

### SECTION 1: Identification of the substance/mixture and of the company/undertaking

#### 1.1. Product identifier

Product form	: Mixture
Product name	: Pineapple #
UFI	: 0RJE-X18C-2005-
Product code	T4G7 :
Type of product	: Perfumes, fragrances
Product group	: Finished Good

#### 1.2. Relevant identified uses of the substance or mixture and uses advised against

##### 1.2.1. Relevant identified uses

Main use category	: Industrial use, Professional use
Industrial/Professional use spec	: Industrial For professional use only
Use of the substance/mixture	: Perfumes, fragrances
Function or use category	: Odour agents

##### 1.2.2. Uses advised against

No additional information available

#### 1.3. Details of the supplier of the safety data sheet

ZEN AROMA  
22c Portside Drive  
Mt Maunganui, 3116  
New Zealand  
PH: 07 578 4755  
support@zenaroma.co.nz

#### 1.4. Emergency telephone number

Emergency number	: 1-800-255-3924; +01-813-248-0585; China:+400-120-0751; Mexico:+01-800-099-0731; Brazil: +0-800-591-6042; India: +000-800-100-4086
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### SECTION 2: Hazards identification

#### 2.1. Classification of the substance or mixture

##### Classification according to Regulation (EC) No. 1272/2008 [CLP]

Acute toxicity (oral), Category 4	H302
Acute toxicity (inhalation:dust,mist) Category 4	H332
Skin sensitisation, Category 1	H317
Carcinogenicity, Category 1B	H350
Hazardous to the aquatic environment — Chronic Hazard, Category 2	H411
Full text of H statements : see section 16	

##### Adverse physicochemical, human health and environmental effects

No additional information available

#### 2.2. Label elements

##### Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP)



Signal word (CLP)

: Danger

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Hazardous ingredients	: Nutmeg Oil; Hexyl cinnamic aldehyde; Allyl heptanoate; Allyl cyclohexylpropionate; Linalool; Orange oil
Hazard statements (CLP)	: H302+H332 - Harmful if swallowed or if inhaled. H317 - May cause an allergic skin reaction. H350 - May cause cancer. H411 - Toxic to aquatic life with long lasting effects.
Precautionary statements (CLP)	: P201 - Obtain special instructions before use. P202 - Do not handle until all safety precautions have been read and understood. P264 - Wash hands, forearms and face 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.

### 2.3. Other hazards

No additional information available

## SECTION 3: Composition/information on ingredients

### 3.1. Substances

Not applicable

### 3.2. Mixtures

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Verdorex	(CAS-No.) 88-41-5 (EC-No.) 201-828-7 (REACH-no) 01-2119970713-33	5 – 10	Aquatic Chronic 2, H411
Allyl cyclohexylpropionate	(CAS-No.) 2705-87-5 (EC-No.) 220-292-5	5 – 10	Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Dermal), H312 Acute Tox. 4 (Inhalation), H332 Skin Sens. 1, H317 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
Benzyl benzoate	(CAS-No.) 120-51-4 (EC-No.) 204-402-9 (EC Index-No.) 607-085-00-9 (REACH-no) 01-2119976371-33	3.75 – 7.5	Acute Tox. 4 (Oral), H302 Aquatic Chronic 2, H411
Hexamethylindanopyran	(CAS-No.) 1222-05-5 (EC-No.) 214-946-9 (EC Index-No.) 603-212-00-7 (REACH-no) 01-2119488227-29	3.75 – 7.5	Aquatic Acute 1, H400 Aquatic Chronic 1, H410
Hexyl cinnamic aldehyde	(CAS-No.) 101-86-0 (EC-No.) 202-983-3 (REACH-no) 01-2119533092-50	3.5 – 7	Skin Sens. 1, H317 Aquatic Chronic 2, H411
Allyl heptanoate	(CAS-No.) 142-19-8 (EC-No.) 205-527-1 (REACH-no) 01-2119488961-23	3.15 – 6.3	Acute Tox. 3 (Oral), H301 Acute Tox. 3 (Dermal), H311 Acute Tox. 3 (Inhalation), H331 Aquatic Acute 1, H400 Aquatic Chronic 3, H412
Ethylene brassylate	(CAS-No.) 105-95-3 (EC-No.) 203-347-8 (REACH-no) 01-2119967772-24	2 – 4	Aquatic Chronic 2, H411

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Linalool	(CAS-No.) 78-70-6 (EC-No.) 201-134-4 (EC Index-No.) 603-235-00-2 (REACH-no) 01-2119474016-42	1.375 – 2.75	Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1B, H317
Aldehyde C-14	(CAS-No.) 104-67-6 (EC-No.) 203-225-4 (REACH-no) 01-2119959333-34	1.2 – 2.4	Aquatic Chronic 3, H412
Diethyl malonate	(CAS-No.) 105-53-3 (EC-No.) 203-305-9 (REACH-no) 01-2119886972-18	1.1 – 2.2	Eye Irrit. 2, H319
Orange oil	(CAS-No.) 8008-57-9 (EC-No.) 232-433-8 (REACH-no) 01-2119493353-35	1 – 2	Flam. Liq. 3, H226 Skin Irrit. 2, H315 Skin Sens. 1, H317 Asp. Tox. 1, H304 Aquatic Chronic 2, H411
Verdyl acetate	(CAS-No.) 5413-60-5 (EC-No.) 226-501-6	0.75 – 1.5	Aquatic Chronic 3, H412
Veltol plus crystals	(CAS-No.) 4940-11-8 (EC-No.) 225-582-5	0.5 – 1	Acute Tox. 4 (Oral), H302
beta-Ionone	(CAS-No.) 14901-07-6 (EC-No.) 238-969-9	0.5 – 1	Aquatic Chronic 2, H411
Triplal (Vertocitral)	(CAS-No.) 68039-49-6 (EC-No.) 268-264-1	0.25 – 0.5	Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1, H317 Aquatic Chronic 3, H412
Cyclamal	(CAS-No.) 103-95-7 (EC-No.) 203-161-7 (REACH-no) 01-2119970582-32	0.25 – 0.5	Skin Irrit. 2, H315 Skin Sens. 1B, H317 Aquatic Chronic 2, H411
Allyl caproate	(CAS-No.) 123-68-2 (EC-No.) 204-642-4 (REACH-no) 01-2119983573-26	0.2 – 0.4	Acute Tox. 3 (Oral), H301 Acute Tox. 3 (Dermal), H311 Acute Tox. 3 (Inhalation), H331 Aquatic Acute 1, H400 Aquatic Chronic 3, H412
Isoamyl acetate substance with a Community workplace exposure limit	(CAS-No.) 123-92-2 (EC-No.) 204-662-3 (EC Index-No.) 607-130-00-2 (REACH-no) 01-2119548408-32	0.15 – 0.3	Flam. Liq. 3, H226
Nutmeg Oil	(CAS-No.) 8008-45-5 (EC-No.) 282-013-3;616-921-1	0.05 – 0.1	Flam. Liq. 3, H226 Skin Sens. 1, H317 Muta. 2, H341 Carc. 1B, H350 Asp. Tox. 1, H304 Aquatic Chronic 2, H411

Full text of H-statements: see section 16

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

First-aid measures general

: Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).

First-aid measures after inhalation

: Allow affected person to breathe fresh air. Allow the victim to rest.

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First-aid measures after skin contact	: Wash with plenty of water/.... If skin irritation or rash occurs: Get medical advice/attention. Specific treatment (see supplemental first aid instruction on this label). Wash contaminated clothing before reuse. Remove affected clothing and wash all exposed skin area with mild soap and water, followed by warm water rinse. If skin irritation occurs: Get medical advice/attention.
First-aid measures after eye contact	: Rinse immediately with plenty of water. Obtain medical attention if pain, blinking or redness persists.
First-aid measures after ingestion	: Rinse mouth. Call a POISON CENTER/doctor if you feel unwell. Do NOT induce vomiting. Obtain emergency medical attention.

### 4.2. Most important symptoms and effects, both acute and delayed

Symptoms/effects	: Not expected to present a significant hazard under anticipated conditions of normal use.
Symptoms/effects after inhalation	: May cause an allergic skin reaction.
Symptoms/effects after ingestion	: Swallowing a small quantity of this material will result in serious health hazard.

### 4.3. Indication of any immediate medical attention and special treatment needed

No additional information available

## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

Suitable extinguishing media	: Foam. Dry powder. Carbon dioxide. Water spray. Sand.
Unsuitable extinguishing media	: Do not use a heavy water stream.

### 5.2. Special hazards arising from the substance or mixture

No additional information available

### 5.3. Advice for firefighters

Firefighting instructions	: Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire fighting water from entering the environment.
Protection during firefighting	: Do not enter fire area without proper protective equipment, including respiratory protection.

## SECTION 6: Accidental release measures

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

#### 6.1.1. For non-emergency personnel

Emergency procedures	: Evacuate unnecessary personnel.
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#### 6.1.2. For emergency responders

Protective equipment	: Equip cleanup crew with proper protection.
Emergency procedures	: Ventilate area.

### 6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

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

Methods for cleaning up	: Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Collect spillage. Store away from other materials.
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### 6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection.

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### SECTION 7: Handling and storage

#### 7.1. Precautions for safe handling

- Precautions for safe handling : Avoid breathing dust/fume/gas/mist/vapours/spray. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapour.
- Hygiene measures : Do not eat, drink or smoke when using this product. Wash hands thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reuse.

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

- Storage conditions : Keep only in the original container in a cool, well ventilated place away from : Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Keep container closed when not in use.
- Incompatible products : Strong bases. Strong acids.
- Incompatible materials : Sources of ignition. Direct sunlight.
- Storage temperature : 25 °C
- Storage area : Store in a well-ventilated place. Store away from heat.
- Special rules on packaging : Store in a closed container.
- Packaging materials : Do not store in corrodable metal.

#### 7.3. Specific end use(s)

No additional information available

### SECTION 8: Exposure controls/personal protection

#### 8.1. Control parameters

<b>Isoamyl acetate (123-92-2)</b>	
<b>EU - Occupational Exposure Limits</b>	
IOELV TWA (mg/m <sup>3</sup> )	270 mg/m <sup>3</sup>
IOELV TWA (ppm)	50 ppm
IOELV STEL (mg/m <sup>3</sup> )	540 mg/m <sup>3</sup>
IOELV STEL (ppm)	100 ppm
<b>Austria - Occupational Exposure Limits</b>	
MAK (mg/m <sup>3</sup> )	270 mg/m <sup>3</sup> (Pentyl acetate (all isomers))
MAK (ppm)	50 ppm (Pentyl acetate (all isomers))
MAK Short time value (mg/m <sup>3</sup> )	540 mg/m <sup>3</sup> (Pentylacetate)
MAK Short time value (ppm)	100 ppm (Pentylacetate)
<b>Belgium - Occupational Exposure Limits</b>	
Limit value (mg/m <sup>3</sup> )	270 mg/m <sup>3</sup>
Limit value (ppm)	50 ppm
Short time value (mg/m <sup>3</sup> )	540 mg/m <sup>3</sup>
Short time value (ppm)	100 ppm
<b>Bulgaria - Occupational Exposure Limits</b>	
OEL TWA (mg/m <sup>3</sup> )	270 mg/m <sup>3</sup>
OEL TWA (ppm)	50 ppm
OEL STEL (mg/m <sup>3</sup> )	540 mg/m <sup>3</sup>
OEL STEL (ppm)	100 ppm

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<b>Isoamyl acetate (123-92-2)</b>	
<b>Croatia - Occupational Exposure Limits</b>	
GVI (granična vrijednost izloženosti) (mg/m <sup>3</sup> )	270 mg/m <sup>3</sup>
GVI (granična vrijednost izloženosti) (ppm)	50 ppm
KGVI (kratkotrajna granična vrijednost izloženosti) (mg/m <sup>3</sup> )	540 mg/m <sup>3</sup>
KGVI (kratkotrajna granična vrijednost izloženosti) (ppm)	100 ppm
<b>Cyprus - Occupational Exposure Limits</b>	
OEL TWA (mg/m <sup>3</sup> )	270 mg/m <sup>3</sup>
OEL TWA (ppm)	50 ppm
OEL STEL (mg/m <sup>3</sup> )	540 mg/m <sup>3</sup>
OEL STEL (ppm)	100 ppm
<b>Denmark - Occupational Exposure Limits</b>	
Grænseværdie (langvarig) (mg/m <sup>3</sup> )	271 mg/m <sup>3</sup> (Amyl acetate, all isomers)
Grænseværdie (langvarig) (ppm)	50 ppm (Amyl acetate, all isomers)
<b>Estonia - Occupational Exposure Limits</b>	
OEL TWA (mg/m <sup>3</sup> )	270 mg/m <sup>3</sup>
OEL TWA (ppm)	50 ppm
OEL STEL (mg/m <sup>3</sup> )	540 mg/m <sup>3</sup>
OEL STEL (ppm)	100 ppm
<b>Finland - Occupational Exposure Limits</b>	
HTP-arvo (8h) (mg/m <sup>3</sup> )	270 mg/m <sup>3</sup> (Pentyl acetate)
HTP-arvo (8h) (ppm)	50 ppm (Pentyl acetate)
HTP-arvo (15 min)	540 mg/m <sup>3</sup>
HTP-arvo (15 min) (ppm)	100 ppm
<b>France - Occupational Exposure Limits</b>	
VME (mg/m <sup>3</sup> )	270 mg/m <sup>3</sup> (restrictive limit)
VME (ppm)	50 ppm (restrictive limit)
VLE (mg/m <sup>3</sup> )	540 mg/m <sup>3</sup> (restrictive limit)
VLE (ppm)	100 ppm (restrictive limit)
<b>Germany - Occupational Exposure Limits (TRGS 900)</b>	
Occupational exposure limit value (mg/m <sup>3</sup> )	270 mg/m <sup>3</sup>
Occupational exposure limit value (ppm)	50 ppm
<b>Gibraltar - Occupational Exposure Limits</b>	
Eight hours mg/m <sup>3</sup>	270 mg/m <sup>3</sup>
Eight hours ppm	50 ppm
Short-term mg/m <sup>3</sup>	540 mg/m <sup>3</sup>
Short-term ppm	100 ppm
<b>Greece - Occupational Exposure Limits</b>	
OEL TWA (mg/m <sup>3</sup> )	530 mg/m <sup>3</sup>
OEL TWA (ppm)	100 ppm

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<b>Isoamyl acetate (123-92-2)</b>	
OEL STEL (mg/m <sup>3</sup> )	800 mg/m <sup>3</sup>
OEL STEL (ppm)	150 ppm
<b>Hungary - Occupational Exposure Limits</b>	
AK-érték	270 mg/m <sup>3</sup>
CK-érték	540 mg/m <sup>3</sup>
<b>Ireland - Occupational Exposure Limits</b>	
OEL (8 hours ref) (mg/m <sup>3</sup> )	260 mg/m <sup>3</sup>
OEL (8 hours ref) (ppm)	50 ppm
OEL (15 min ref) (mg/m <sup>3</sup> )	520 mg/m <sup>3</sup>
OEL (15 min ref) (ppm)	100 ppm
<b>Italy - Occupational Exposure Limits</b>	
OEL TWA (mg/m <sup>3</sup> )	270 mg/m <sup>3</sup>
OEL TWA (ppm)	50 ppm
OEL STEL (mg/m <sup>3</sup> )	540 mg/m <sup>3</sup>
OEL STEL (ppm)	100 ppm
<b>Latvia - Occupational Exposure Limits</b>	
OEL TWA (mg/m <sup>3</sup> )	270 mg/m <sup>3</sup>
OEL TWA (ppm)	50 ppm
<b>Lithuania - Occupational Exposure Limits</b>	
IPRV (mg/m <sup>3</sup> )	270 mg/m <sup>3</sup>
IPRV (ppm)	50 ppm
TPRV (mg/m <sup>3</sup> )	540 mg/m <sup>3</sup>
TPRV (ppm)	100 ppm
<b>Luxembourg - Occupational Exposure Limits</b>	
OEL TWA (mg/m <sup>3</sup> )	270 mg/m <sup>3</sup>
OEL TWA (ppm)	50 ppm
OEL STEL (mg/m <sup>3</sup> )	540 mg/m <sup>3</sup>
OEL STEL (ppm)	100 ppm
<b>Malta - Occupational Exposure Limits</b>	
OEL TWA (mg/m <sup>3</sup> )	270 mg/m <sup>3</sup>
OEL TWA (ppm)	50 ppm
OEL STEL (mg/m <sup>3</sup> )	540 mg/m <sup>3</sup>
OEL STEL (ppm)	100 ppm
<b>Netherlands - Occupational Exposure Limits</b>	
Grenswaarde TGG 15MIN (mg/m <sup>3</sup> )	530 mg/m <sup>3</sup>
<b>Poland - Occupational Exposure Limits</b>	
NDS (mg/m <sup>3</sup> )	250 mg/m <sup>3</sup>
NDSch (mg/m <sup>3</sup> )	500 mg/m <sup>3</sup>
<b>Portugal - Occupational Exposure Limits</b>	
OEL TWA (mg/m <sup>3</sup> )	270 mg/m <sup>3</sup> (indicative limit value)

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<b>Isoamyl acetate (123-92-2)</b>	
OEL TWA (ppm)	50 ppm (indicative limit value)
OEL STEL (mg/m <sup>3</sup> )	540 mg/m <sup>3</sup> (indicative limit value)
OEL STEL (ppm)	100 ppm (indicative limit value, regulated under Pentyl acetate, all isomers)
<b>Romania - Occupational Exposure Limits</b>	
OEL TWA (mg/m <sup>3</sup> )	270 mg/m <sup>3</sup>
OEL TWA (ppm)	50 ppm
OEL STEL (mg/m <sup>3</sup> )	540 mg/m <sup>3</sup>
OEL STEL (ppm)	100 ppm
<b>Slovakia - Occupational Exposure Limits</b>	
NPHV (priemerná) (mg/m <sup>3</sup> )	270 mg/m <sup>3</sup>
NPHV (priemerná) (ppm)	50 ppm
NPHV (Hraničná) (mg/m <sup>3</sup> )	540 mg/m <sup>3</sup>
<b>Slovenia - Occupational Exposure Limits</b>	
OEL TWA (mg/m <sup>3</sup> )	270 mg/m <sup>3</sup>
OEL TWA (ppm)	50 ppm
OEL STEL (mg/m <sup>3</sup> )	540 mg/m <sup>3</sup>
OEL STEL (ppm)	100 ppm
<b>Spain - Occupational Exposure Limits</b>	
VLA-ED (mg/m <sup>3</sup> )	270 mg/m <sup>3</sup> (indicative limit value)
VLA-ED (ppm)	50 ppm (indicative limit value)
VLA-EC (mg/m <sup>3</sup> )	540 mg/m <sup>3</sup>
VLA-EC (ppm)	100 ppm
<b>Sweden - Occupational Exposure Limits</b>	
nivågränsvärde (NVG) (mg/m <sup>3</sup> )	270 mg/m <sup>3</sup> (Pentyl acetates)
nivågränsvärde (NVG) (ppm)	50 ppm (Pentyl acetates)
kortidsvärde (KTV) (mg/m <sup>3</sup> )	540 mg/m <sup>3</sup> (Pentyl acetates)
kortidsvärde (KTV) (ppm)	100 ppm (Pentyl acetates)
<b>Norway - Occupational Exposure Limits</b>	
Grenseverdier (AN) (mg/m <sup>3</sup> )	260 mg/m <sup>3</sup>
Grenseverdier (AN) (ppm)	50 ppm
Grenseverdier (Korttidsverdi) (mg/m <sup>3</sup> )	325 mg/m <sup>3</sup> (value calculated)
Grenseverdier (Korttidsverdi) (ppm)	75 ppm (value calculated)
<b>Turkey - Occupational Exposure Limits</b>	
OEL TWA (mg/m <sup>3</sup> )	270 mg/m <sup>3</sup>
OEL TWA (ppm)	50 ppm
OEL STEL (mg/m <sup>3</sup> )	540 mg/m <sup>3</sup>
OEL STEL (ppm)	100 ppm
<b>USA - ACGIH - Occupational Exposure Limits</b>	
ACGIH TWA (ppm)	50 ppm (Pentyl acetate, all isomers)
ACGIH STEL (ppm)	100 ppm (Pentyl acetate, all isomers)



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### 8.2. Exposure controls

#### Personal protective equipment:

Avoid all unnecessary exposure.

#### Hand protection:

Wear protective gloves.

#### Eye protection:

Chemical goggles or safety glasses

#### Respiratory protection:

Wear appropriate mask

#### Other information:

Do not eat, drink or smoke during use.

## SECTION 9: Physical and chemical properties

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

Physical state	: Liquid
Colour	: light yellow. amber.
Odour	: characteristic.
Odour threshold	: No data available
pH	: No data available
Relative evaporation rate (butylacetate=1)	: No data available
Melting point	: No data available
Freezing point	: No data available
Boiling point	: No data available
Flash point	: > 93.33 °C (closed cup) ASTM D7094
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability (solid, gas)	: Not applicable
Vapour pressure	: No data available
Relative vapour density at 20 °C	: No data available
Relative density	: ≈ 0.96
Solubility	: No data available
Partition coefficient n-octanol/water (Log Pow)	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidising properties	: No data available
Explosive limits	: No data available

### 9.2. Other information

No additional information available

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

No additional information available

### 10.2. Chemical stability

Not established.

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### 10.3. Possibility of hazardous reactions

Not established.

### 10.4. Conditions to avoid

Direct sunlight. Extremely high or low temperatures.

### 10.5. Incompatible materials

Strong acids. Strong bases.

### 10.6. Hazardous decomposition products

fume. Carbon monoxide. Carbon dioxide.

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

Acute toxicity (oral) : Harmful if swallowed or in contact with skin.  
Acute toxicity (dermal) : Not classified  
Acute toxicity (inhalation) : Harmful if inhaled.

Pineapple #	
ATE CLP (oral)	1000.364 mg/kg bodyweight
ATE CLP (dust,mist)	4.983 mg/l/4h

Allyl caproate (123-68-2)	
LD50 oral	300 mg/kg bodyweight
LD50 dermal	300 mg/kg bodyweight
LC50 inhalation rat (Vapours - mg/l/4h)	3 mg/l/4h

Triplal (Vertocitral) (68039-49-6)	
LD50 oral	3900 mg/kg bodyweight

Cyclamal (103-95-7)	
LD50 oral rat	3810 mg/kg
LD50 oral	3810 mg/kg bodyweight

Veltol plus crystals (4940-11-8)	
LD50 oral rat	1150 mg/kg
LD50 oral	1200 mg/kg bodyweight

beta-Ionone (14901-07-6)	
LD50 oral rat	4590 mg/kg

Verdyl acetate (5413-60-5)	
LD50 oral	3050 mg/kg bodyweight

Diethyl malonate (105-53-3)	
LD50 oral rat	14900 µl/kg

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### Aldehyde C-14 (104-67-6)

LD50 oral rat	18500 mg/kg
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### Ethylene brassylate (105-95-3)

LD50 oral rat	> 5000 mg/kg
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LD50 dermal rabbit	> 5000 mg/kg
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### Allyl heptanoate (142-19-8)

LD50 oral rat	500 mg/kg
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LD50 oral	218 mg/kg bodyweight
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LD50 dermal	810 mg/kg bodyweight
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### Hexyl cinnamic aldehyde (101-86-0)

LD50 oral rat	3100 mg/kg
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LD50 oral	3100 mg/kg bodyweight
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LD50 dermal rabbit	> 3000 mg/kg
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LC50 inhalation rat (mg/l)	> 5 mg/l/4h
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### Verdox (88-41-5)

LD50 oral rat	4600 mg/kg
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LD50 oral	4600 mg/kg bodyweight
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### Allyl cyclohexylpropionate (2705-87-5)

LD50 oral rat	585 mg/kg
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LD50 oral	480 mg/kg bodyweight
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LD50 dermal	1600 mg/kg bodyweight
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LC50 inhalation rat (Vapours - mg/l/4h)	11 mg/l/4h
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### Hexamethylindanopyran (1222-05-5)

LD50 oral rat	> 3250 mg/kg
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LD50 dermal rabbit	> 3250 mg/kg
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### Benzyl benzoate (120-51-4)

LD50 oral rat	500 mg/kg
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LD50 oral	1500 mg/kg bodyweight
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LD50 dermal rabbit	4000 mg/kg
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LD50 dermal	4000 mg/kg bodyweight
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### Linalool (78-70-6)

LD50 oral rat	2790 mg/kg
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LD50 oral	2790 mg/kg bodyweight
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LD50 dermal rabbit	2000 mg/kg
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# Pineapple #

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### Nutmeg Oil (8008-45-5)

LD50 oral rat	2620 mg/kg
LD50 dermal rabbit	> 10 g/kg

### Orange oil (8008-57-9)

LD50 oral rat	4400 mg/kg
LD50 dermal rabbit	> 5000 mg/kg

Skin corrosion/irritation	: Not classified
Serious eye damage/irritation	: Not classified
Respiratory or skin sensitisation	: May cause an allergic skin reaction.
Germ cell mutagenicity	: Not classified
Carcinogenicity	: May cause cancer.
Reproductive toxicity	: Not classified
STOT-single exposure	: Not classified
STOT-repeated exposure	: Not classified
Aspiration hazard	: Not classified
Potential adverse human health effects and symptoms	: Harmful if swallowed. Based on available data, the classification criteria are not met.

## SECTION 12: Ecological information

### 12.1. Toxicity

Hazardous to the aquatic environment, short-term (acute)	: Not classified
Hazardous to the aquatic environment, long-term (chronic)	: Toxic to aquatic life with long lasting effects.

### Allyl caproate (123-68-2)

LC50 fish 1	0.117 mg/l (Exposure time: 96 h - Species: Danio rerio [semi-static])
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### Veltol plus crystals (4940-11-8)

LC50 fish 1	> 85 mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss)
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### Diethyl malonate (105-53-3)

LC50 fish 1	10.3 – 13.4 mg/l (Exposure time: 96 h - Species: Pimephales promelas [flow-through])
EC50 Daphnia 1	202.3 mg/l (Exposure time: 48 h - Species: Daphnia magna)
EC50 72h algae (1)	508.2 mg/l (Species: Desmodesmus subspicatus)

### Aldehyde C-14 (104-67-6)

LC50 fish 1	569 mg/l 96 h
EC50 Daphnia 1	5.85 mg/l 48 h
EC50 other aquatic organisms 1	5.94 mg/l 72 h

# Pineapple #

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### Allyl cyclohexylpropionate (2705-87-5)

LC50 fish 1	0.13 mg/l (Exposure time: 96 h - Species: Pimephales promelas [flow-through])
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### Hexamethylindanopyran (1222-05-5)

LC50 fish 1	0.452 mg/l Wolf, 1996d-27682
LC50 other aquatic organisms 1	> 0.14 mg/l REACH DOSSIER Pimephales promelas
EC50 Daphnia 2	260 µg/l REACH Dossier
EC50 other aquatic organisms 1	0.131 mg/l REACH Dossier

### Benzyl benzoate (120-51-4)

LC50 fish 1	2.32 mg/l (Exposure time: 96 h - Species: Danio rerio [semi-static])
NOEC (chronic)	0.168 mg/l

### Linalool (78-70-6)

LC50 fish 1	27.8 mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss [static])
EC50 Daphnia 1	20 mg/l (Exposure time: 48 h - Species: Daphnia magna)
EC50 96h algae (1)	88.3 mg/l (Species: Desmodesmus subspicatus)

## 12.2. Persistence and degradability

### Pineapple #

Persistence and degradability	Not established.
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### Benzyl benzoate (120-51-4)

Persistence and degradability	May cause long-term adverse effects in the environment.
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## 12.3. Bioaccumulative potential

### Pineapple #

Bioaccumulative potential	Not established.
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### Diethyl malonate (105-53-3)

Partition coefficient n-octanol/water (Log Pow)	0.96
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### Benzyl benzoate (120-51-4)

Partition coefficient n-octanol/water (Log Pow)	4
Bioaccumulative potential	Not established.

### Linalool (78-70-6)

Partition coefficient n-octanol/water (Log Pow)	2.84 – 3.1 (at 25 °C)
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## 12.4. Mobility in soil

No additional information available

## 12.5. Results of PBT and vPvB assessment

No additional information available

# Pineapple #

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### 12.6. Other adverse effects

Additional information : Avoid release to the environment.

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

Product/Packaging disposal recommendations : Dispose of contents/container in accordance with local/national laws and regulations.  
Dispose in a safe manner in accordance with local/national regulations.

Ecology - waste materials : Avoid release to the environment.

## SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

### 14.1. UN number

UN-No. (ADR) : UN 3082  
UN-No. (IMDG) : UN 3082  
UN-No. (IATA) : UN 3082  
UN-No. (ADN) : UN 3082  
UN-No. (RID) : UN 3082

### 14.2. UN proper shipping name

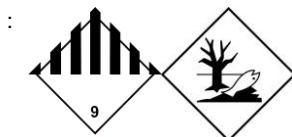
Proper Shipping Name (ADR) : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.  
Proper Shipping Name (IMDG) : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.  
Proper Shipping Name (IATA) : Environmentally hazardous substance, liquid, n.o.s.  
Proper Shipping Name (ADN) : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.  
Proper Shipping Name (RID) : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.

Transport document description (ADR) : UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Allyl cyclohexylpropionate), 9, III, (-)  
Transport document description (IMDG) : UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Allyl cyclohexylpropionate), 9, III, MARINE POLLUTANT  
Transport document description (IATA) : UN 3082 Environmentally hazardous substance, liquid, n.o.s. (Allyl cyclohexylpropionate), 9, III  
Transport document description (ADN) : UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S., 9, III  
Transport document description (RID) : UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S., 9, III

### 14.3. Transport hazard class(es)

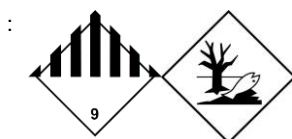
#### ADR

Transport hazard class(es) (ADR) : 9  
Danger labels (ADR) : 9



#### IMDG

Transport hazard class(es) (IMDG) : 9  
Danger labels (IMDG) : 9



#### IATA

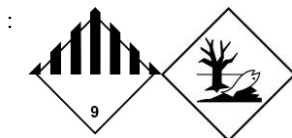
Transport hazard class(es) (IATA) : 9

# Pineapple #

## Safety Data Sheet

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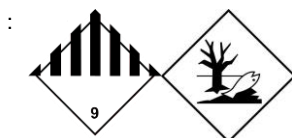
Danger labels (IATA) : 9



### ADN

Transport hazard class(es) (ADN) : 9

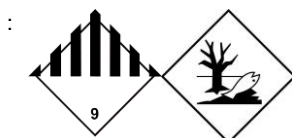
Danger labels (ADN) : 9



### RID

Transport hazard class(es) (RID) : 9

Danger labels (RID) : 9



## 14.4. Packing group

Packing group (ADR) : III

Packing group (IMDG) : III

Packing group (IATA) : III

Packing group (ADN) : III

Packing group (RID) : III

## 14.5. Environmental hazards

Dangerous for the environment : Yes

Marine pollutant : Yes

Other information : No supplementary information available

## 14.6. Special precautions for user

### Overland transport

Classification code (ADR) : M6

Special provisions (ADR) : 274, 335, 375, 601

Limited quantities (ADR) : 5I

Excepted quantities (ADR) : E1

Packing instructions (ADR) : P001, IBC03, LP01, R001

Special packing provisions (ADR) : PP1

Mixed packing provisions (ADR) : MP19

Portable tank and bulk container instructions (ADR) : T4

Portable tank and bulk container special provisions (ADR) : TP1, TP29

Tank code (ADR) : LGBV

Vehicle for tank carriage : AT

Transport category (ADR) : 3

Special provisions for carriage - Packages (ADR) : V12

Special provisions for carriage - Loading, unloading and handling (ADR) : CV13

Hazard identification number (Kemler No.) : 90

Orange plates :



Tunnel restriction code (ADR) : -

# Pineapple #

## Safety Data Sheet

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EAC code	: •3Z
<b>Transport by sea</b>	
Special provisions (IMDG)	: 274, 335, 969
Limited quantities (IMDG)	: 5 L
Excepted quantities (IMDG)	: E1
Packing instructions (IMDG)	: LP01, P001
Special packing provisions (IMDG)	: PP1
IBC packing instructions (IMDG)	: IBC03
Tank instructions (IMDG)	: T4
Tank special provisions (IMDG)	: TP2, TP29
EmS-No. (Fire)	: F-A
EmS-No. (Spillage)	: S-F
Stowage category (IMDG)	: A

### Air transport

PCA Excepted quantities (IATA)	: E1
PCA Limited quantities (IATA)	: Y964
PCA limited quantity max net quantity (IATA)	: 30kgG
PCA packing instructions (IATA)	: 964
PCA max net quantity (IATA)	: 450L
CAO packing instructions (IATA)	: 964
CAO max net quantity (IATA)	: 450L
Special provisions (IATA)	: A97, A158, A197
ERG code (IATA)	: 9L

### Inland waterway transport

Classification code (ADN)	: M6
Special provisions (ADN)	: 274, 335, 375, 601
Limited quantities (ADN)	: 5 L
Excepted quantities (ADN)	: E1
Equipment required (ADN)	: PP
Number of blue cones/lights (ADN)	: 0

### Rail transport

Classification code (RID)	: M6
Special provisions (RID)	: 274, 335, 375, 601
Limited quantities (RID)	: 5L
Excepted quantities (RID)	: E1
Packing instructions (RID)	: P001, IBC03, LP01, R001
Special packing provisions (RID)	: PP1
Mixed packing provisions (RID)	: MP19
Portable tank and bulk container instructions (RID)	: T4
Portable tank and bulk container special provisions (RID)	: TP1, TP29
Tank codes for RID tanks (RID)	: LGBV
Transport category (RID)	: 3
Special provisions for carriage – Packages (RID)	: W12
Special provisions for carriage - Loading, unloading and handling (RID)	: CW13, CW31
Colis express (express parcels) (RID)	: CE8
Hazard identification number (RID)	: 90

## 14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

Not applicable

## SECTION 15: Regulatory information

### 15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

#### 15.1.1. EU-Regulations

The following restrictions are applicable according to Annex XVII of the REACH Regulation (EC) No 1907/2006:

Reference code	Applicable on
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# Pineapple #

## Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

3(a)	Nutmeg Oil ; Isoamyl acetate ; Orange oil
3(b)	Pineapple # ; Nutmeg Oil ; Allyl caproate ; Triplal (Vertocitral) ; Hexyl cinnamic aldehyde ; Cyclamal ; Allyl heptanoate ; Diethyl malonate ; Allyl cyclohexylpropionate ; Linalool ; Benzyl benzoate ; Orange oil
3(c)	Pineapple # ; Nutmeg Oil ; Allyl caproate ; Triplal (Vertocitral) ; Hexyl cinnamic aldehyde ; Cyclamal ; Aldehyde C-14 ; Ethylene brassylate ; Allyl heptanoate ; Verdyl acetate ; beta-Ionone ; Verdox ; Allyl cyclohexylpropionate ; Benzyl benzoate ; Hexamethylindanopyran ; Orange oil
40.	Nutmeg Oil ; Isoamyl acetate ; Orange oil

Contains no substance on the REACH candidate list

Contains no REACH Annex XIV substances

Contains no substance subject to Regulation (EU) No 649/2012 of the European Parliament and of the Council of 4 July 2012 concerning the export and import of hazardous chemicals.

Contains no substance subject to Regulation (EU) No 2019/1021 of the European Parliament and of the Council of 20 June 2019 on persistent organic pollutants

### 15.1.2. National regulations

#### Germany

Water hazard class (WGK) : WGK 3, Highly hazardous to water (Classification according to AwSV, Annex 1)

Hazardous Incident Ordinance (12. BImSchV) : Is not subject of the Hazardous Incident Ordinance (12. BImSchV)

#### Netherlands

SZW-lijst van kankerverwekkende stoffen : Triplal (Vertocitral), Orange oil are listed

SZW-lijst van mutagene stoffen : Triplal (Vertocitral), Orange oil are listed

NIET-limitatieve lijst van voor de voortplanting : None of the components are listed

giftige stoffen – Borstvoeding

NIET-limitatieve lijst van voor de voortplanting : None of the components are listed

giftige stoffen – Vruchtbaarheid

NIET-limitatieve lijst van voor de voortplanting : None of the components are listed

giftige stoffen – Ontwikkeling

#### Denmark

Classification remarks : Emergency management guidelines for the storage of flammable liquids must be followed

Danish National Regulations : Young people below the age of 18 years are not allowed to use the product  
Pregnant/breastfeeding women working with the product must not be in direct contact with the product

The requirements from the Danish Working Environment Authorities regarding work with carcinogens must be followed during use and disposal

### 15.2. Chemical safety assessment

No chemical safety assessment has been carried out

## SECTION 16: Other information

Other information : None.

### Classification according to Regulation (EC) No. 1272/2008 [CLP]:

Acute Tox. 4 (Oral)	H302
Acute Tox. 4 (Inhalation:dust,mist)	H332
Skin Sens. 1	H317
Carc. 1B	H350
Aquatic Chronic 2	H411

### Full text of H- and EUH-statements:

Acute Tox. 3 (Dermal)	Acute toxicity (dermal), Category 3
Acute Tox. 3 (Inhalation)	Acute toxicity (inhal.), Category 3
Acute Tox. 3 (Oral)	Acute toxicity (oral), Category 3

# Pineapple #

## Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

Acute Tox. 4 (Dermal)	Acute toxicity (dermal), Category 4
Acute Tox. 4 (Inhalation)	Acute toxicity (inhal.), Category 4
Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
Aquatic Acute 1	Hazardous to the aquatic environment — Acute Hazard, Category 1
Aquatic Chronic 1	Hazardous to the aquatic environment — Chronic Hazard, Category 1
Aquatic Chronic 2	Hazardous to the aquatic environment — Chronic Hazard, Category 2
Aquatic Chronic 3	Hazardous to the aquatic environment — Chronic Hazard, Category 3
Asp. Tox. 1	Aspiration hazard, Category 1
Carc. 1B	Carcinogenicity, Category 1B
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
Flam. Liq. 3	Flammable liquids, Category 3
Muta. 2	Germ cell mutagenicity, Category 2
Skin Irrit. 2	Skin corrosion/irritation, Category 2
Skin Sens. 1	Skin sensitisation, Category 1
Skin Sens. 1B	Skin sensitisation, category 1B
H226	Flammable liquid and vapour.
H301	Toxic if swallowed.
H302	Harmful if swallowed.
H304	May be fatal if swallowed and enters airways.
H311	Toxic in contact with skin.
H312	Harmful in contact with skin.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H331	Toxic if inhaled.
H332	Harmful if inhaled.
H341	Suspected of causing genetic defects.
H350	May cause cancer.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.

### Safety Data Sheet (SDS), New Zealand

The data contained in this Safety Data Sheet is accurate to the best knowledge of Zen Aroma applies to the product as supplied by Zen Aroma and does not relate to use in combination with any other material or in any process. Data and information is furnished without warranty expressed or implied, nor does Zen Aroma assume responsibility for use or reliance upon this data.

This SDS is current to the date listed above. However, the GHS classifications may change due to hazard communication updates by the overseeing governing body. For the most current SDS information please contact support@zenaroma.co.nz