



# Grapefruit Juice

## Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878  
Issue date: 6/26/2018 Revision date: 8/19/2024 Supersedes version of: 5/19/2023 Version: 2.0

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

#### 1.1. Product identifier

Product form	: Mixture
Trade name	: Grapefruit Juice
UFI	: 69UA-S34U-H004-NNK2
Product code	: parf_grapefruit_juice
Type of product	: Perfumes, fragrances
Product group	: Trade product

#### 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	: For professional use only Industrial
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

BAKED GAMES SRL  
ROMANIA, BUCHAREST, SECTOR 4  
+40771326626  
contact@kitlumanari.ro | www.kitlumanari.ro

#### 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
------------------	--

### SECTION 2: Hazards identification

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

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

Skin corrosion/irritation, Category 2	H315
Serious eye damage/eye irritation, Category 2	H319
Skin sensitisation, Category 1	H317
Aspiration hazard, Category 1	H304
Hazardous to the aquatic environment – Chronic Hazard, Category 3	H412

Full text of H- and EUH-statements: see section 16

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

Toxic to aquatic life with long lasting effects. Causes skin irritation. Causes serious eye irritation. May be fatal if swallowed and enters airways.  
Harmful to aquatic life with long lasting effects. May cause an allergic skin reaction.

#### 2.2. Label elements

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

Hazard pictograms (CLP)



# Grapefruit Juice

## Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

	GHS07	GHS08
Signal word (CLP)	: Danger	
Contains	: Grapefruit oil terpenes; Grapefruit oil; (R)-p-mentha-1,8-diene; d-limonene; Geraniol; Nerol; Citronellol Pure; Lime Oxide	
Hazard statements (CLP)	: H304 - May be fatal if swallowed and enters airways. H315 - Causes skin irritation. H317 - May cause an allergic skin reaction. H319 - Causes serious eye irritation. H412 - Harmful to aquatic life with long lasting effects.	
Precautionary statements (CLP)	: P261 - Avoid breathing dust/fume/gas/mist/vapours/spray. P264 - Wash hands, forearms and face thoroughly after handling. P272 - Contaminated work clothing should not be allowed out of the workplace. P273 - Avoid release to the environment. P280 - Wear protective gloves/protective clothing/eye protection/face protection/hearing protection. P301+P310 - IF SWALLOWED: Immediately call a POISON CENTER or doctor.	
Extra phrases	: For professional users only.	

### 2.3. Other hazards

Contains no PBT and/or vPvB substances ≥ 0.1% assessed in accordance with REACH Annex XIII

The mixture does not contain substance(s) included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or substance(s) are not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at a concentration equal to or greater than 0,1 %

## 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]
Bis(2-ethylhexyl) adipate substance with national workplace exposure limit(s) (PL)	CAS-No.: 103-23-1 EC-No.: 203-090-1 REACH-no: 01-2119439699-19	36.6 – 73.25	Not classified
Grapefruit oil terpenes	CAS-No.: 68917-32-8 EC-No.: 289-904-6	4.9 – 9.8	Flam. Liq. 3, H226 Skin Irrit. 2, H315 Skin Sens. 1, H317 Asp. Tox. 1, H304 Aquatic Chronic 2, H411
Grapefruit oil	CAS-No.: 8016-20-4 EC-No.: 600-007-4	0.28 – 2.1	Flam. Liq. 3, H226 Skin Irrit. 2, H315 Skin Sens. 1, H317 Asp. Tox. 1, H304 Aquatic Chronic 2, H411
Geraniol	CAS-No.: 106-24-1 EC-No.: 203-377-1 EC Index-No.: 603-241-00-5 REACH-no: 01-2119552430-49	0.7 – 1.96	Skin Irrit. 2, H315 Eye Dam. 1, H318 Skin Sens. 1, H317

# Grapefruit Juice

## Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
(R)-p-mentha-1,8-diene; d-limonene substance with national workplace exposure limit(s) (DE, ES, FI, SI, NO, CH)	CAS-No.: 5989-27-5 EC-No.: 205-341-0 EC Index-No.: 601-096-00-2 REACH-no: 01-2119493353-35	0.35 – 1.4	Flam. Liq. 3, H226 Skin Irrit. 2, H315 Skin Sens. 1B, H317 Asp. Tox. 1, H304 Aquatic Acute 1, H400 Aquatic Chronic 3, H412
Nerol	CAS-No.: 106-25-2 EC-No.: 203-378-7	0.42 – 1.4	Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1, H317
Citronellol Pure	CAS-No.: 106-22-9 EC-No.: 203-375-0 REACH-no: 01-2119453995-23	0.542 – 1.19	Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1B, H317
Methyl pamplemousse	CAS-No.: 67674-46-8 EC-No.: 266-885-2	0.5 – 1.05	Aquatic Chronic 3, H412 Skin Irrit. 2, H315
1,3,4,6,7,8-hexahydro-4,6,6,7,8,8-hexamethylindeno[5,6-c]pyran; galaxolide; (HHCB)	CAS-No.: 1222-05-5 EC-No.: 214-946-9 EC Index-No.: 603-212-00-7 REACH-no: 01-2119488227-29	0.5 – 1.05	Aquatic Acute 1, H400 Aquatic Chronic 1, H410
Allyl caproate	CAS-No.: 123-68-2 EC-No.: 204-642-4 REACH-no: 01-2119983573-26	0.1 – 0.15	Acute Tox. 3 (Oral), H301 Acute Tox. 3 (Dermal), H311 Acute Tox. 3 (Inhalation), H331 Aquatic Acute 1, H400 Aquatic Chronic 3, H412
Lime Oxide	CAS-No.: 73018-51-6 EC-No.: 277-225-8	0.1 – 0.15	Flam. Liq. 3, H226 Skin Sens. 1, H317 Asp. Tox. 1, H304 Aquatic Chronic 2, H411
citral substance with national workplace exposure limit(s) (BE, ES, IE, PL, PT)	CAS-No.: 5392-40-5 EC-No.: 226-394-6 EC Index-No.: 605-019-00-3 REACH-no: 01-2119462829-23	0.014 – 0.084	Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1, H317
.alpha.-Pinene substance with national workplace exposure limit(s) (BE, EE, ES, LT, PT, SE, NO)	CAS-No.: 80-56-8 EC-No.: 201-291-9	< 0.028	Flam. Liq. 3, H226 Acute Tox. 4 (Oral), H302 Skin Irrit. 2, H315 Skin Sens. 1B, H317 Asp. Tox. 1, H304 Aquatic Acute 1, H400 Aquatic Chronic 1, H410

Full text of H- and EUH-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). Call a physician immediately.
- First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing. Allow affected person to breathe fresh air. Allow the victim to rest.

# Grapefruit Juice

## Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

First-aid measures after skin contact	: If skin irritation or rash occurs: Get medical advice/attention. Specific treatment (see Get medical advice/attention. on this label). If skin irritation occurs: Get medical advice/attention. Wash with plenty of water/.... Wash contaminated clothing before reuse. Get medical advice/attention. Remove affected clothing and wash all exposed skin area with mild soap and water, followed by warm water rinse. Wash skin with plenty of water. Take off contaminated clothing. If skin irritation or rash 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. 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	: Rinse mouth. Do NOT induce vomiting. Obtain emergency medical attention. Do not induce vomiting. Call a physician immediately.

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

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

Treat symptomatically.

## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

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

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

Hazardous decomposition products in case of fire	: Toxic fumes may be released.
--	--------------------------------

### 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. 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. Evacuate unnecessary personnel. Avoid contact with skin and eyes. Avoid breathing dust/fume/gas/mist/vapours/spray.
----------------------	--

#### 6.1.2. For emergency responders

Protective equipment	: Do not attempt to take action without suitable protective equipment. Equip cleanup crew with proper protection. For further information refer to section 8: "Exposure controls/personal protection".
Emergency procedures	: Ventilate area.

### 6.2. Environmental precautions

Avoid release to the environment. 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

For containment	: Collect spillage.
Methods for cleaning up	: Take up liquid spill into absorbent material. Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Collect spillage. Store away from other materials.

# Grapefruit Juice

## Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

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

### 6.4. Reference to other sections

See Section 8. Exposure controls and personal protection. 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. 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. No open flames. No smoking. Avoid contact with skin and eyes. Wear personal protective equipment. Avoid breathing dust/fume/gas/mist/vapours/spray.

Hygiene measures : Wash hands thoroughly after handling. 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

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. Keep in fireproof place. Store locked up. Store in a well-ventilated place. Keep cool.

Incompatible products : Strong bases. Strong acids.

Incompatible materials : Sources of ignition. Direct sunlight. Heat sources.

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

#### 8.1.1 National occupational exposure and biological limit values

Bis(2-ethylhexyl) adipate (103-23-1)	
Poland - Occupational Exposure Limits	
NDS (OEL TWA)	400 mg/m <sup>3</sup>
(R)-p-mentha-1,8-diene; d-limonene (5989-27-5)	
Finland - Occupational Exposure Limits	
HTP (OEL TWA)	140 mg/m <sup>3</sup>
	25 ppm
HTP (OEL STEL)	280 mg/m <sup>3</sup>
	50 ppm
Germany - Occupational Exposure Limits (TRGS 900)	
AGW (OEL TWA)	28 mg/m <sup>3</sup> (the risk of damage to the embryo or fetus can be excluded when AGW and BGW values are observed)
	5 ppm (the risk of damage to the embryo or fetus can be excluded when AGW and BGW values are observed)

# Grapefruit Juice

## Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

(R)-p-mentha-1,8-diene; d-limonene (5989-27-5)	
Chemical category	Skin notation, Skin sensitization
Slovenia - Occupational Exposure Limits	
OEL TWA	28 mg/m <sup>3</sup>
	5 ppm
OEL STEL	112 mg/m <sup>3</sup>
	20 ppm
OEL chemical category	Potential for cutaneous absorption
Spain - Occupational Exposure Limits	
VLA-ED (OEL TWA)	168 mg/m <sup>3</sup>
	30 ppm
OEL chemical category	Sensitizer, skin - potential for cutaneous absorption
Norway - Occupational Exposure Limits	
Grenseverdi (OEL TWA)	140 mg/m <sup>3</sup>
	25 ppm
Kortidsverdi (OEL STEL)	175 mg/m <sup>3</sup> (value calculated)
	37.5 ppm (value calculated)
OEL chemical category	Allergenic substance
Switzerland - Occupational Exposure Limits	
MAK (OEL TWA)	40 mg/m <sup>3</sup>
	7 ppm
KZGW (OEL STEL)	80 mg/m <sup>3</sup>
	14 ppm
OEL chemical category	Sensitizer
.alpha.-Pinene (80-56-8)	
Belgium - Occupational Exposure Limits	
OEL TWA	20 ppm
Estonia - Occupational Exposure Limits	
OEL TWA	150 mg/m <sup>3</sup> (Turpentine produced from Nordic conifers has an irritating effect on the skin, monoterpenes, with the exception of 3-Carene, have a lesser effect)
	25 ppm (Turpentine produced from Nordic conifers has an irritating effect on the skin, monoterpenes, with the exception of 3-Carene, have a lesser effect)
OEL STEL	300 mg/m <sup>3</sup> (Turpentine produced from Nordic conifers has an irritating effect on the skin, monoterpenes, with the exception of 3-Carene, have a lesser effect)
	50 ppm (Turpentine produced from Nordic conifers has an irritating effect on the skin, monoterpenes, with the exception of 3-Carene, have a lesser effect)
Lithuania - Occupational Exposure Limits	
IPRV (OEL TWA)	150 mg/m <sup>3</sup>
	25 ppm
TPRV (OEL STEL)	300 mg/m <sup>3</sup>
	50 ppm

# Grapefruit Juice

## Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

<b>.alpha.-Pinene (80-56-8)</b>	
<b>Portugal - Occupational Exposure Limits</b>	
OEL TWA	20 ppm (Turpentine and selected Monoterpenes)
OEL chemical category	Sensitizer dermal, A4 - Not Classifiable as a Human Carcinogen
<b>Spain - Occupational Exposure Limits</b>	
VLA-ED (OEL TWA)	113 mg/m <sup>3</sup>
	20 ppm
OEL chemical category	Sensitizer
<b>Sweden - Occupational Exposure Limits</b>	
NGV (OEL TWA)	150 mg/m <sup>3</sup>
	25 ppm
KGV (OEL STEL)	300 mg/m <sup>3</sup>
	50 ppm
OEL chemical category	Sensitizer
<b>Norway - Occupational Exposure Limits</b>	
Grenseverdi (OEL TWA)	140 mg/m <sup>3</sup>
	25 ppm
Korttidsverdi (OEL STEL)	175 mg/m <sup>3</sup> (value calculated)
	37.5 ppm (value calculated)
OEL chemical category	Skin notation
<b>USA - ACGIH - Occupational Exposure Limits</b>	
ACGIH OEL TWA	20 ppm (Turpentine and selected Monoterpenes)
ACGIH chemical category	Not Classifiable as a Human Carcinogen, dermal sensitizer
<b>citral (5392-40-5)</b>	
<b>Belgium - Occupational Exposure Limits</b>	
OEL TWA	32 mg/m <sup>3</sup> (vapor and aerosol)
	5 ppm (vapor and aerosol)
OEL chemical category	Skin
<b>Ireland - Occupational Exposure Limits</b>	
OEL TWA	5 ppm
OEL STEL	15 ppm (calculated)
<b>Poland - Occupational Exposure Limits</b>	
NDS (OEL TWA)	27 mg/m <sup>3</sup>
NDSch (OEL STEL)	54 mg/m <sup>3</sup>
<b>Portugal - Occupational Exposure Limits</b>	
OEL TWA	5 ppm (inhalable fraction; vapor)
OEL chemical category	Sensitizer dermal, A4 - Not Classifiable as a Human Carcinogen, skin - potential for cutaneous exposure
<b>Spain - Occupational Exposure Limits</b>	
VLA-ED (OEL TWA)	5 ppm (inhalable fraction and vapor)

# Grapefruit Juice

## Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

citral (5392-40-5)	
OEL chemical category	Sensitizer, skin - potential for cutaneous absorption
USA - ACGIH - Occupational Exposure Limits	
ACGIH OEL TWA	5 ppm (inhalable fraction and vapor)
ACGIH chemical category	Not Classifiable as a Human Carcinogen, Skin - potential significant contribution to overall exposure by the cutaneous route, dermal sensitizer

### 8.1.2. Recommended monitoring procedures

No additional information available

### 8.1.3. Air contaminants formed

No additional information available

### 8.1.4. DNEL and PNEC

No additional information available

### 8.1.5. Control banding

No additional information available

## 8.2. Exposure controls

### 8.2.1. Appropriate engineering controls

#### Appropriate engineering controls:

Ensure good ventilation of the work station.

### 8.2.2. Personal protection equipment

#### Personal protective equipment:

Avoid all unnecessary exposure.

#### Personal protective equipment symbol(s):



#### 8.2.2.1. Eye and face protection

##### Eye protection:

Chemical goggles or safety glasses. Safety glasses

#### 8.2.2.2. Skin protection

##### Skin and body protection:

Wear suitable protective clothing

##### Hand protection:

Protective gloves. Wear protective gloves.

#### 8.2.2.3. Respiratory protection

##### Respiratory protection:

In case of insufficient ventilation, wear suitable respiratory equipment. Wear appropriate mask

#### 8.2.2.4. Thermal hazards

No additional information available

### 8.2.3. Environmental exposure controls

#### Environmental exposure controls:

Avoid release to the environment.

#### Other information:

Do not eat, drink or smoke during use.



# Grapefruit Juice

## Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

### SECTION 9: Physical and chemical properties

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

Physical state	: Liquid
Colour	: Conforms to standard.
Odour	: characteristic.
Odour threshold	: Not available
Melting point	: Not applicable
Freezing point	: Not available
Boiling point	: Not available
Flammability	: Not applicable, Combustible liquid
Lower explosion limit	: Not available
Upper explosion limit	: Not available
Flash point	: 70 °C
Auto-ignition temperature	: Not available
Decomposition temperature	: Not available
pH	: Not available
Viscosity, kinematic	: Not available
Solubility	: Not available
Partition coefficient n-octanol/water (Log Kow)	: Not available
Vapour pressure	: 0.003349526 mm Hg (calculated value)
Vapour pressure at 50°C	: Not available
Density	: Not available
Relative density	: ≈ 0.88
Relative vapour density at 20°C	: Not available
Particle characteristics	: Not applicable

#### 9.2. Other information

##### 9.2.1. Information with regard to physical hazard classes

No additional information available

##### 9.2.2. Other safety characteristics

VOC content : 18.296 % (calculated value)(CARB VOC) (%w/w)

### SECTION 10: Stability and reactivity

#### 10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

#### 10.2. Chemical stability

Stable under normal conditions. Combustible liquid. May form flammable/explosive vapour-air mixture.

#### 10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use. Not established.

#### 10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7). Direct sunlight. Extremely high or low temperatures. Open flame. Overheating. Heat. Sparks.

#### 10.5. Incompatible materials

Strong acids. Strong bases.

#### 10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced. fume. Carbon monoxide. Carbon dioxide. May release flammable gases.

# Grapefruit Juice

## Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

### SECTION 11: Toxicological information

#### 11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

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

<b>Bis(2-ethylhexyl) adipate (103-23-1)</b>	
LD50 oral rat	5600 mg/kg (Source: NLM_CIP)
LD50 dermal rabbit	8410 mg/kg (Source: NLM_CIP)
LC50 Inhalation - Rat	> 5.7 mg/l/4h
<b>Grapefruit oil (8016-20-4)</b>	
LD50 oral rat	> 5 g/kg (Source: ECHA)
<b>(R)-p-mentha-1,8-diene; d-limonene (5989-27-5)</b>	
LD50 oral rat	4400 mg/kg (Source: CHEMVIEW)
LD50 dermal rabbit	> 5 g/kg (Source: CHEMVIEW)
<b>.alpha.-Pinene (80-56-8)</b>	
LD50 oral rat	3700 mg/kg (Source: NLM_CIP)
LD50 dermal rat	> 5000 mg/kg (Source: CHEMVIEW)
<b>Geraniol (106-24-1)</b>	
LD50 oral rat	3600 mg/kg (Source: NLM_CIP)
LD50 oral	3600 mg/kg bodyweight
LD50 dermal rabbit	> 5 g/kg (Source: NLM_CIP)
<b>Nerol (106-25-2)</b>	
LD50 oral rat	4500 mg/kg (Source: NLM_CIP)
LD50 oral	4500 mg/kg bodyweight
LD50 dermal rabbit	> 5 g/kg (Source: NLM_CIP)
<b>Citronellol Pure (106-22-9)</b>	
LD50 oral rat	3450 mg/kg (Source: NLM_CIP)
LD50 oral	3450 mg/kg bodyweight
LD50 dermal rabbit	2650 mg/kg (Source: EPA_HP)
LD50 dermal	2650 mg/kg bodyweight
<b>citral (5392-40-5)</b>	
LD50 oral rat	4960 mg/kg (Source: NLM_CIP)
LD50 dermal rabbit	2250 mg/kg (Source: NLM_CIP)
<b>1,3,4,6,7,8-hexahydro-4,6,6,7,8,8-hexamethylindeno[5,6-c]pyran; galaxolide; (HHCb) (1222-05-5)</b>	
LD50 oral rat	> 3250 mg/kg (Source: CHEMVIEW)
LD50 dermal rabbit	> 3250 mg/kg (Source: CHEMVIEW)
LC50 Inhalation - Rat	> 5.04 mg/l/4h
<b>Allyl caproate (123-68-2)</b>	
LD50 oral	218 mg/kg

# Grapefruit Juice

## Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

Allyl caproate (123-68-2)	
LD50 dermal rabbit	820 mg/kg (Source: ECHA_API)
LD50 dermal	300 mg/kg
Skin corrosion/irritation	: Causes skin irritation.
Serious eye damage/irritation	: Causes serious eye irritation.
Respiratory or skin sensitisation	: May cause an allergic skin reaction.
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Bis(2-ethylhexyl) adipate (103-23-1)	
IARC group	3 - Not classifiable
(R)-p-mentha-1,8-diene; d-limonene (5989-27-5)	
IARC group	3 - Not classifiable
Reproductive toxicity	: Not classified
STOT-single exposure	: Not classified
STOT-repeated exposure	: Not classified
Aspiration hazard	: May be fatal if swallowed and enters airways.
(R)-p-mentha-1,8-diene; d-limonene (5989-27-5)	
Hydrocarbon	Yes
.alpha.-Pinene (80-56-8)	
Hydrocarbon	Yes

### 11.2. Information on other hazards

#### 11.2.1. Endocrine disrupting properties

No additional information available

#### 11.2.2. Other information

Potential adverse human health effects and symptoms : Based on available data, the classification criteria are not met

## SECTION 12: Ecological information

### 12.1. Toxicity

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

Bis(2-ethylhexyl) adipate (103-23-1)	
LC50 - Fish [1]	0.48 – 0.85 mg/l (Exposure time: 96 h - Species: Lepomis macrochirus [static] Source: EPA)
LC50 - Fish [2]	0.48 – 0.85 mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss [static] Source: EPA)
EC50 - Crustacea [1]	> 1.6 mg/l (Exposure time: 48 h - Species: Daphnia magna)
EC50 72h - Algae [1]	> 500 mg/l (Species: Desmodesmus subspicatus)
(R)-p-mentha-1,8-diene; d-limonene (5989-27-5)	
LC50 - Fish [1]	0.619 – 0.796 mg/l (Exposure time: 96 h - Species: Pimephales promelas [flow-through] Source: EPA)

# Grapefruit Juice

## Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

<b>(R)-p-mentha-1,8-diene; d-limonene (5989-27-5)</b>	
LC50 - Fish [2]	35 mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss Source: EPA)
<b>.alpha.-Pinene (80-56-8)</b>	
LC50 - Fish [1]	0.28 mg/l (Exposure time: 96 h - Species: Pimephales promelas [static] Source: IUCLID)
EC50 - Crustacea [1]	41 mg/l (Exposure time: 48 h - Species: Daphnia magna)
<b>Geraniol (106-24-1)</b>	
LC50 - Fish [1]	22 mg/l (Exposure time: 96 h - Species: Danio rerio [static] Source: ECHA)
<b>Nerol (106-25-2)</b>	
LC50 - Fish [1]	20.3 mg/l (Exposure time: 96 h - Species: Danio rerio [semi-static] Source: ECHA)
<b>citral (5392-40-5)</b>	
EC50 - Crustacea [1]	7 mg/l (Exposure time: 48 h - Species: Daphnia magna)
EC50 72h - Algae [1]	16 mg/l (Species: Desmodesmus subspicatus)
EC50 96h - Algae [1]	19 mg/l (Species: Desmodesmus subspicatus)
<b>1,3,4,6,7,8-hexahydro-4,6,6,7,8,8-hexamethylindeno[5,6-c]pyran; galaxolide; (HHCb) (1222-05-5)</b>	
LC50 - Fish [1]	0.452 mg/l Wolf, 1996d-27682
LC50 - Other aquatic organisms [1]	> 0.14 mg/l REACH DOSSIER Pimephales promelas
EC50 - Crustacea [2]	260 µg/l REACH Dossier
EC50 - Other aquatic organisms [1]	0.131 mg/l REACH Dossier
<b>Allyl caproate (123-68-2)</b>	
LC50 - Fish [1]	0.117 mg/l (Exposure time: 96 h - Species: Danio rerio [semi-static] Source: ECHA)
<b>12.2. Persistence and degradability</b>	
<b>Grapefruit Juice</b>	
Persistence and degradability	Not established.
<b>Bis(2-ethylhexyl) adipate (103-23-1)</b>	
Persistence and degradability	Rapidly degradable
<b>Grapefruit oil terpenes (68917-32-8)</b>	
Persistence and degradability	Rapidly degradable
<b>Grapefruit oil (8016-20-4)</b>	
Persistence and degradability	Rapidly degradable
<b>(R)-p-mentha-1,8-diene; d-limonene (5989-27-5)</b>	
Persistence and degradability	Rapidly degradable
<b>.alpha.-Pinene (80-56-8)</b>	
Persistence and degradability	Rapidly degradable
<b>Geraniol (106-24-1)</b>	
Persistence and degradability	Rapidly degradable
<b>Nerol (106-25-2)</b>	
Persistence and degradability	Rapidly degradable

# Grapefruit Juice

## Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

<b>Citronellol Pure (106-22-9)</b>	
Persistence and degradability	Rapidly degradable
<b>citral (5392-40-5)</b>	
Persistence and degradability	Rapidly degradable
<b>Methyl pamplemousse (67674-46-8)</b>	
Persistence and degradability	Rapidly degradable
<b>1,3,4,6,7,8-hexahydro-4,6,6,7,8,8-hexamethylindeno[5,6-c]pyran; galaxolide; (HHCb) (1222-05-5)</b>	
Persistence and degradability	Rapidly degradable
<b>Allyl caproate (123-68-2)</b>	
Persistence and degradability	Rapidly degradable
<b>Lime Oxide (73018-51-6)</b>	
Persistence and degradability	Rapidly degradable
<b>12.3. Bioaccumulative potential</b>	
<b>Grapefruit Juice</b>	
Bioaccumulative potential	Not established.
<b>Bis(2-ethylhexyl) adipate (103-23-1)</b>	
BCF - Fish [1]	(27 dimensionless)
Partition coefficient n-octanol/water (Log Pow)	8.94 (at 25 °C)
<b>(R)-p-mentha-1,8-diene; d-limonene (5989-27-5)</b>	
Partition coefficient n-octanol/water (Log Pow)	4.38 (at 37 °C (at pH 7.2)
<b>.alpha.-Pinene (80-56-8)</b>	
Partition coefficient n-octanol/water (Log Pow)	4.1
<b>Geraniol (106-24-1)</b>	
Partition coefficient n-octanol/water (Log Pow)	2.6 (at 25 °C)
<b>Nerol (106-25-2)</b>	
Partition coefficient n-octanol/water (Log Pow)	2.76 (at 30 °C (at pH 6.5)
<b>Citronellol Pure (106-22-9)</b>	
Partition coefficient n-octanol/water (Log Pow)	3.41 (at 25 °C)
<b>citral (5392-40-5)</b>	
Partition coefficient n-octanol/water (Log Pow)	2.76 (at 25 °C)
<b>Methyl pamplemousse (67674-46-8)</b>	
Partition coefficient n-octanol/water (Log Pow)	3.8 (at 35 °C (at pH 7)
<b>1,3,4,6,7,8-hexahydro-4,6,6,7,8,8-hexamethylindeno[5,6-c]pyran; galaxolide; (HHCb) (1222-05-5)</b>	
BCF - Fish [1]	(1618 dimensionless (whole body w.w.)
Partition coefficient n-octanol/water (Log Pow)	5.3 (at 25 °C (at pH 7)

# Grapefruit Juice

## Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

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

Partition coefficient n-octanol/water (Log Pow)	3.191 (at 20 °C (at pH 5)
---	---------------------------

### Lime Oxide (73018-51-6)

Partition coefficient n-octanol/water (Log Pow)	3.3 – 4.9 (at 35 °C (at pH 7)
---	-------------------------------

### 12.4. Mobility in soil

No additional information available

### 12.5. Results of PBT and vPvB assessment

No additional information available

### 12.6. Endocrine disrupting properties

No additional information available

### 12.7. Other adverse effects

Additional information : Avoid release to the environment.

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

Waste treatment methods	: Dispose of contents/container in accordance with licensed collector's sorting instructions.
Product/Packaging disposal recommendations	: Dispose in a safe manner in accordance with local/national regulations. Dispose of contents/container in accordance with local/national laws and regulations.
Ecological information	: Avoid release to the environment.
HP Code	: HP4 - "Irritant – skin irritation and eye damage:" waste which on application can cause skin irritation or damage to the eye. HP14 - "Ecotoxic:" waste which presents or may present immediate or delayed risks for one or more sectors of the environment

## SECTION 14: Transport information

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

ADR	IMDG	IATA	ADN	RID
<b>14.1. UN number or ID number</b>				
Not regulated for transport				
<b>14.2. UN proper shipping name</b>				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
<b>14.3. Transport hazard class(es)</b>				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
<b>14.4. Packing group</b>				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
<b>14.5. Environmental hazards</b>				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
No supplementary information available				

### 14.6. Special precautions for user

#### Overland transport

Not regulated

# Grapefruit Juice

## Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

Transport by sea

Not regulated

Air transport

Not regulated

Inland waterway transport

Not regulated

Rail transport

Not regulated

14.7. Maritime transport in bulk according to IMO instruments

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

REACH Annex XVII (Restriction List)

EU restriction list (REACH Annex XVII)		
Reference code	Applicable on	Entry title or description
3(a)	Grapefruit oil terpenes ; (R)-p-mentha-1,8-diene; d-limonene ; Grapefruit oil ; .alpha.-Pinene ; Lime Oxide	Substances or mixtures fulfilling the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No 1272/2008: Hazard classes 2.1 to 2.4, 2.6 and 2.7, 2.8 types A and B, 2.9, 2.10, 2.12, 2.13 categories 1 and 2, 2.14 categories 1 and 2, 2.15 types A to F
3(b)	Grapefruit Juice ; Grapefruit oil terpenes ; Geraniol ; Nerol ; (R)-p-mentha-1,8-diene; d-limonene ; Grapefruit oil ; Citronellol Pure ; Methyl pamplemousse ; Lime Oxide ; Allyl caproate	Substances or mixtures fulfilling the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No 1272/2008: Hazard classes 3.1 to 3.6, 3.7 adverse effects on sexual function and fertility or on development, 3.8 effects other than narcotic effects, 3.9 and 3.10
3(c)	Grapefruit Juice ; Grapefruit oil terpenes ; (R)-p-mentha-1,8-diene; d-limonene ; Grapefruit oil ; 1,3,4,6,7,8-hexahydro-4,6,6,7,8,8-hexamethylindeno[5,6-c]pyran; galaxolide; (HHCB) ; Methyl pamplemousse ; Lime Oxide ; Allyl caproate	Substances or mixtures fulfilling the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No 1272/2008: Hazard class 4.1
40.	Grapefruit oil terpenes ; (R)-p-mentha-1,8-diene; d-limonene ; Grapefruit oil ; .alpha.-Pinene ; Lime Oxide	Substances classified as flammable gases category 1 or 2, flammable liquids categories 1, 2 or 3, flammable solids category 1 or 2, substances and mixtures which, in contact with water, emit flammable gases, category 1, 2 or 3, pyrophoric liquids category 1 or pyrophoric solids category 1, regardless of whether they appear in Part 3 of Annex VI to Regulation (EC) No 1272/2008 or not.

# Grapefruit Juice

## Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

### REACH Annex XIV (Authorisation List)

Contains no substance(s) listed on REACH Annex XIV (Authorisation List)

### REACH Candidate List (SVHC)

Contains no substance(s) listed on the REACH Candidate List

### PIC Regulation (Prior Informed Consent)

Contains no substance(s) listed on the PIC list (Regulation EU 649/2012 concerning the export and import of hazardous chemicals)

### POP Regulation (Persistent Organic Pollutants)

Contains no substance(s) listed on the POP list (Regulation EU 2019/1021 on persistent organic pollutants)

### Ozone Regulation (1005/2009)

Contains no substance(s) listed on the Ozone Depletion list (Regulation EU 1005/2009 on substances that deplete the ozone layer)

### Council Regulation (EC) for the control of dual-use items

Contains substance subject to the COUNCIL REGULATION (EC) for the control of dual-use items

### VOC Directive (2004/42)

VOC content : 18.296 % (calculated value)(CARB VOC) (%w/w)

### Explosives Precursors Regulation (2019/1148)

Contains no substance(s) listed on the Explosives Precursors list (Regulation EU 2019/1148 on the marketing and use of explosives precursors)

### Drug Precursors Regulation (273/2004)

Contains no substance(s) listed on the Drug Precursors list (Regulation EC 273/2004 on the manufacture and the placing on market of certain substances used in the illicit manufacture of narcotic drugs and psychotropic substances)

## 15.1.2. National regulations

### Germany

Employment restrictions : Observe restrictions according Act on the Protection of Working Mothers (MuSchG).  
Observe restrictions according Act on the Protection of Young People in Employment (JArbSchG).  
Water hazard class (WGK) : WGK 3, Highly hazardous to water (Classification according to AwSV, Annex 1).  
Hazardous Incident Ordinance (12. BImSchV) : Is not subject to the Hazardous Incident Ordinance (12. BImSchV)

### Netherlands

ABM category : A(2) - toxic for aquatic organisms, may have longterm hazardous effects in aquatic environment  
SZW-lijst van kankerverwekkende stoffen : Grapefruit oil terpenes, Methyl pamplemousse, Lime Oxide are listed  
SZW-lijst van mutagene stoffen : Grapefruit oil terpenes, Methyl pamplemousse, Lime Oxide are listed  
SZW-lijst van reprotoxische stoffen – Borstvoeding : None of the components are listed  
SZW-lijst van reprotoxische stoffen – Vruchtbaarheid : None of the components are listed  
SZW-lijst van reprotoxische stoffen – Ontwikkeling : None of the components are listed

### Denmark

Class for fire hazard : Class III-1  
Store unit : 50 liter  
Classification remarks : Flammable according to the Danish Ministry of Justice; 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

## 15.2. Chemical safety assessment

No chemical safety assessment has been carried out

## SECTION 16: Other information

Other information : None.



# Grapefruit Juice

## Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

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
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
Eye Dam. 1	Serious eye damage/eye irritation, Category 1
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
Flam. Liq. 3	Flammable liquids, Category 3
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.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H331	Toxic if inhaled.
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.
Skin Irrit. 2	Skin corrosion/irritation, Category 2
Skin Sens. 1	Skin sensitisation, Category 1
Skin Sens. 1B	Skin sensitisation, category 1B

The classification complies with : ATP 12

Safety Data Sheet (SDS), EU

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.