: Alga, Growth Inhibition Test, 72 h, Pseudokirchneriella subcapitata, Static system, Fresh water, Experimental value, GLP) |
| <b>MYRCENE (123-35-3)</b>           |  |
| EC50 - Crustacea [1]                | 1.47 mg/l Test organisms (species): Daphnia magna  |
| <b>P-CYMENE (99-87-6)</b>           |  |
| LC50 - Fish [1]                     | 48 mg/l (EPA OPPTS 850.1075, 96 h, Cyprinodon variegatus, Static system, Salt water, Experimental value)                                       |
| EC50 - Crustacea [1]                | 3.7 mg/l (OECD 202: Daphnia sp. Acute Immobilisation Test, 48 h, Daphnia magna, Semi-static system, Fresh water, Experimental value, GLP)      |
| ErC50 algae                         | 4.03 mg/l (OECD 201: Alga, Growth Inhibition Test, 72 h, Selenastrum capricornutum, Static system, Fresh water, Experimental value, GLP)       |
| <b>CITRAL (5392-40-5)</b>           |  |
| LC50 - Fish [1]                     | 6.78 mg/l Test organisms (species): Leuciscus idus   |
| EC50 - Crustacea [1]                | 6.8 mg/l Test organisms (species): Daphnia magna   |
| <b>BETA CARYOPHYLLENE (87-44-5)</b> |  |
| EC50 - Crustacea [1]                | > 0.17 mg/l Test organisms (species): Daphnia magna  |

### 12.2. Persistence and degradability

| <b>BETA-PINENES (127-91-3)</b> |                                    |
|--------------------------------|------------------------------------|
| Persistence and degradability  | Readily biodegradable in water.    |
| <b>D-LIMONENE (5989-27-5)</b>  |                                    |
| Persistence and degradability  | Readily biodegradable in water.    |
| ThOD                           | 3.29 g O <sub>2</sub> /g substance |
| <b>MYRCENE (123-35-3)</b>      |                                    |
| Persistence and degradability  | Readily biodegradable in water.    |
| <b>P-CYMENE (99-87-6)</b>      |                                    |
| Persistence and degradability  | Readily biodegradable in water.    |

### 12.3. Bioaccumulative potential

| <b>BETA-PINENES (127-91-3)</b>                  |   |
|---|---|
| BCF - Fish [1]                                  | 1125 l/kg (BCFBAF v3.01, Pisces, Fresh water, QSAR, Other isomer)                               |
| Partition coefficient n-octanol/water (Log Pow) | 4.425 (Similar product, Read-across, Equivalent or similar to OECD 107, 25 °C)                  |
| Bioaccumulative potential                       | Potential for bioaccumulation (4 ≤ Log Kow ≤ 5).  |
| <b>D-LIMONENE (5989-27-5)</b>                   |   |
| BCF - Fish [1]                                  | 864.8 l/kg (BCFBAF v3.01, Pisces, QSAR, Fresh weight)   |
| Partition coefficient n-octanol/water (Log Pow) | 4.38 (Experimental value, Equivalent or similar to OECD 117, 37 °C)                             |
| Bioaccumulative potential                       | Potential for bioaccumulation (4 ≤ Log Kow ≤ 5).  |
| <b>MYRCENE (123-35-3)</b>                       |   |
| Partition coefficient n-octanol/water (Log Pow) | 5.285 (Literature, 25 °C)   |
| Bioaccumulative potential                       | High potential for bioaccumulation (Log Kow > 5).   |
| <b>P-CYMENE (99-87-6)</b>                       |   |
| Partition coefficient n-octanol/water (Log Pow) | 4.8 (Experimental value, OECD 117: Partition Coefficient (n-octanol/water), HPLC method, 20 °C) |
| Bioaccumulative potential                       | Potential for bioaccumulation (4 ≤ Log Kow ≤ 5).  |

### 12.4. Mobility in soil

| <b>BETA-PINENES (127-91-3)</b>                             |   |
|--|---|
| Organic Carbon Normalized Adsorption Coefficient (Log Koc) | 3.009 – 3.836 (log Koc, Calculated value, Other isomer) |
| Ecology - soil   | Low potential for mobility in soil.                     |

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| <b>D-LIMONENE (5989-27-5)</b>                              |  |
|--|--|
| Surface tension  | No data available in the literature                          |
| Organic Carbon Normalized Adsorption Coefficient (Log Koc) | 3.049 – 3.801 (log Koc, SRC PCKOCWIN v2.0, Calculated value) |
| Ecology - soil   | Low potential for mobility in soil.                          |
| <b>MYRCENE (123-35-3)</b>                                  |  |
| Ecology - soil   | No (test)data on mobility of the substance available.        |
| <b>P-CYMENE (99-87-6)</b>                                  |  |
| Organic Carbon Normalized Adsorption Coefficient (Log Koc) | 4.17 (log Koc, SRC PCKOCWIN v2.0, QSAR)                      |
| Ecology - soil   | Low potential for mobility in soil.                          |

### 12.5. Other adverse effects

No additional information available

## SECTION 13: Disposal considerations

### 13.1. Disposal methods

- Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.  
Additional information : Flammable vapors may accumulate in the container.

## SECTION 14: Transport information

### Department of Transportation (DOT)

In accordance with DOT

Transport document description (DOT) : UN1197 Extracts, flavoring, liquid (Regulated for Bulk only), 3, III

UN-No.(DOT) : UN1197

Proper Shipping Name (DOT) : Extracts, flavoring, liquid  
(Regulated for Bulk only)

Class (DOT) : 3 - Class 3 - Flammable and combustible liquid 49 CFR 173.120

Packing group (DOT) : III - Minor Danger

Hazard labels (DOT) : 3 - Flammable liquid



DOT Packaging Non Bulk (49 CFR 173.xxx) : 203

DOT Packaging Bulk (49 CFR 173.xxx) : 242

DOT Special Provisions (49 CFR 172.102) : B1 - If the material has a flash point at or above 38 C (100 F) and below 93 C (200 F), then the bulk packaging requirements of 173.241 of this subchapter are applicable. If the material has a flash point of less than 38 C (100 F), then the bulk packaging requirements of 173.242 of this subchapter are applicable.

IB3 - Authorized IBCs: Metal (31A, 31B and 31N); Rigid plastics (31H1 and 31H2); Composite (31HZ1 and 31HA2, 31HB2, 31HN2, 31HD2 and 31HH2). Additional Requirement: Only liquids with a vapor pressure less than or equal to 110 kPa at 50 C (1.1 bar at 122 F), or 130 kPa at 55 C (1.3 bar at 131 F) are authorized, except for UN2672 (also see Special Provision IP8 in Table 2 for UN2672).

T2 - 1.5 178.274(d)(2) Normal..... 178.275(d)(3)

TP1 - The maximum degree of filling must not exceed the degree of filling determined by the following: Degree of filling =  $97 / 1 + a (tr - tf)$  Where: tr is the maximum mean bulk temperature during transport, and tf is the temperature in degrees celsius of the liquid during filling.

DOT Packaging Exceptions (49 CFR 173.xxx) : 150

DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27) : 60 L

DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75) : 220 L

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|                                       |   |
|---------------------------------------|---|
| DOT Vessel Stowage Location           | : A - The material may be stowed "on deck" or "under deck" on a cargo vessel and on a passenger vessel. |
| Emergency Response Guide (ERG) Number | : 127   |
| Other information                     | : No supplementary information available.   |

### Transportation of Dangerous Goods

|   |   |
|---|---|
| Transport document description (TDG)  | : UN1197 EXTRACTS, FLAVOURING, LIQUID (Regulated for Bulk only), 3, III |
| UN-No. (TDG)  | : UN1197  |
| Proper Shipping Name (TDG)  | : EXTRACTS, FLAVOURING, LIQUID  |
| TDG Primary Hazard Classes  | : 3 - Class 3 - Flammable Liquids                                       |
| Packing group (TDG)   | : III - Minor Danger  |
| Explosive Limit and Limited Quantity Index                                  | : 5 L   |
| Passenger Carrying Road Vehicle or Passenger Carrying Railway Vehicle Index | : 60 L  |

### Transport by sea

|                                       |  |
|---------------------------------------|--|
| Transport document description (IMDG) | : UN 1197 EXTRACTS, FLAVOURING, LIQUID, 3, III |
| UN-No. (IMDG)                         | : 1197   |
| Proper Shipping Name (IMDG)           | : EXTRACTS, FLAVOURING, LIQUID                 |
| Class (IMDG)                          | : 3 - Flammable liquids                        |
| Packing group (IMDG)                  | : III - substances presenting low danger       |
| Limited quantities (IMDG)             | : 5 L  |

### Air transport

|                                       |                                    |
|---------------------------------------|------------------------------------|
| Transport document description (IATA) | : UN 1197 Extracts, liquid, 3, III |
| UN-No. (IATA)                         | : 1197                             |
| Proper Shipping Name (IATA)           | : Extracts, liquid                 |
| Class (IATA)                          | : 3 - Flammable Liquids            |
| Packing group (IATA)                  | : III - Low danger                 |

## SECTION 15: Regulatory information

### 15.1. US Federal regulations

#### Isoamyl alcohol (123-51-3)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

### 15.2. International regulations

#### CANADA

#### BETA-PINENES (127-91-3)

Listed on the Canadian DSL (Domestic Substances List)

#### GAMMA-TERPINENE (99-85-4)

Listed on the Canadian DSL (Domestic Substances List)

#### LINALOOL (78-70-6)

Listed on the Canadian DSL (Domestic Substances List)

#### MYRCENE (123-35-3)

Listed on the Canadian DSL (Domestic Substances List)

#### D-LIMONENE (5989-27-5)

Listed on the Canadian DSL (Domestic Substances List)

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### MYRCENE (123-35-3)

Listed on the Canadian DSL (Domestic Substances List)

### P-CYMENE (99-87-6)

Listed on the Canadian DSL (Domestic Substances List)

### CITRAL (5392-40-5)

Listed on the Canadian DSL (Domestic Substances List)

### L-ALPHA-PINENE (7785-26-4)

Listed on the Canadian NDSL (Non-Domestic Substances List)

### BETA CARYOPHYLLENE (87-44-5)

Listed on the Canadian DSL (Domestic Substances List)

### ETHYL PROPIONATE (105-37-3)

Listed on the Canadian DSL (Domestic Substances List)

### Isoamyl alcohol (123-51-3)

Listed on the Canadian DSL (Domestic Substances List)

### EU-Regulations

No additional information available

### National regulations

#### BETA-PINENES (127-91-3)

Listed on the United States TSCA (Toxic Substances Control Act) inventory - Status: Active  
Listed on INSQ (Mexican National Inventory of Chemical Substances)

#### GAMMA-TERPINENE (99-85-4)

Listed on the United States TSCA (Toxic Substances Control Act) inventory - Status: Active  
Listed on INSQ (Mexican National Inventory of Chemical Substances)

#### LINALOOL (78-70-6)

Listed on the United States TSCA (Toxic Substances Control Act) inventory - Status: Active  
Listed on INSQ (Mexican National Inventory of Chemical Substances)

#### MYRCENE (123-35-3)

Listed on IARC (International Agency for Research on Cancer)  
Listed on the United States TSCA (Toxic Substances Control Act) inventory - Status: Active  
Listed on INSQ (Mexican National Inventory of Chemical Substances)

#### D-LIMONENE (5989-27-5)

Listed on the United States TSCA (Toxic Substances Control Act) inventory - Status: Active  
Listed on INSQ (Mexican National Inventory of Chemical Substances)

#### MYRCENE (123-35-3)

Listed on IARC (International Agency for Research on Cancer)  
Listed on the United States TSCA (Toxic Substances Control Act) inventory - Status: Active  
Listed on INSQ (Mexican National Inventory of Chemical Substances)

#### P-CYMENE (99-87-6)

Listed on the United States TSCA (Toxic Substances Control Act) inventory - Status: Active  
Listed on INSQ (Mexican National Inventory of Chemical Substances)

#### CITRAL (5392-40-5)

Listed on the United States TSCA (Toxic Substances Control Act) inventory - Status: Active  
Listed on INSQ (Mexican National Inventory of Chemical Substances)

#### L-ALPHA-PINENE (7785-26-4)

Listed on the United States TSCA (Toxic Substances Control Act) inventory - Status: Active

#### BETA CARYOPHYLLENE (87-44-5)

Listed on the United States TSCA (Toxic Substances Control Act) inventory - Status: Active

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### ETHYL PROPIONATE (105-37-3)

Listed on the United States TSCA (Toxic Substances Control Act) inventory - Status: Active  
Listed on INSQ (Mexican National Inventory of Chemical Substances)

### 15.3. US State regulations

 **WARNING:**

This product can expose you to methyl eugenol, which is known to the State of California to cause cancer. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

This product can expose you to myrcene, which is known to the State of California to cause cancer. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

| Component                   | State or local regulations  |
|-----------------------------|---|
| P-CYMENE(99-87-6)           | U.S. - Massachusetts - Right To Know List; U.S. - Pennsylvania - RTK (Right to Know) List   |
| ETHYL PROPIONATE (105-37-3) | U.S. - Massachusetts - Right To Know List; U.S. - New Jersey - Right to Know Hazardous Substance List; U.S. - Pennsylvania - RTK (Right to Know) List |
| Isoamyl alcohol(123-51-3)   | U.S. - New Jersey - Right to Know Hazardous Substance List; U.S. - Pennsylvania - RTK (Right to Know) List  |

## SECTION 16: Other information

Full text of H-phrases:

|      |   |
|------|---|
| H225 | Highly flammable liquid and vapor                                 |
| H226 | Flammable liquid and vapor  |
| 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                               |
| H318 | Causes serious eye damage   |
| H319 | Causes serious eye irritation                                     |
| H320 | Causes eye irritation   |
| H331 | Toxic if inhaled  |
| H332 | Harmful if inhaled  |
| H335 | May cause respiratory irritation                                  |
| H361 | Suspected of damaging fertility or the unborn child               |
| H373 | May cause damage to organs through prolonged or repeated exposure |

SDS US (GHS HazCom 2012)

*This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.*