

A&L ULTIMATE E-LIQUIDE KRONOS

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006
Issue date: 28/07/2025 Version: 1.0

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

1.1. Product identifier

Product form : Mixture
Product name : A&L ULTIMATE E-LIQUIDE KRONOS
UFI : 8GVA-S3RF-D9SV-RM35

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

Relevant identified uses

Intended for general public

Main use category : Professional use, 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	

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
Contains Furaneol. May produce an allergic reaction. EUH208
Full text of H- and EUH-statements: see section 16

Adverse physicochemical, human health and environmental effects

Flammable liquid and vapour.

2.2. Label elements

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

Hazard pictograms (CLP)



GHS02

Signal word (CLP)

: Warning

Hazard statements (CLP)

: H226 - Flammable liquid and vapour.

Precautionary statements (CLP)

: P102 - Keep out of reach of children.
P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P501 - Dispose of contents/container in accordance with regulations.

EUH-statements

: EUH208 - Contains Furaneol. May produce an allergic reaction.

Child-resistant fastening

: Not applicable

Tactile warning

: Not applicable

2.3. Other hazards

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

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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]
Glycerol substance with national workplace exposure limit(s) (FR)	CAS-No.: 56-81-5 EC-No.: 200-289-5	25 – 50	Not classified
2-isopropyl-N,2,3-trimethylbutyramide	CAS-No.: 51115-67-4 EC-No.: 256-974-4	0,9 – 1,5	Acute Tox. 4 (Oral), H302 (ATE=500 mg/kg bodyweight)
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	0,1 – 0,5	Flam. Liq. 2, H225 Eye Irrit. 2, H319 STOT SE 3, H336
Furaneol / 4-Hydroxy-2,5-dimethyl-3(2H)-furanone	CAS-No.: 3658-77-3 EC-No.: 222-908-8	< 0,1	Acute Tox. 4 (Oral), H302 (ATE=500 mg/kg bodyweight) Skin Corr. 1, H314 Eye Dam. 1, H318 Skin Sens. 1A, H317
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
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	< 0,1	Flam. Liq. 3, H226 Acute Tox. 4 (Dermal), H312 (ATE=1060 mg/kg bodyweight) Skin Corr. 1A, H314 Eye Dam. 1, H318
Isoamyl acetate / 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
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 EUH066
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	< 0,1	Flam. Liq. 2, H225 Eye Irrit. 2, H319
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	Flam. Liq. 3, H226 Skin Corr. 1B, H314 Eye Dam. 1, H318 STOT SE 3, H335
butan-1-ol; n-butanol substance with national workplace exposure limit(s) (FR)	CAS-No.: 71-36-3 EC-No.: 200-751-6 EC Index-No.: 603-004-00-6	< 0,1	Flam. Liq. 3, H226 Acute Tox. 4 (Oral), H302 (ATE=500 mg/kg bodyweight) STOT SE 3, H335 Skin Irrit. 2, H315 Eye Dam. 1, H318 STOT SE 3, H336

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Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
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
Valeraldehyde substance with national workplace exposure limit(s) (FR)	CAS-No.: 110-62-3 EC-No.: 203-784-4	< 0,1	Flam. Liq. 2, H225 Acute Tox. 4 (Inhalation), H332 Eye Irrit. 2, H319 Skin Sens. 1, H317 STOT SE 3, H335

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.
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.
Self protection of the first-aiders	: First aid workers will be equipped with suitable personal protective equipment.

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

Symptoms/effects after inhalation	: None under normal conditions.
Symptoms/effects after skin contact	: None under normal conditions.
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.

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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.
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For non-emergency personnel

Protective equipment	: Wear recommended personal protective equipment.
Emergency procedures	: Ventilate spillage area. No open flames, no sparks, and no smoking.

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.
Hygiene measures	: 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.

Switzerland

Storage class (LK)	: LK 3 - Flammable liquids
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7.3. Specific end use(s)

No additional information available

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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/m ³
	10 ppm
IOEL STEL	50 mg/m ³
	20 ppm
Regulatory reference	COMMISSION DIRECTIVE (EU) 2017/164
France - Occupational Exposure Limits	
Local name	Acide acétique
VME (OEL TWA)	25 mg/m ³
	10 ppm
VLE (OEL C/STEL)	50 mg/m ³
	20 ppm
Remark	Valeurs réglementaires indicatives
Regulatory reference	Arrêté du 30 juin 2004 modifié (réf.: INRS ED 6443, 2022; Outil65; Arrête du 27 septembre 2019)
Isoamyl acetate / Isopentyl acetate (123-92-2)	
EU - Indicative Occupational Exposure Limit (IOEL)	
Local name	Isopentylacetate
IOEL TWA	270 mg/m ³
	50 ppm
IOEL STEL	540 mg/m ³
	100 ppm
Regulatory reference	COMMISSION DIRECTIVE 2000/39/EC
France - Occupational Exposure Limits	
Local name	Acétate d'isopentyle
VME (OEL TWA)	270 mg/m ³
	50 ppm
VLE (OEL C/STEL)	540 mg/m ³
	100 ppm
Remark	Valeurs règlementaires contraignantes
Regulatory reference	Article R4412-149 du Code du travail (réf.: INRS ED 6443, 2022; Outil65; Décret n° 2019-1487; Décret n° 2020-1546; Décret n° 2021-434; Décret n° 2021-1849)
isobutyl acetate (110-19-0)	
EU - Indicative Occupational Exposure Limit (IOEL)	
Local name	Isobutyl acetate
IOEL TWA	241 mg/m ³

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isobutyl acetate (110-19-0)	
	50 ppm
IOEL STEL	723 mg/m ³
	150 ppm
Regulatory reference	COMMISSION DIRECTIVE (EU) 2019/1831
France - Occupational Exposure Limits	
Local name	Acétate d'isobutyle
VME (OEL TWA)	241 mg/m ³
	50 ppm
VLE (OEL C/STEL)	723 mg/m ³
	150 ppm
Remark	Valeurs réglementaires contraignantes
Regulatory reference	Article R4412-149 du Code du travail (réf.: INRS ED 6443, 2022; Outil65; Décret n° 2021-1849)
ethyl acetate (141-78-6)	
EU - Indicative Occupational Exposure Limit (IOEL)	
Local name	Ethyl acetate
IOEL TWA	734 mg/m ³
	200 ppm
IOEL STEL	1468 mg/m ³
	400 ppm
Regulatory reference	COMMISSION DIRECTIVE (EU) 2017/164
France - Occupational Exposure Limits	
Local name	Acétate d'éthyle
VME (OEL TWA)	734 mg/m ³
	200 ppm
VLE (OEL C/STEL)	1468 mg/m ³
	400 ppm
Remark	Valeurs réglementaires contraignantes
Regulatory reference	Article R4412-149 du Code du travail (réf.: INRS ED 6443, 2022; Outil65; Décret n° 2019-1487; Décret n° 2020-1546; Décret n° 2021-434; Décret n° 2021-1849)
butan-1-ol; n-butanol (71-36-3)	
France - Occupational Exposure Limits	
Local name	Alcool n-butylque
VLE (OEL C/STEL)	150 mg/m ³
	50 ppm
Remark	Valeurs recommandées/admises
Regulatory reference	Circulaire du Ministère du travail (réf.: INRS ED 6443, 2022; Outil65)

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ethanol/ ethyl alcohol (64-17-5)	
France - Occupational Exposure Limits	
Local name	Alcool éthylique
VME (OEL TWA)	1900 mg/m ³
	1000 ppm
VLE (OEL C/STEL)	9500 mg/m ³
	5000 ppm
Remark	Valeurs recommandées/admises
Regulatory reference	Circulaire du Ministère du travail (réf.: INRS ED 6443, 2022; Outil65)
n-butyl acetate (123-86-4)	
EU - Indicative Occupational Exposure Limit (IOEL)	
Local name	n-Butyl acetate
IOEL TWA	241 mg/m ³
	50 ppm
IOEL STEL	723 mg/m ³
	150 ppm
Regulatory reference	COMMISSION DIRECTIVE (EU) 2019/1831
France - Occupational Exposure Limits	
Local name	Acétate de n-butyle
VME (OEL TWA)	241 mg/m ³
	50 ppm
VLE (OEL C/STEL)	723 mg/m ³
	150 ppm
Remark	Valeurs règlementaires contraignantes
Regulatory reference	Article R4412-149 du Code du travail (réf.: INRS ED 6443, 2022; Outil65; Décret n° 2021-1849)
Valeraldehyde (110-62-3)	
France - Occupational Exposure Limits	
Local name	Aldéhyde n-valérique
VME (OEL TWA)	175 mg/m ³
	50 ppm
Remark	Valeurs recommandées/admises
Regulatory reference	Circulaire du Ministère du travail (réf.: INRS ED 6443, 2022; Outil65)
Isoamyl alcohol (123-51-3)	
EU - Indicative Occupational Exposure Limit (IOEL)	
Local name	Isoamyl alcohol
IOEL TWA	18 mg/m ³
	5 ppm
IOEL STEL	37 mg/m ³
	10 ppm

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Isoamyl alcohol (123-51-3)	
Regulatory reference	COMMISSION DIRECTIVE (EU) 2019/1831
France - Occupational Exposure Limits	
Local name	Alcool isoamylique
VME (OEL TWA)	18 mg/m ³
	5 ppm
VLE (OEL C/STEL)	37 mg/m ³
	10 ppm
Remark	Valeurs réglementaires contraignantes
Regulatory reference	Article R4412-149 du Code du travail (réf.: INRS ED 6443, 2022; Outil65; Décret n° 2021-1849)
Propionic acid (79-09-4)	
EU - Indicative Occupational Exposure Limit (IOEL)	
Local name	Propionic acid
IOEL TWA	31 mg/m ³
	10 ppm
IOEL STEL	62 mg/m ³
	20 ppm
Regulatory reference	COMMISSION DIRECTIVE 2000/39/EC
France - Occupational Exposure Limits	
Local name	Acide propionique
VME (OEL TWA)	31 mg/m ³
	10 ppm
VLE (OEL C/STEL)	62 mg/m ³
	20 ppm
Remark	Valeurs réglementaires indicatives
Regulatory reference	Arrêté du 30 juin 2004 modifié (réf.: INRS ED 6443, 2022; Outil65)
Glycerol (56-81-5)	
France - Occupational Exposure Limits	
Local name	Glycérine (aérosols de)
VME (OEL TWA)	10 mg/m ³
Remark	Valeurs recommandées/admises
Regulatory reference	Circulaire du Ministère du travail (réf.: INRS ED 6443, 2022; Outil65)
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.

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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	: Pink.
Odour	: Characteristic.
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	: 54,5 °C
Auto-ignition temperature	: Not available
Decomposition temperature	: Not available
pH	: 4,5 (3,5 – 5,5)
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	: 1,14 (1,12 – 1,16)
Relative vapour density at 20°C	: Not available
Particle characteristics	: Not applicable

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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)

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

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butan-1-ol; n-butanol (71-36-3)	
LD50 oral rat	≈ 2292 mg/kg bodyweight Animal: rat, Animal sex: female, Guideline: OECD Guideline 401 (Acute Oral Toxicity)
LD50 dermal rabbit	≈ 3430 mg/kg bodyweight Animal: rabbit, Animal sex: male, Guideline: OECD Guideline 402 (Acute Dermal Toxicity)
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
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
Valeraldehyde (110-62-3)	
LD50 oral rat	≈ 6490 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 401 (Acute Oral Toxicity)
LD50 dermal rabbit	4857 mg/kg bodyweight Animal: rabbit, Animal sex: male, Guideline: OECD Guideline 402 (Acute Dermal Toxicity)
LC50 Inhalation - Rat	14,3 mg/l air Animal: rat, Guideline: OECD Guideline 403 (Acute Inhalation Toxicity)
LC50 Inhalation - Rat (Vapours)	14,3 mg/l Source: ECHA
Isoamyl alcohol (123-51-3)	
LD50 oral rat	> 5000 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 401 (Acute Oral Toxicity)
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
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
Glycerol (56-81-5)	
LD50 oral rat	27200 mg/kg bodyweight Animal: rat, Animal sex: female
LC50 Inhalation - Rat	5,85 mg/l air Animal: rat
LC50 Inhalation - Rat (Vapours)	> 2,75 mg/l Source: ECHA
Skin corrosion/irritation	: Not classified (Based on available data, the classification criteria are not met) pH: 4,5 (3,5 – 5,5)
Acetic acid (64-19-7)	
pH	2,4 Source: ECHA

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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
Serious eye damage/irritation	: Not classified (Based on available data, the classification criteria are not met) pH: 4,5 (3,5 – 5,5)
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
Respiratory or skin sensitisation	: Not classified (Based on available data, the classification criteria are not met)
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)
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)
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.
butan-1-ol; n-butanol (71-36-3)	
STOT-single exposure	May cause respiratory irritation. May cause drowsiness or dizziness.
n-butyl acetate (123-86-4)	
STOT-single exposure	May cause drowsiness or dizziness.
Valeraldehyde (110-62-3)	
STOT-single exposure	May cause respiratory irritation.
Isoamyl alcohol (123-51-3)	
STOT-single exposure	May cause respiratory irritation.
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

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Isoamyl acetate / Isopentyl acetate (123-92-2)	
NOAEL (subchronic, oral, animal/female, 90 days)	443,07 mg/kg bodyweight Animal: , Animal sex: female
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)
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)
butan-1-ol; n-butanol (71-36-3)	
LOAEL (oral, rat, 90 days)	500 mg/kg bodyweight Animal: rat
NOAEL (oral, rat, 90 days)	125 mg/kg bodyweight Animal: rat
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)
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)
Aspiration hazard : Not classified (Based on available data, the classification criteria are not met)	
Acetic acid (64-19-7)	
Viscosity, kinematic	1,015 mm²/s
Isoamyl acetate / Isopentyl acetate (123-92-2)	
Viscosity, kinematic	1,176 mm²/s
isobutyl acetate (110-19-0)	
Viscosity, kinematic	0,803 mm²/s
2-isopropyl-N,2,3-trimethylbutyramide (51115-67-4)	
Viscosity, kinematic	Not applicable
butan-1-ol; n-butanol (71-36-3)	
Viscosity, kinematic	3,641 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)'

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Valeraldehyde (110-62-3)	
Viscosity, kinematic	0,672 mm ² /s

Isoamyl alcohol (123-51-3)	
Viscosity, kinematic	5,32 mm ² /s Temp.: '20°C' Parameter: 'kinematic viscosity (in mm ² /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)

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

Isoamyl acetate / 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

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)
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'

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'

2-isopropyl-N,2,3-trimethylbutyramide (51115-67-4)	
EC50 - Crustacea [1]	> 100 mg/l Test organisms (species): Daphnia magna

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2-isopropyl-N,2,3-trimethylbutyramide (51115-67-4)	
EC50 72h - Algae [1]	> 100 mg/l Test organisms (species): Raphidocelis subcapitata (previous names: Pseudokirchneriella subcapitata, Selenastrum capricornutum)
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
butan-1-ol; n-butanol (71-36-3)	
LC50 - Fish [1]	1376 mg/l Test organisms (species): Pimephales promelas
EC50 - Crustacea [1]	1328 mg/l Test organisms (species): Daphnia magna
EC50 96h - Algae [1]	225 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum)
NOEC (chronic)	4,1 mg/l Test organisms (species): Daphnia magna Duration: '21 d'
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'
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'
Valeraldehyde (110-62-3)	
LC50 - Fish [1]	12,4 mg/l Test organisms (species): Pimephales promelas
EC50 - Crustacea [1]	31,5 mg/l Test organisms (species): Daphnia magna
ErC50 algae	20 mg/l Source: EHCA
NOEC (chronic)	2,5 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)

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Isoamyl alcohol (123-51-3)	
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)
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)
Glycerol (56-81-5)	
LC50 - Fish [1]	54000 mg/l Test organisms (species): Oncorhynchus mykiss (previous name: Salmo gairdneri)
12.2. Persistence and degradability	
A&L ULTIMATE E-LIQUIDE KRONOS	
Persistence and degradability	Not rapidly degradable
Acetic acid (64-19-7)	
Persistence and degradability	Not rapidly degradable
Isoamyl acetate / Isopentyl acetate (123-92-2)	
Persistence and degradability	Not rapidly degradable
isobutyl acetate (110-19-0)	
Persistence and degradability	Not rapidly degradable
ethyl acetate (141-78-6)	
Persistence and degradability	Not rapidly degradable
2-isopropyl-N,2,3-trimethylbutyramide (51115-67-4)	
Persistence and degradability	Not rapidly degradable
Furaneol / 4-Hydroxy-2,5-dimethyl-3(2H)-furanone (3658-77-3)	
Persistence and degradability	Not rapidly degradable
butan-1-ol; n-butanol (71-36-3)	
Persistence and degradability	Not rapidly degradable
ethanol/ ethyl alcohol (64-17-5)	
Persistence and degradability	Not rapidly degradable
n-butyl acetate (123-86-4)	
Persistence and degradability	Not rapidly degradable
Valeraldehyde (110-62-3)	
Persistence and degradability	Not rapidly degradable
Isoamyl alcohol (123-51-3)	
Persistence and degradability	Not rapidly degradable

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

Glycerol (56-81-5)	
Persistence and degradability	Not rapidly degradable

12.3. Bioaccumulative potential

Acetic acid (64-19-7)	
Partition coefficient n-octanol/water (Log Pow)	-0,17 Source: ECHA

Isoamyl acetate / Isopentyl acetate (123-92-2)	
Partition coefficient n-octanol/water (Log Pow)	2,13 Source: ICSC

isobutyl acetate (110-19-0)	
Partition coefficient n-octanol/water (Log Pow)	1,6 Source: ICSC

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

ethanol/ ethyl alcohol (64-17-5)	
Partition coefficient n-octanol/water (Log Pow)	-0,32 Source: ICSC

n-butyl acetate (123-86-4)	
Partition coefficient n-octanol/water (Log Pow)	1,78 Source: HSDB

Valeraldehyde (110-62-3)	
Partition coefficient n-octanol/water (Log Pow)	1,5 Source: ECHA

Isoamyl alcohol (123-51-3)	
Partition coefficient n-octanol/water (Log Pow)	1,16 Source: HSDB

Propionic acid (79-09-4)	
Partition coefficient n-octanol/water (Log Pow)	0,33 Source: HSDB

Glycerol (56-81-5)	
Partition coefficient n-octanol/water (Log Pow)	-1,75 Source: ECHA

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.

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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

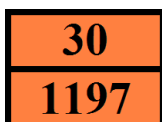
In accordance with ADR / IMDG / IATA

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) : 5I
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 :



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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 (EU 2019/1148)

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

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Drug Precursors Regulation (EC 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)

National regulations

Occupational diseases	
Code	Description
RG 84	Conditions caused by liquid organic solvents for professional use: saturated or unsaturated aliphatic or cyclic liquid hydrocarbons and mixtures thereof; liquid halogenated hydrocarbons; nitrated derivatives of aliphatic hydrocarbons; alcohols; glycols, glycol ethers; ketones; aldehydes; aliphatic and cyclic ethers, including tetrahydrofuran; esters; dimethylformamide and dimethylacetamine; acetonitrile and propionitrile; pyridine; dimethylsulfone and dimethylsulfoxide

Germany

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

Netherlands

SZW-lijst van kankerverwekkende stoffen : Ethanol/ Ethyl alcohol is listed
SZW-lijst van mutagene stoffen : None of the components are listed
SZW-lijst van reprotoxische stoffen – Borstvoeding : Ethanol/ Ethyl alcohol is listed
SZW-lijst van reprotoxische stoffen – Vruchtbaarheid : Ethanol/ Ethyl alcohol is listed
SZW-lijst van reprotoxische stoffen – Ontwikkeling : Ethanol/ Ethyl alcohol is listed

Denmark

Class for fire hazard : Class II-1
Store unit : 5 liter
Classification remarks : R10 <H226>; Emergency management guidelines for the storage of flammable liquids must be followed
Danish National Regulations : Pregnant/breastfeeding women working with the product must not be in direct contact with the product

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Poland

Polish National Regulations

: Act of 25 February 2011 on chemical substances and their mixtures (J. o L. No. 63, item 322 as amended; consolidated text J. o L. 2019, item 1225).
Act of 14 December 2012 on waste (J. o L. 2013, item 322 as amended; consolidated text J. o L. 2020, item 797).
The announcement of Marshal of the Sejm of the Republic of Poland dated 19 October 2016 concerning the consolidated text announcement of the decree on the management of packaging and packaging waste (J. o L. 2016, item 1863 as amended).
Decree of the Minister of Environment of 14 December 2014 on the catalogue of waste (J. o L. 2014, item 1923).
Act of 19 August 2011 on the Carriage of Dangerous Goods (J. o L. 2011 No. 227, item 1367 as amended; consolidated text J. o L. 2020, item 154).
Regulation of the Minister of Family, Labour and Social Policy of 12 June 2018 on the highest permissible concentration and intensity of noxious agents for health at work environment (J. o L. item 1286 as amended).
The announcement of Minister of Health dated 9 September 2016 concerning the consolidated text announcement of the decree of the Minister of Health of 30 December 2004 on health and safety at work related to exposure to chemical agents at work (J. o L. of 16 September 2016, item 1488).
Regulation of the Minister of Health of 2 February 2011 on tests and measurements of the noxious agents for health at work environment (J. o L. No. 33, item 166 as amended).
Regulation of the Minister of Environment of 9 December 2003 on particularly hazardous substances to the environment (J. o L. No. 217, item 2141).
ADR Agreement: Government Statement of 13 March 2023 on the entry into force of amendments to Annexes A and B to the Agreement concerning the International Carriage of Dangerous Goods by Road (ADR), signed in Geneva on 30 September 1957 (J. o. L. 2023, item 891)

Spain

Royal Decree 665/1997

: Is not subject to the Royal Decree 665/1997

15.2. Chemical safety assessment

No chemical safety assessment has been carried out

SECTION 16: Other information

Abbreviations and acronyms:	
ACGIH	American Conference of Governmental Industrial Hygienists (ACGIH)
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

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Abbreviations and acronyms:	
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	Lethal concentration for 50% of the population tested (median lethal concentration)
LD50	Median lethal dose for 50% of the population tested (median lethal dose)
LOAEL	Lowest Observed Adverse Effect Level
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 and Health Administration (OSHA)
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
Eye Dam. 1	Serious eye damage/eye irritation, Category 1
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2

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Full text of H- and EUH-statements:	
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
Skin Irrit. 2	Skin corrosion/irritation, Category 2
Skin Sens. 1	Skin sensitisation, Category 1
Skin Sens. 1A	Skin sensitisation, category 1A
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.
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.
EUH066	Repeated exposure may cause skin dryness or cracking.
EUH208	Contains Furaneol. May produce an allergic reaction.

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.