A&L ULTIMATE RAGNAROK-ZERO ORIGINAL SWEET EDITION

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006
Issue date: 5/27/2021 Revision date: 2/28/2025 Supersedes version of: 5/27/2021 Version: 2.0

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

1.1. Product identifier

Product form : Mixture

Product name : A&L ULTIMATE RAGNAROK-ZERO ORIGINAL SWEET EDITION

UFI : 3V59-6TGU-1308-X0QW

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

Relevant identified uses

Main use category : Consumer use

1.3. Details of the supplier of the safety data sheet

Comunica Concept SAS
405 rue Jacques de Lesseps
FR 42160 Andrézieux Bouthéon
France
T +33 4.77.40.09.71
contact@aromes-et-liquides.fr

1.4. Emergency telephone number

Country/Area	Organisation/Company	Address	Emergency number	Comment
France	ORFILA		+33 1 45 42 59 59	This number provides contact details for all French anti-poison centres. These anti-poison and toxicovigilance centres provide free medical assistance (excluding call costs), 24 hours a day, 7 days a week.

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

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

Flammable liquids, Category 3	H226
Skin sensitisation, Category 1	H317

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

Adverse physicochemical, human health and environmental effects

Flammable liquid and vapour. May cause an allergic skin reaction.

2.2. Label elements

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

Hazard pictograms (CLP) :

GHS02 GHS07

Signal word (CLP) : Warning

Contains : Limonene; Beta-damascenone; Furaneol; Methyl cinnamate

Hazard statements (CLP) : H226 - Flammable liquid and vapour.
H317 - May cause an allergic skin reaction.

Precautionary statements (CLP) : P101 - If medical advice is needed, have product container or label at hand.
P102 - Keep out of reach of children.
P210 - Keep away from heat, hot surfaces, open flames, sparks. – No smoking.

P333+P313 - If skin irritation or rash occurs: Get medical advice/attention.
P501 - Dispose of contents/container in accordance with regulations.
P302+P352 - IF ON SKIN: Wash with plenty of water.

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

3.2. Mixtures

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Acetic acid substance with national workplace exposure limit(s) (FR); substance with a Community workplace exposure limit	CAS-No.: 64-19-7 EC-No.: 200-580-7 EC Index-No.: 607-002-00-6	0.9 – 1.5	Flam. Liq. 3, H226 Acute Tox. 4 (Dermal), H312 (ATE=1060 mg/kg bodyweight) Skin Corr. 1A, H314 Eye Dam. 1, H318
Ethyl butyrate	CAS-No.: 105-54-4 EC-No.: 203-306-4	0.9 – 1.5	Flam. Liq. 3, H226 Eye Irrit. 2, H319
ethyl acetate substance with national workplace exposure limit(s) (FR); substance with a Community workplace exposure limit	CAS-No.: 141-78-6 EC-No.: 205-500-4 EC Index-No.: 607-022-00-5	0.9 – 1.5	Flam. Liq. 2, H225 Eye Irrit. 2, H319 STOT SE 3, H336 EUH066
Methyl cinnamate	CAS-No.: 103-26-4 EC-No.: 203-093-8	0.5 - 0.9	Skin Sens. 1, H317
ethanol/ ethyl alcohol substance with national workplace exposure limit(s) (FR)	CAS-No.: 64-17-5 EC-No.: 200-578-6 EC Index-No.: 603-002-00-5	0.5 – 0.9	Flam. Liq. 2, H225 Eye Irrit. 2, H319
Furaneol / 4-Hydroxy-2,5-dimethyl-3(2H)-furanone	CAS-No.: 3658-77-3 EC-No.: 222-908-8	0.1 – 0.5	Acute Tox. 4 (Oral), H302 (ATE=500 mg/kg bodyweight) Skin Corr. 1, H314 Eye Dam. 1, H318 Skin Sens. 1A, H317
dipentene; limonene	CAS-No.: 138-86-3 EC-No.: 205-341-0 EC Index-No.: 601-029-00-7	0.1 - 0.2	Flam. Liq. 3, H226 Skin Irrit. 2, H315 Skin Sens. 1B, H317 Asp. Tox. 1, H304 Aquatic Acute 1, H400 Aquatic Chronic 3, H412
Propionic acid substance with national workplace exposure limit(s) (FR); substance with a Community workplace exposure limit	CAS-No.: 79-09-4 EC-No.: 201-176-3 EC Index-No.: 607-089-00-0	0.1 – 0.5	Flam. Liq. 3, H226 Skin Corr. 1B, H314 Eye Dam. 1, H318 STOT SE 3, H335
isopentyl acetate substance with national workplace exposure limit(s) (FR); 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	< 0.1	Flam. Liq. 3, H226 EUH066

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Beta-damascenone / (E)-1-(2,6,6-trimethyl-1,3-cyclohexadien-1-yl)-2-buten-1-one	CAS-No.: 23726-93-4 EC-No.: 245-844-2	< 0.1	Skin Irrit. 2, H315 Skin Sens. 1A, H317 Aquatic Chronic 2, H411
Isoamyl alcohol substance with national workplace exposure limit(s) (FR); substance with a Community workplace exposure limit	CAS-No.: 123-51-3 EC-No.: 204-633-5	< 0.1	Flam. Liq. 3, H226 Acute Tox. 4 (Inhalation), H332 Skin Irrit. 2, H315 Eye Dam. 1, H318 STOT SE 3, H335
n-butyl acetate substance with national workplace exposure limit(s) (FR); substance with a Community workplace exposure limit	CAS-No.: 123-86-4 EC-No.: 204-658-1 EC Index-No.: 607-025-00-1	< 0.1	Flam. Liq. 3, H226 STOT SE 3, H336 EUH066
isobutyl acetate substance with national workplace exposure limit(s) (FR); substance with a Community workplace exposure limit	CAS-No.: 110-19-0 EC-No.: 203-745-1 EC Index-No.: 607-026-00-7	< 0.1	Flam. Liq. 2, H225 STOT SE 3, H336

Specific concentration limits:		
Name	**Product identifier**	**Specific concentration limits (%)**
Acetic acid	CAS-No.: 64-19-7 EC-No.: 200-580-7 EC Index-No.: 607-002-00-6	(10 ≤ C < 25) Skin Irrit. 2; H315 (10 ≤ C < 25) Eye Irrit. 2; H319 (25 ≤ C < 90) Skin Corr. 1B; H314 (90 ≤ C ≤ 100) Skin Corr. 1A; H314
Propionic acid	CAS-No.: 79-09-4 EC-No.: 201-176-3 EC Index-No.: 607-089-00-0	(10 ≤ C < 25) Skin Irrit. 2; H315 (10 ≤ C < 25) Eye Irrit. 2; H319 (10 ≤ C ≤ 100) STOT SE 3; H335 (25 ≤ C ≤ 100) Skin Corr. 1B; H314

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 : If you feel unwell, seek medical advice.

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. Take off immediately all contaminated clothing. If skin irritation or rash occurs: Get medical advice/attention.

First-aid measures after eye contact : Rinse eyes with water as a precaution.

First-aid measures after ingestion : Call a poison center or a doctor if you feel unwell.

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

Symptoms/effects after inhalation : None under normal conditions.

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

Symptoms/effects after eye contact : None under normal conditions.

Symptoms/effects after ingestion : None under normal conditions.

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 : 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

Fire hazard	: Flammable liquid and vapour.
Explosion hazard	: No direct explosion hazard.
Hazardous decomposition products in case of fire	: Toxic fumes may be released.

5.3. Advice for firefighters

Firefighting instructions	: Fight fire from safe distance and protected location. Do not enter fire area without proper protective equipment, including respiratory protection.
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

General measures	: Stop leak if safe to do so. Notify authorities if product enters sewers or public waters. Absorb spillage to prevent material damage.

For non-emergency personnel

Protective equipment	: Wear recommended personal protective equipment.
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/vapours/spray.

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".
Emergency procedures	: Evacuate unnecessary personnel. Stop leak if safe to do so.

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

For containment	: Absorb spilled material with sand or earth. Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams. Stop leak without risks if possible.
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

Additional hazards when processed	: Not expected to present a significant hazard under anticipated conditions of normal use.
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 vapours may accumulate in the container. Use explosion-proof equipment. Wear personal protective equipment. Avoid contact with skin and eyes. Avoid breathing dust/fume/gas/mist/vapours/spray.
Hygiene measures	: Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reuse. 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.
Packaging materials	: Store always product in container of same material as original container.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

National occupational exposure and biological limit values

Acetic acid (64-19-7)	
EU - Indicative Occupational Exposure Limit (IOEL)	
Local name	Acetic acid
IOEL TWA	25 mg/m³
	10 ppm
IOEL STEL	50 mg/m³
	20 ppm
Regulatory reference	COMMISSION DIRECTIVE (EU) 2017/164

isobutyl acetate (110-19-0)	
EU - Indicative Occupational Exposure Limit (IOEL)	
Local name	Isobutyl acetate
IOEL TWA	241 mg/m³
	50 ppm
IOEL STEL	723 mg/m³
	150 ppm
Regulatory reference	COMMISSION DIRECTIVE (EU) 2019/1831

isopentyl acetate (123-92-2)	
EU - Indicative Occupational Exposure Limit (IOEL)	
Local name	Isopentylacetate
IOEL TWA	270 mg/m³
	50 ppm
IOEL STEL	540 mg/m³
	100 ppm
Regulatory reference	COMMISSION DIRECTIVE 2000/39/EC

ethyl acetate (141-78-6)	
EU - Indicative Occupational Exposure Limit (IOEL)	
Local name	Ethyl acetate
IOEL TWA	734 mg/m³
	200 ppm
IOEL STEL	1468 mg/m³
	400 ppm
Regulatory reference	COMMISSION DIRECTIVE (EU) 2017/164

Isoamyl alcohol (123-51-3)	
EU - Indicative Occupational Exposure Limit (IOEL)	
Local name	Isoamyl alcohol
IOEL TWA	18 mg/m³
	5 ppm
IOEL STEL	37 mg/m³
	10 ppm
Regulatory reference	COMMISSION DIRECTIVE (EU) 2019/1831

n-butyl acetate (123-86-4)	
EU - Indicative Occupational Exposure Limit (IOEL)	
Local name	n-Butyl acetate
IOEL TWA	241 mg/m³
	50 ppm
IOEL STEL	723 mg/m³
	150 ppm
Regulatory reference	COMMISSION DIRECTIVE (EU) 2019/1831

Propionic acid (79-09-4)	
EU - Indicative Occupational Exposure Limit (IOEL)	
Local name	Propionic acid
IOEL TWA	31 mg/m³
	10 ppm
IOEL STEL	62 mg/m³
	20 ppm
Regulatory reference	COMMISSION DIRECTIVE 2000/39/EC

8.2. Exposure controls

Appropriate engineering controls

Appropriate engineering controls:

Ensure good ventilation of the work station.

Personal protection equipment

Personal protective equipment:

Wear recommended personal protective equipment.

Personal protective equipment symbol(s):

Eye and face protection

Eye protection:

Safety glasses

Skin protection

Skin and body protection:

Wear suitable protective clothing

Hand protection:

Protective gloves

Respiratory protection

Respiratory protection:

In case of insufficient ventilation, wear suitable respiratory equipment

Environmental exposure controls

Environmental exposure controls:

Avoid release to the environment.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Colour	: Colourless.
Odour	: Not available
Odour threshold	: Not available
Melting point	: Not applicable
Freezing point	: Not available
Boiling point	: Not available
Flammability	: Flammable liquid and vapour.
Lower explosion limit	: Not available
Upper explosion limit	: Not available
Flash point	: 47 °C
Auto-ignition temperature	: Not available
Decomposition temperature	: Not available
pH	: 4.5 – 6.5
Viscosity, kinematic	: Not available
Solubility	: soluble in water.
Partition coefficient n-octanol/water (Log Kow)	: Not available
Vapour pressure	: Not available
Vapour pressure at 50°C	: Not available
Density	: Not available
Relative density	: 1.01 – 1.05
Relative vapour density at 20°C	: Not available
Particle characteristics	: Not applicable

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

Flammable liquid and vapour.

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 hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity (oral) : Not classified (Based on available data, the classification criteria are not met)

Acute toxicity (dermal) : Not classified (Based on available data, the classification criteria are not met)

Acute toxicity (inhalation) : Not classified (Based on available data, the classification criteria are not met)

dipentene; limonene (138-86-3)	
LD50 oral rat	> 2000 mg/kg bodyweight Animal: rat, Animal sex: female, Guideline: OECD Guideline 423 (Acute Oral toxicity - Acute Toxic Class Method)
LD50 dermal rabbit	> 5000 mg/kg Source: National Library of Medicine

Ethyl butyrate (105-54-4)	
LD50 oral rat	> 2000 mg/kg bodyweight Animal: rat, Animal sex: female, Guideline: OECD Guideline 423 (Acute Oral toxicity - Acute Toxic Class Method), Remarks on results: other:
LD50 dermal rat	> 2000 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 402 (Acute Dermal Toxicity), Remarks on results: other:
LD50 dermal rabbit	> 2000 mg/kg Source: NLM
LC50 Inhalation - Rat [ppm]	> 4000 ppm Animal: rat, Guideline: other:, Remarks on results: other:

Acetic acid (64-19-7)	
LD50 oral rat	3310 mg/kg bodyweight Animal: rat
LD50 oral	4960 mg/kg bodyweight Animal: mouse
LD50 dermal rabbit	1060 mg/kg Source: HSDB, NITE
LC50 Inhalation - Rat [ppm]	16000 ppm Source: ChemIDPlus

isobutyl acetate (110-19-0)	
LD50 oral rat	13413 mg/kg bodyweight Animal: rat, Animal sex: male, Guideline: OECD Guideline 401 (Acute Oral Toxicity)
LD50 dermal rabbit	> 17400 mg/kg bodyweight Animal: rabbit, Animal sex: male, Guideline: OECD Guideline 402 (Acute Dermal Toxicity)
LC50 Inhalation - Rat	> 23.4 mg/l air Animal: rat, Guideline: OECD Guideline 403 (Acute Inhalation Toxicity)
LC50 Inhalation - Rat (Vapours)	30 mg/l Source: ECHA

isopentyl acetate (123-92-2)	
LD50 dermal rabbit	> 5000 mg/kg bodyweight Animal: rabbit

ethyl acetate (141-78-6)	
LD50 oral	4934 mg/kg bodyweight Animal: rabbit, Guideline: OECD Guideline 401 (Acute Oral Toxicity)
LD50 dermal rabbit	> 20000 mg/kg bodyweight Animal: rabbit, Animal sex: male

Isoamyl alcohol (123-51-3)	
LD50 oral rat	> 5000 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 401 (Acute Oral Toxicity)

Isoamyl alcohol (123-51-3)	
LD50 dermal rabbit	≈ 3216 mg/kg bodyweight Animal: rabbit, Animal sex: male, 95% CL: 2373 - 4350
LC50 Inhalation - Rat (Vapours)	10 mg/l Source: ECHA

ethanol/ ethyl alcohol (64-17-5)	
LD50 oral rat	15010 mg/kg bodyweight Animal: rat, Animal sex: female, Guideline: OECD Guideline 401 (Acute Oral Toxicity), 95% CL: 14450 - 15560
LD50 oral	8300 mg/kg bodyweight Animal: mouse

Beta-damascenone / (E)-1-(2,6,6-trimethyl-1,3-cyclohexadien-1-yl)-2-buten-1-one (23726-93-4)	
LD50 oral rat	> 2000 mg/kg

Furaneol / 4-Hydroxy-2,5-dimethyl-3(2H)-furanone (3658-77-3)	
LD50 oral rat	2320 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 401 (Acute Oral Toxicity)

n-butyl acetate (123-86-4)	
LD50 oral rat	3200 ml/kg Source: ECHA
LD50 dermal rabbit	> 17600 mg/kg Source: ECHA
LC50 Inhalation - Rat (Vapours)	1802 mg/l Source: ECHA

Methyl cinnamate (103-26-4)	
LD50 oral rat	2610 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 401 (Acute Oral Toxicity), 95% CL: 2000 - 3410
LD50 dermal rabbit	> 5000 mg/kg bodyweight Animal: rabbit, Guideline: OECD Guideline 402 (Acute Dermal Toxicity)

Propionic acid (79-09-4)	
LD50 oral rat	3455.1 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 401 (Acute Oral Toxicity), 95% CL: 2978,9 - 4007,5
LD50 dermal rat	3235 mg/kg bodyweight Animal: rat, Animal sex: female, Guideline: OECD Guideline 402 (Acute Dermal Toxicity)
LD50 dermal rabbit	3235 mg/kg Source: ECHA
LC50 Inhalation - Rat	> 20 mg/l air Animal: rat, Guideline: OECD Guideline 403 (Acute Inhalation Toxicity)
LC50 Inhalation - Rat (Vapours)	> 20 mg/l Source: ECHA

Skin corrosion/irritation : Not classified (Based on available data, the classification criteria are not met)

pH: 4.5 – 6.5

Ethyl butyrate (105-54-4)	
pH	4.18 Temp.: 29 °C Concentration: 1 other:

Acetic acid (64-19-7)	
pH	2.4 Source: ECHA

isobutyl acetate (110-19-0)	
pH	6.7 Temp.: 20 °C Concentration: (≈)5 g/L

n-butyl acetate (123-86-4)	
pH	6.2 Temp.: 20 °C Concentration: (≈)5 g/L

Methyl cinnamate (103-26-4)	
pH	4.6 Temp.: 20 °C Concentration: 299 mg/L

Serious eye damage/irritation : Not classified (Based on available data, the classification criteria are not met)

pH: 4.5 – 6.5

Ethyl butyrate (105-54-4)	
pH	4.18 Temp.: 29 °C Concentration: 1 other:

Acetic acid (64-19-7)	
pH	2.4 Source: ECHA

isobutyl acetate (110-19-0)	
pH	6.7 Temp.: 20 °C Concentration: (≈)5 g/L

n-butyl acetate (123-86-4)	
pH	6.2 Temp.: 20 °C Concentration: (≈)5 g/L

Methyl cinnamate (103-26-4)	
pH	4.6 Temp.: 20 °C Concentration: 299 mg/L

Respiratory or skin sensitisation : May cause an allergic skin reaction.

Germ cell mutagenicity : Not classified (Based on available data, the classification criteria are not met)

Carcinogenicity : Not classified (Based on available data, the classification criteria are not met)

dipentene; limonene (138-86-3)	
IARC group	3 - Not classifiable

ethanol/ ethyl alcohol (64-17-5)	
IARC group	1 - Carcinogenic to humans

Reproductive toxicity : Not classified (Based on available data, the classification criteria are not met)

dipentene; limonene (138-86-3)	
NOAEL (animal/female, F0/P)	600 mg/kg bodyweight Animal: rat, Animal sex: female, Guideline: other:

Furaneol / 4-Hydroxy-2,5-dimethyl-3(2H)-furanone (3658-77-3)	
NOAEL (animal/male, F0/P)	1000 mg/kg bodyweight Animal: rat, Animal sex: male, Guideline: other:

STOT-single exposure : Not classified (Based on available data, the classification criteria are not met)

isobutyl acetate (110-19-0)	
STOT-single exposure	May cause drowsiness or dizziness.

ethyl acetate (141-78-6)	
STOT-single exposure	May cause drowsiness or dizziness.

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

n-butyl acetate (123-86-4)	
STOT-single exposure	May cause drowsiness or dizziness.

Propionic acid (79-09-4)	
STOT-single exposure	May cause respiratory irritation.

STOT-repeated exposure : Not classified (Based on available data, the classification criteria are not met)

Acetic acid (64-19-7)	
NOAEL (oral, rat, 90 days)	290 mg/kg bodyweight Animal: rat, Animal sex: male

isobutyl acetate (110-19-0)	
NOAEL (oral, rat, 90 days)	316 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity Study in Rodents)

isopentyl acetate (123-92-2)	
NOAEL (subchronic, oral, animal/female, 90 days)	443.07 mg/kg bodyweight Animal: , Animal sex: female

ethyl acetate (141-78-6)	
LOAEL (oral, rat, 90 days)	3600 mg/kg bodyweight Animal: rat, Guideline: EPA OTS 795.2600 (Subchronic Oral Toxicity Test)
NOAEL (oral, rat, 90 days)	900 mg/kg bodyweight Animal: rat, Guideline: EPA OTS 795.2600 (Subchronic Oral Toxicity Test)

Isoamyl alcohol (123-51-3)	
NOAEL (oral, rat, 90 days)	1250 mg/kg bodyweight Animal: rat, Animal sex: female, Guideline: OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity in Rodents)

ethanol/ ethyl alcohol (64-17-5)	
LOAEL (oral, rat, 90 days)	3200 mg/kg bodyweight Animal: rat, Animal sex: male, Guideline: OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity Study in Rodents)
NOAEL (oral, rat, 90 days)	1730 mg/kg bodyweight Animal: rat, Animal sex: male, Guideline: OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity Study in Rodents), Remarks on results: other:
NOAEL (subchronic, oral, animal/male, 90 days)	< 9700 mg/kg bodyweight Animal: mouse, Animal sex: male, Guideline: EPA OPPTS 870.3100 (90-Day Oral Toxicity in Rodents)
NOAEL (subchronic, oral, animal/female, 90 days)	> 9400 mg/kg bodyweight Animal: mouse, Animal sex: female, Guideline: EPA OPPTS 870.3100 (90-Day Oral Toxicity in Rodents)

Beta-damascenone / (E)-1-(2,6,6-trimethyl-1,3-cyclohexadien-1-yl)-2-buten-1-one (23726-93-4)	
LOAEL (oral, rat, 90 days)	30 mg/kg bodyweight/day
NOAEL (oral, rat, 90 days)	30 mg/kg bodyweight Animal: rat, Animal sex: male, Guideline: OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity Study in Rodents)

Aspiration hazard : Not classified (Based on available data, the classification criteria are not met)

dipentene; limonene (138-86-3)	
Viscosity, kinematic	1.075 mm²/s

Ethyl butyrate (105-54-4)	
Viscosity, kinematic	0.82 mm²/s

Acetic acid (64-19-7)	
Viscosity, kinematic	1.015 mm²/s

isobutyl acetate (110-19-0)	
Viscosity, kinematic	0.803 mm²/s

isopentyl acetate (123-92-2)	
Viscosity, kinematic	1.176 mm²/s

Isoamyl alcohol (123-51-3)	
Viscosity, kinematic	5.32 mm²/s Temp.: '20°C' Parameter: 'kinematic viscosity (in mm²/s)'

ethanol/ ethyl alcohol (64-17-5)	
Viscosity, kinematic	1.488 mm²/s

n-butyl acetate (123-86-4)	
Viscosity, kinematic	0.83 mm²/s Temp.: '20°C' Parameter: 'kinematic viscosity (in mm²/s)'

11.2. Information on other hazards

No additional information available

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : The product is not considered harmful to aquatic organisms nor to cause long-term adverse effects in the environment.

Hazardous to the aquatic environment, short–term (acute) : Not classified (Based on available data, the classification criteria are not met)

Hazardous to the aquatic environment, long–term (chronic) : Not classified (Based on available data, the classification criteria are not met)

dipentene; limonene (138-86-3)	
LC50 - Fish [1]	720 µg/l Test organisms (species): Pimephales promelas
LC50 - Fish [2]	702 µg/l Test organisms (species): Pimephales promelas
EC50 - Crustacea [1]	0.36 mg/l
EC50 - Crustacea [2]	0.51 mg/l
EC50 72h - Algae [1]	0.32 mg/l Test organisms (species): Raphidocelis subcapitata (previous names: Pseudokirchneriella subcapitata, Selenastrum capricornutum)
EC50 72h - Algae [2]	0.214 mg/l Test organisms (species): Raphidocelis subcapitata (previous names: Pseudokirchneriella subcapitata, Selenastrum capricornutum)
NOEC (chronic)	0.115 mg/l Test organisms (species): other:For freshwater invertebrates, species frequently include Daphnia magna or Daphnia pulex. Duration: '16 d'

Ethyl butyrate (105-54-4)	
LC50 - Fish [1]	4.6 mg/l Test organisms (species): Danio rerio (previous name: Brachydanio rerio)
EC50 - Crustacea [1]	116.6 mg/l Test organisms (species): Daphnia magna
EC50 96h - Algae [1]	1.675 mg/l Source: ECOSAR
NOEC (chronic)	28833 mg/l Test organisms (species): Daphnia magna Duration: '21 d'
NOEC chronic fish	1483 mg/l Test organisms (species): other: Duration: '28 d'

Acetic acid (64-19-7)	
LC50 - Fish [1]	> 1000 mg/l Test organisms (species): Oncorhynchus mykiss (previous name: Salmo gairdneri)
LC50 - Fish [2]	> 300.82 mg/l Test organisms (species): Oncorhynchus mykiss (previous name: Salmo gairdneri)
EC50 - Crustacea [1]	> 1000 mg/l Test organisms (species): Daphnia magna
EC50 - Crustacea [2]	> 300.82 mg/l Test organisms (species): Daphnia magna
EC50 72h - Algae [1]	> 1000 mg/l Test organisms (species): Skeletonema costatum
EC50 72h - Algae [2]	> 300.82 mg/l Test organisms (species): Skeletonema costatum

isobutyl acetate (110-19-0)	
LC50 - Fish [1]	17 mg/l Test organisms (species): Oryzias latipes
EC50 - Crustacea [1]	25 mg/l Test organisms (species): Daphnia magna
EC50 72h - Algae [1]	370 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum)

isobutyl acetate (110-19-0)	
EC50 72h - Algae [2]	250 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum)
ErC50 algae	397 mg/l Source: ECHA
LOEC (chronic)	47.6 mg/l Test organisms (species): Daphnia magna Duration: '21 d'
NOEC (chronic)	23 mg/l Test organisms (species): Daphnia magna Duration: '21 d'

isopentyl acetate (123-92-2)	
LC50 - Fish [1]	22 – 46 mg/l Test organisms (species): Danio rerio (previous name: Brachydanio rerio)
EC50 - Crustacea [1]	42 mg/l Test organisms (species): other:Daphnia magna STRAUS

ethyl acetate (141-78-6)	
LC50 - Fish [1]	230 mg/l Test organisms (species): Pimephales promelas
NOEC (chronic)	2.4 mg/l Test organisms (species): Daphnia magna Duration: '21 d'

Isoamyl alcohol (123-51-3)	
LC50 - Fish [1]	700 mg/l Test organisms (species): Oncorhynchus mykiss (previous name: Salmo gairdneri)
EC50 - Crustacea [1]	255 mg/l Test organisms (species): Daphnia magna
EC50 72h - Algae [1]	> 500 mg/l Test organisms (species): Desmodesmus subspicatus (previous name: Scenedesmus subspicatus)
EC50 72h - Algae [2]	493 mg/l Test organisms (species): Desmodesmus subspicatus (previous name: Scenedesmus subspicatus)
EC50 96h - Algae [1]	274 mg/l Test organisms (species): Desmodesmus subspicatus (previous name: Scenedesmus subspicatus)
EC50 96h - Algae [2]	181 mg/l Test organisms (species): Desmodesmus subspicatus (previous name: Scenedesmus subspicatus)

ethanol/ ethyl alcohol (64-17-5)	
LC50 - Fish [1]	14.2 g/l Test organisms (species): Pimephales promelas
EC50 - Crustacea [1]	> 10000 mg/l Test organisms (species): Daphnia magna
EC50 96h - Algae [1]	≈ 22000 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum)
ErC50 algae	275 mg/l Source: ECHA
NOEC (chronic)	9.6 mg/l Test organisms (species): Daphnia magna Duration: '9 d'

Beta-damascenone / (E)-1-(2,6,6-trimethyl-1,3-cyclohexadien-1-yl)-2-buten-1-one (23726-93-4)	
LC50 - Fish [1]	1.09 mg/l
EC50 - Crustacea [1]	9 mg/l
EC50 72h - Algae [1]	8.3 mg/l
EC50 96h - Algae [1]	1.594 mg/l Source: ECOSAR

Furaneol / 4-Hydroxy-2,5-dimethyl-3(2H)-furanone (3658-77-3)	
LC50 - Fish [1]	1.887 mg/l Source: Ecological Structure Activity Relationships
EC50 - Crustacea [1]	6.8 mg/l Test organisms (species): Daphnia magna
EC50 72h - Algae [1]	194.03 mg/l Test organisms (species): Desmodesmus subspicatus (previous name: Scenedesmus subspicatus)
EC50 96h - Algae [1]	96.963 mg/l Source: Ecological Structure Activity Relationships

n-butyl acetate (123-86-4)	
LC50 - Fish [1]	18 mg/l Test organisms (species): Pimephales promelas
EC50 - Crustacea [1]	44 mg/l Test organisms (species): Daphnia sp.
EC50 - Other aquatic organisms [1]	32 mg/l Test organisms (species): Artemia salina
EC50 72h - Algae [1]	674.7 mg/l Test organisms (species): Desmodesmus subspicatus (previous name: Scenedesmus subspicatus)
NOEC (chronic)	23 mg/l Test organisms (species): Daphnia magna Duration: '21 d'

Methyl cinnamate (103-26-4)	
LC50 - Fish [1]	2.76 mg/l Test organisms (species): Danio rerio (previous name: Brachydanio rerio)
EC50 - Crustacea [1]	24 mg/l Test organisms (species): Daphnia magna
EC50 72h - Algae [1]	7.6 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum)
EC50 96h - Algae [1]	1.08 mg/l Source: ECOSAR

Propionic acid (79-09-4)	
LC50 - Fish [1]	> 10000 mg/l Test organisms (species): Leuciscus idus
EC50 - Crustacea [1]	> 500 mg/l Test organisms (species): Daphnia magna
EC50 72h - Algae [1]	> 500 mg/l Test organisms (species): Desmodesmus subspicatus (previous name: Scenedesmus subspicatus)

12.2. Persistence and degradability

A&L ULTIMATE RAGNAROK-ZERO ORIGINAL SWEET EDITION	
Persistence and degradability	Not rapidly degradable

dipentene; limonene (138-86-3)	
Persistence and degradability	Not rapidly degradable

Ethyl butyrate (105-54-4)	
Persistence and degradability	Not rapidly degradable

Acetic acid (64-19-7)	
Persistence and degradability	Not rapidly degradable

isobutyl acetate (110-19-0)	
Persistence and degradability	Not rapidly degradable

isopentyl acetate (123-92-2)	
Persistence and degradability	Not rapidly degradable

ethyl acetate (141-78-6)	
Persistence and degradability	Not rapidly degradable

Isoamyl alcohol (123-51-3)	
Persistence and degradability	Not rapidly degradable

ethanol/ ethyl alcohol (64-17-5)	
Persistence and degradability	Not rapidly degradable

Beta-damascenone / (E)-1-(2,6,6-trimethyl-1,3-cyclohexadien-1-yl)-2-buten-1-one (23726-93-4)	
Persistence and degradability	Not rapidly degradable

Furaneol / 4-Hydroxy-2,5-dimethyl-3(2H)-furanone (3658-77-3)	
Persistence and degradability	Not rapidly degradable

n-butyl acetate (123-86-4)	
Persistence and degradability	Not rapidly degradable

Methyl cinnamate (103-26-4)	
Persistence and degradability	Not rapidly degradable

Propionic acid (79-09-4)	
Persistence and degradability	Not rapidly degradable

12.3. Bioaccumulative potential

dipentene; limonene (138-86-3)	
Partition coefficient n-octanol/water (Log Pow)	4.38 Source: ECHA Registered substances

Ethyl butyrate (105-54-4)	
Partition coefficient n-octanol/water (Log Pow)	2.85

Acetic acid (64-19-7)	
Partition coefficient n-octanol/water (Log Pow)	-0.17 Source: ECHA

isobutyl acetate (110-19-0)	
Partition coefficient n-octanol/water (Log Pow)	1.6 Source: ICSC

isopentyl acetate (123-92-2)	
Partition coefficient n-octanol/water (Log Pow)	2.13 Source: ICSC

Isoamyl alcohol (123-51-3)	
Partition coefficient n-octanol/water (Log Pow)	1.16 Source: HSDB

ethanol/ ethyl alcohol (64-17-5)	
Partition coefficient n-octanol/water (Log Pow)	-0.32 Source: ICSC

Beta-damascenone / (E)-1-(2,6,6-trimethyl-1,3-cyclohexadien-1-yl)-2-buten-1-one (23726-93-4)	
Partition coefficient n-octanol/water (Log Pow)	4.21 Source: Episuite

Furaneol / 4-Hydroxy-2,5-dimethyl-3(2H)-furanone (3658-77-3)	
Partition coefficient n-octanol/water (Log Pow)	0.82 Source: Quantitative Structure Activity Relation

n-butyl acetate (123-86-4)	
Partition coefficient n-octanol/water (Log Pow)	1.78 Source: HSDB

Methyl cinnamate (103-26-4)	
Partition coefficient n-octanol/water (Log Pow)	2.18

Propionic acid (79-09-4)	
Partition coefficient n-octanol/water (Log Pow)	0.33 Source: HSDB

12.4. Mobility in soil

Furaneol / 4-Hydroxy-2,5-dimethyl-3(2H)-furanone (3658-77-3)	
Mobility in soil	1.072 Source: Quantitative Structure Activity Relation

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

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Regional waste regulation : Disposal must be done according to official regulations.

Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.

Sewage disposal recommendations : Disposal must be done according to official regulations.

Product/Packaging disposal recommendations : Disposal must be done according to official regulations.

Additional information : Flammable vapours may accumulate in the container. Do not re-use empty containers.

SECTION 14: Transport information

In accordance with ADR / IMDG / IATA

ADR	IMDG	IATA
14.1. UN number or ID number		
UN 1197	UN 1197	UN 1197
14.2. UN proper shipping name		
EXTRACTS, LIQUID	EXTRACTS, LIQUID	Extracts, liquid
Transport document description		
UN 1197 EXTRACTS, LIQUID, 3, III, (D/E)	UN 1197 EXTRACTS, LIQUID, 3, III	UN 1197 Extracts, liquid, 3, III
14.3. Transport hazard class(es)		
3	3	3
		
14.4. Packing group		
III	III	III
14.5. Environmental hazards		
Dangerous for the environment: No	Dangerous for the environment: No Marine pollutant: No EmS-No. (Fire): F-E EmS-No. (Spillage): S-D	Dangerous for the environment: No
No supplementary information available		

14.6. Special precautions for user

Overland transport

Classification code (ADR) : F1

Special provisions (ADR) : 601

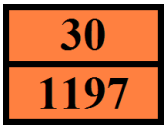
Limited quantities (ADR) : 5l

Excepted quantities (ADR) : E1

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

Mixed packing provisions (ADR) : MP19

Portable tank and bulk container instructions (ADR) : T2

Portable tank and bulk container special provisions (ADR)	: TP1
Tank code (ADR)	: LGBF
Vehicle for tank carriage	: FL
Transport category (ADR)	: 3
Special provisions for carriage - Packages (ADR)	: V12
Special provisions for carriage - Operation (ADR)	: S2
Hazard identification number (Kemler No.)	: 30
Orange plates	: 
Tunnel restriction code (ADR)	: D/E
EAC code	: 3Y

Transport by sea

Special provisions (IMDG)	: 223, 955
Limited quantities (IMDG)	: 5 L
Excepted quantities (IMDG)	: E1
Packing instructions (IMDG)	: P001, LP01
IBC packing instructions (IMDG)	: IBC03
Tank instructions (IMDG)	: T2
Tank special provisions (IMDG)	: TP1
Stowage category (IMDG)	: A
Properties and observations (IMDG)	: Usually consist of alcoholic solutions. Miscibility with water depends upon the composition.

Air transport

PCA Excepted quantities (IATA)	: E1
PCA Limited quantities (IATA)	: Y344
PCA limited quantity max net quantity (IATA)	: 10L
PCA packing instructions (IATA)	: 355
PCA max net quantity (IATA)	: 60L
CAO packing instructions (IATA)	: 366
CAO max net quantity (IATA)	: 220L
Special provisions (IATA)	: A3
ERG code (IATA)	: 3L

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

EU-Regulations

REACH Annex XVII (Restriction List)

Contains no substance(s) listed on REACH Annex XVII (Restriction Conditions)

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 (2024/590)

Contains no substance(s) listed on the Ozone Depletion list (Regulation EU 2024/590 on substances that deplete the ozone layer)

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

Contains no substance subject to the COUNCIL REGULATION (EC) for the control of dual-use items

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)

15.2. Chemical safety assessment

No chemical safety assessment has been carried out

SECTION 16: Other information

Abbreviations and acronyms:	
ACGIH	American Conference of Government Industrial Hygienists
ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE	Acute Toxicity Estimate
BCF	Bioconcentration factor
BLV	Biological limit value
BOD	Biochemical oxygen demand (BOD)
CAS-No.	Chemical Abstract Service number
CLP	Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008
COD	Chemical oxygen demand (COD)
CSA	Chemical safety assessment
DMEL	Derived Minimal Effect level
DNEL	Derived-No Effect Level
EC-No.	European Community number
EC50	Median effective concentration
ED	Endocrine disruptor
EN	European Standard
EWC	European waste catalogue
IARC	International Agency for Research on Cancer
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods
LC50	Median lethal concentration
LD50	Median lethal dose
LOAEL	Lowest Observed Adverse Effect Level

Abbreviations and acronyms:	
Log Kow	Partition coefficient n-octanol/water (Log Kow)
Log Pow	Partition coefficient n-octanol/water (Log Pow)
MAK	maximum workplace concentration
NOAEC	No-Observed Adverse Effect Concentration
NOAEL	No-Observed Adverse Effect Level
NOEC	No-Observed Effect Concentration
N.O.S.	Not Otherwise Specified
OECD	Organisation for Economic Co-operation and Development
OEL	Occupational Exposure Limit
OSHA	Occupational Safety Health Administration
PBT	Persistent Bioaccumulative Toxic
PNEC	Predicted No-Effect Concentration
PPE	Personal protection equipment
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
SDS	Safety Data Sheet
STP	Sewage treatment plant
TF	Technical function
ThOD	Theoretical oxygen demand (ThOD)
TLM	Median Tolerance Limit
TWA	Time Weighted Average
VOC	Volatile Organic Compounds
vPvB	Very Persistent and Very Bioaccumulative
UFI	Unique Formula Identifier

Full text of H- and EUH-statements:	
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 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. 2	Flammable liquids, Category 2
Flam. Liq. 3	Flammable liquids, Category 3
Skin Corr. 1	Skin corrosion/irritation, Category 1
Skin Corr. 1A	Skin corrosion/irritation, Category 1, Sub-Category 1A
Skin Corr. 1B	Skin corrosion/irritation, Category 1, Sub-Category 1B

Full text of H- and EUH-statements:	
Skin Irrit. 2	Skin corrosion/irritation, Category 2
Skin Sens. 1	Skin sensitisation, Category 1
Skin Sens. 1A	Skin sensitisation, category 1A
Skin Sens. 1B	Skin sensitisation, category 1B
STOT SE 3	Specific target organ toxicity – Single exposure, Category 3, Narcosis
H225	Highly flammable liquid and vapour.
H226	Flammable liquid and vapour.
H302	Harmful if swallowed.
H304	May be fatal if swallowed and enters airways.
H312	Harmful in contact with skin.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.
H400	Very toxic to aquatic life.
H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.
EUH066	Repeated exposure may cause skin dryness or cracking.

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.