

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH), amended by Regulation
(EC) No. 2015/830

Yuzu oil – cold pressed - Citrus junos Sieb. Ex Tanaka

Version number: GHS 1.1

Date of compilation: 2018-06-21

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

1.1 Product identifier

Trade name

Yuzu oil – cold pressed - Citrus junos Sieb. Ex Tanaka

Registration number (REACH)

the substance is exempted from the obligation to register - tonnage

EC number

639-006-9

CAS number

233683-84-6

Other means of identification

Botanical name

Citrus junos Sieb. Ex Tanaka

Item code

YU-CPO-EO1

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

Relevant identified uses

SU3 : industrial uses: uses of substances as such or in preparations at industrial sites
PC28 : perfumes, fragrances

1.3 Details of the supplier of the safety data sheet



1.4 Emergency telephone number

Emergency information service

Austria : +431 406 43 43;
Belgium : +070 245 245 (7 /7 24/24);
Bulgaria : +359 2 9154 409;
Czech republic tel +420 224 919 293, +420 224 915 402;
Denmark : 82 12 12 12;
Estonia : tel. nationally 16662, from abroad (+372) 626 93 90;
Finland : (09) 471 977 (direct) or (09) 4711 (exchange);
France : + 33 (0)1 45 42 59 59 (7/7 24/24);
Germany : 030/19240;
Hungary : +36 1 476 6464;
Ireland : 01 8092566 or 01 8379964;
Lithuania : 370 5 236 20 52 ou 370 687 53 378;
Malta : 2545 0000;
Netherlands : 030-2748888;
New zealand : 0800 764 766 or 0800 611 116;
Norway : + 47 810 20 050;
Portugal : 808 250 143;
Romania : 021.318.36.06;
Slovakia : 421 2 5477 4166;
Spain : + 34 91 562 04 20;
Sweden : 112 ou 08-331231.
United kingdom : +44 7769893997
USA : 1-800-222-1222.

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

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

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH), amended by Regulation
(EC) No. 2015/830

Yuzu oil – cold pressed - Citrus junos Sieb. Ex Tanaka

Version number: GHS 1.1

Date of compilation: 2018-06-21

Section	Hazard class	Cat-egory	Hazard class and category	Hazard state-ment
2.6	flammable liquid	Cat. 3	(Flam. Liq. 3)	H226
3.2	skin corrosion/irritation	Cat. 2	(Skin Irrit. 2)	H315
3.4S	skin sensitisation	Cat. 1B	(Skin Sens. 1B)	H317
3.10	aspiration hazard	Cat. 1	(Asp. Tox. 1)	H304
4.1A	hazardous to the aquatic environment - acute hazard	Cat. 1	(Aquatic Acute 1)	H400
4.1C	hazardous to the aquatic environment - chronic hazard	Cat. 1	(Aquatic Chronic 1)	H410

Remarks

For full text of H-phrases: see SECTION 16.

The most important adverse physicochemical, human health and environmental effects

The product is combustible and can be ignited by potential ignition sources. Spillage and fire water can cause pollution of watercourses.

2.2 Label elements

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

Signal word

Danger

Pictograms

GHS02, GHS07,
GHS08, GHS09



Hazard statements

H226 Flammable liquid and vapour.
H304 May be fatal if swallowed and enters airways.
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H410 Very toxic to aquatic life with long lasting effects.

Precautionary statements

Precautionary statements - prevention

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P233 Keep container tightly closed.
P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
P272 Contaminated work clothing should not be allowed out of the workplace.
P273 Avoid release to the environment.
P280 Wear protective gloves.

Precautionary statements - response

P301+P310 IF SWALLOWED: Immediately call a POISON CENTER/doctor.
P302+P352 IF ON SKIN: Wash with plenty of soap and water.
P331 Do NOT induce vomiting.
P333+P313 If skin irritation or rash occurs: Get medical advice/attention.
P362+P364 Take off contaminated clothing and wash it before reuse.
P391 Collect spillage.

Precautionary statements - storage

P403+P235 Store in a well-ventilated place. Keep cool.
P405 Store locked up.

Precautionary statements - disposal

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH), amended by Regulation (EC) No. 2015/830

Yuzu oil – cold pressed - Citrus junos Sieb. Ex Tanaka

Version number: GHS 1.1

Date of compilation: 2018-06-21

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

Hazardous ingredients for labelling:

d-Limonene, alpha-Pinene, p-Mentha-1,4-diene = gamma terpinene, beta-Pinene, Terpinolene, Linalool, Caryophyllene

2.3 Other hazards

There is no additional information.

SECTION 3: Composition/information on ingredients

3.1 Substances






















UVCB substance : composition of the UVCB substance in section 3.2.

EC number 639-006-9

CAS number 233683-84-6

3.2 Mixtures

Description of the mixture

Name of substance	Identifier	wt%	Classification acc. to 1272/2008/EC	Pictograms	Notes
d-Limonene	CAS No 5989-27-5 EC No 227-813-5	50 – < 75	Flam. Liq. 3 / H226 Skin Irrit. 2 / H315 Skin Sens. 1B / H317 Asp. Tox. 1 / H304 Aquatic Acute 1 / H400 Aquatic Chronic 1 / H410	   	
p-Mentha-1,4-diene = gamma terpinene	CAS No 99-85-4 EC No 202-794-6	10 – < 25	Flam. Liq. 3 / H226 Asp. Tox. 1 / H304	 	
beta-Phellandrene	CAS No 555-10-2 EC No 209-081-9	5 – < 10	Flam. Liq. 3 / H226 Asp. Tox. 1 / H304	 	
Myrcene	CAS No 123-35-3 EC No 204-622-5	1 – < 5	Flam. Liq. 3 / H226 Skin Irrit. 2 / H315 Eye Irrit. 2 / H319 Asp. Tox. 1 / H304	  	
alpha-Pinene	CAS No 80-56-8 EC No 201-291-9	1 – < 5	Flam. Liq. 3 / H226 Skin Irrit. 2 / H315 Skin Sens. 1B / H317 Asp. Tox. 1 / H304 Aquatic Acute 1 / H400 Aquatic Chronic 1 / H410	   	
beta-Pinene	CAS No 127-91-3 EC No 204-872-5	1 – < 5	Flam. Liq. 3 / H226 Skin Irrit. 2 / H315 Skin Sens. 1B / H317 Asp. Tox. 1 / H304 Aquatic Acute 1 / H400 Aquatic Chronic 1 / H410	   	
alpha-Phellandrene	CAS No 99-83-2 EC No 202-792-5	1 – < 5	Flam. Liq. 3 / H226 Asp. Tox. 1 / H304	 	







Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH), amended by Regulation (EC) No. 2015/830

Yuzu oil – cold pressed - Citrus junos Sieb. Ex Tanaka

Version number: GHS 1.1

Date of compilation: 2018-06-21

Name of substance	Identifier	wt%	Classification acc. to 1272/2008/EC	Pictograms	Notes
p-Cymene	CAS No 99-87-6 EC No 202-796-7	< 1	Flam. Liq. 3 / H226 Asp. Tox. 1 / H304 Aquatic Chronic 2 / H411		
Terpinolene	CAS No 586-62-9 EC No 209-578-0	< 1	Skin Sens. 1B / H317 Asp. Tox. 1 / H304 Aquatic Acute 1 / H400 Aquatic Chronic 1 / H410		
Linalool	CAS No 78-70-6 EC No 201-134-4	< 1	Skin Irrit. 2 / H315 Eye Irrit. 2 / H319 Skin Sens. 1 / H317		
p-Mentha-1,3-diene	CAS No 99-86-5 EC No 202-795-1	< 1	Flam. Liq. 3 / H226 Acute Tox. 4 / H302 Asp. Tox. 1 / H304 Aquatic Chronic 2 / H411		
Thymol	CAS No 89-83-8 EC No 201-944-8	< 1	Acute Tox. 4 / H302 Skin Corr. 1B / H314 Eye Dam. 1 / H318 Aquatic Chronic 2 / H411		
Caryophyllene	CAS No 87-44-5 EC No 201-746-1 REACH Reg. No 01-2120745237-53- xxxx	< 1	Skin Sens. 1B / H317 Asp. Tox. 1 / H304 Aquatic Chronic 4 / H413		

For full text of abbreviations: see SECTION 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

General notes

Do not leave affected person unattended. Remove victim out of the danger area. Keep affected person warm, still and covered. Take off immediately all contaminated clothing. In all cases of doubt, or when symptoms persist, seek medical advice. In case of unconsciousness place person in the recovery position. Never give anything by mouth.

Following inhalation

If breathing is irregular or stopped, immediately seek medical assistance and start first aid actions. In case of respiratory tract irritation, consult a physician. Provide fresh air.

Following skin contact

Wash with plenty of soap and water.

Following eye contact

Remove contact lenses, if present and easy to do. Continue rinsing. Irrigate copiously with clean, fresh water for at least 10 minutes, holding the eyelids apart.

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH), amended by Regulation
(EC) No. 2015/830

Yuzu oil – cold pressed - Citrus junos Sieb. Ex Tanaka

Version number: GHS 1.1

Date of compilation: 2018-06-21

Following ingestion

Rinse mouth with water (only if the person is conscious). Do NOT induce vomiting.

4.2 Most important symptoms and effects, both acute and delayed

Symptoms and effects are not known to date.

4.3 Indication of any immediate medical attention and special treatment needed

none

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media

water spray, alcohol resistant foam, BC-powder, carbon dioxide (CO₂)

Unsuitable extinguishing media

water jet

5.2 Special hazards arising from the substance or mixture

In case of insufficient ventilation and/or in use, may form flammable/explosive vapour-air mixture. Solvent vapours are heavier than air and may spread along floors. Places which are not ventilated, e.g. unventilated below ground level areas such as trenches, conduits and shafts, are particularly prone to the presence of flammable substances or mixtures.

Hazardous combustion products

nitrogen oxides (NO_x)

5.3 Advice for firefighters

In case of fire and/or explosion do not breathe fumes. Co-ordinate firefighting measures to the fire surroundings. Do not allow firefighting water to enter drains or water courses. Collect contaminated firefighting water separately. Fight fire with normal precautions from a reasonable distance.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

Remove persons to safety.

For emergency responders

Wear breathing apparatus if exposed to vapours/dust/spray/gases.

6.2 Environmental precautions

Keep away from drains, surface and ground water. Retain contaminated washing water and dispose of it. If substance has entered a water course or sewer, inform the responsible authority.

6.3 Methods and material for containment and cleaning up

Advices on how to contain a spill

Covering of drains.

Advices on how to clean up a spill

Wipe up with absorbent material (e.g. cloth, fleece). Collect spillage (sawdust, kieselgur (diatomite), sand, universal binder).

Appropriate containment techniques

Use of adsorbent materials.

Other information relating to spills and releases

Place in appropriate containers for disposal. Ventilate affected area.

6.4 Reference to other sections

Hazardous combustion products: see section 5. Personal protective equipment: see section 8. Incompatible materials: see section 10. Disposal considerations: see section 13.

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH), amended by Regulation
(EC) No. 2015/830

Yuzu oil – cold pressed - Citrus junos Sieb. Ex Tanaka

Version number: GHS 1.1

Date of compilation: 2018-06-21

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Recommendations

• Measures to prevent fire as well as aerosol and dust generation

Use local and general ventilation. Avoidance of ignition sources. Keep away from sources of ignition - No smoking. Take precautionary measures against static discharge. Use only in well-ventilated areas. Due to danger of explosion, prevent leakage of vapours into cellars, flues and ditches. Ground/bond container and receiving equipment. Use explosion-proof electrical/ventilating/lighting/equipment. Use only non-sparking tools.

• Warning

Places which are not ventilated, e.g. unventilated below ground level areas such as trenches, conduits and shafts, are particularly prone to the presence of flammable substances or mixtures. Vapours are heavier than air, spread along floors and form explosive mixtures with air. Vapours may form explosive mixtures with air.

Advice on general occupational hygiene

Wash hands after use. Do not eat, drink and smoke in work areas. Remove contaminated clothing and protective equipment before entering eating areas. Never keep food or drink in the vicinity of chemicals. Never place chemicals in containers that are normally used for food or drink. Keep away from food, drink and animal feeding-stuffs.

7.2 Conditions for safe storage, including any incompatibilities

Managing of associated risks

• Explosive atmospheres

Keep container tightly closed and in a well-ventilated place. Use local and general ventilation. Keep cool. Protect from sunlight.

• Flammability hazards

Keep away from sources of ignition - No smoking. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Take precautionary measures against static discharge. Protect from sunlight.

Incompatible substances or mixtures

Observe hints for combined storage.

Consideration of other advice

• Ventilation requirements

Use local and general ventilation. Ground/bond container and receiving equipment.

• Packaging compatibilities

Only packagings which are approved (e.g. acc. to ADR) may be used.

7.3 Specific end use(s)

See section 16 for a general overview.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

National limit values

Occupational exposure limit values (Workplace Exposure Limits)

Country	Name of agent	CAS No	Identifier	TWA A [ppm]	TWA [mg/m ³]	STEL L [ppm]	STEL [mg/m ³]	Source	wt%
GB	cycloalkanes (>C7)	127-91-3	WEL		800			EH40/2005	1 - < 5

Notation

STEL Short-term exposure limit: a limit value above which exposure should not occur and which is related to a 15-minute period (unless otherwise specified)

TWA Time-weighted average (long-term exposure limit): measured or calculated in relation to a reference period of 8 hours time-weighted average (unless otherwise specified)

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH), amended by Regulation
(EC) No. 2015/830

Yuzu oil – cold pressed - Citrus junos Sieb. Ex Tanaka

Version number: GHS 1.1

Date of compilation: 2018-06-21

Relevant DNELs/DMELs/PNECs and other threshold levels

• relevant DNELs of components of the mixture

Name of substance	CAS No	End-point	Threshold level	Protection goal, route of exposure	Used in	Exposure time
d-Limonene	5989-27-5	DNEL	33.3 mg/m ³	human, inhalatory	worker (industry)	chronic - systemic effects
beta-Pinene	127-91-3	DNEL	0.8 mg/kg	human, dermal	worker (industry)	chronic - systemic effects
beta-Pinene	127-91-3	DNEL	5.69 mg/m ³	human, inhalatory	worker (industry)	chronic - systemic effects
Linalool	78-70-6	DNEL	5 mg/kg	human, dermal	worker (industry)	acute - systemic effects
Linalool	78-70-6	DNEL	16.5 mg/m ³	human, inhalatory	worker (industry)	acute - systemic effects
Linalool	78-70-6	DNEL	2.5 mg/kg	human, dermal	worker (industry)	chronic - systemic effects
Linalool	78-70-6	DNEL	2.8 mg/m ³	human, inhalatory	worker (industry)	chronic - systemic effects

• relevant PNECs of components of the mixture

Name of substance	CAS No	End-point	Threshold level	Organism	Environmental compartment	Exposure time
d-Limonene	5989-27-5	PNEC	5.4 µg/l	aquatic organisms	freshwater	short-term (single instance)
d-Limonene	5989-27-5	PNEC	0.54 µg/l	aquatic organisms	marine water	short-term (single instance)
d-Limonene	5989-27-5	PNEC	1.8 mg/l	microorganisms	sewage treatment plant (STP)	short-term (single instance)
d-Limonene	5989-27-5	PNEC	0.13 mg/kg	pelagic organisms	sediments	short-term (single instance)
d-Limonene	5989-27-5	PNEC	3.33 mg/kg	(top) predators	water	short-term (single instance)
d-Limonene	5989-27-5	PNEC	0.262 mg/kg	terrestrial organisms	soil	short-term (single instance)
d-Limonene	5989-27-5	PNEC	1.32 mg/kg	benthic organisms	sediments	short-term (single instance)
beta-Pinene	127-91-3	PNEC	1.004 µg/l	aquatic organisms	freshwater	short-term (single instance)
beta-Pinene	127-91-3	PNEC	0.1004 µg/l	aquatic organisms	marine water	short-term (single instance)
beta-Pinene	127-91-3	PNEC	3.26 mg/l	microorganisms	sewage treatment plant (STP)	short-term (single instance)
beta-Pinene	127-91-3	PNEC	0.337 mg/kg	benthic organisms	sediments	short-term (single instance)
beta-Pinene	127-91-3	PNEC	0.0337 mg/kg	pelagic organisms	sediments	short-term (single instance)
beta-Pinene	127-91-3	PNEC	13.1 mg/kg	(top) predators	water	short-term (single instance)

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH), amended by Regulation
(EC) No. 2015/830

Yuzu oil – cold pressed - Citrus junos Sieb. Ex Tanaka

Version number: GHS 1.1

Date of compilation: 2018-06-21

Name of substance	CAS No	End-point	Threshold level	Organism	Environmental compartment	Exposure time
beta-Pinene	127-91-3	PNEC	0.0671 mg/kg	terrestrial organisms	soil	short-term (single instance)
Linalool	78-70-6	PNEC	0.2 mg/l	aquatic organisms	freshwater	short-term (single instance)
Linalool	78-70-6	PNEC	0.02 mg/l	aquatic organisms	marine water	short-term (single instance)
Linalool	78-70-6	PNEC	10 mg/l	microorganisms	sewage treatment plant (STP)	short-term (single instance)
Linalool	78-70-6	PNEC	2.22 mg/kg	benthic organisms	sediments	short-term (single instance)
Linalool	78-70-6	PNEC	0.222 mg/kg	pelagic organisms	sediments	short-term (single instance)
Linalool	78-70-6	PNEC	7.8 mg/kg	(top) predators	water	short-term (single instance)
Linalool	78-70-6	PNEC	0.327 mg/kg	terrestrial organisms	soil	short-term (single instance)
Linalool	78-70-6	PNEC	2 mg/l	aquatic organisms	water	intermittent release

8.2 Exposure controls

Appropriate engineering controls

General ventilation.

Individual protection measures (personal protective equipment)

Eye/face protection

Wear eye/face protection.

Skin protection

• hand protection

Wear suitable gloves. Chemical protection gloves are suitable, which are tested according to EN 374. Check leak-tightness/impermeability prior to use. In the case of wanting to use the gloves again, clean them before taking off and air them well. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

• other protection measures

Take recovery periods for skin regeneration. Preventive skin protection (barrier creams/ointments) is recommended. Wash hands thoroughly after handling.

Respiratory protection

In case of inadequate ventilation wear respiratory protection.

Environmental exposure controls

Use appropriate container to avoid environmental contamination. Keep away from drains, surface and ground water.

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH), amended by Regulation
(EC) No. 2015/830

Yuzu oil – cold pressed - Citrus junos Sieb. Ex Tanaka

Version number: GHS 1.1

Date of compilation: 2018-06-21

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance

Physical state	liquid
Colour	yellow
Odour	characteristic

Other physical and chemical parameters

pH (value)	not determined
Melting point/freezing point	not determined
Initial boiling point and boiling range	not determined
Flash point	53 °C (closed cup method test)
Evaporation rate	not determined
Flammability (solid, gas)	not relevant (fluid)
Explosive limits	not determined
Vapour pressure	not determined
Density	0.842 - 0.850
Partition coefficient	
n-octanol/water (log KOW)	This information is not available.
Auto-ignition temperature	not determined
Viscosity	not determined
Explosive properties	none
Oxidising properties	none

9.2 Other information

There is no additional information.

SECTION 10: Stability and reactivity

10.1 Reactivity

Concerning incompatibility: see below "Conditions to avoid" and "Incompatible materials". The mixture contains reactive substance(s): risk of ignition

• if heated

risk of ignition

10.2 Chemical stability

See below "Conditions to avoid".

10.3 Possibility of hazardous reactions

No known hazardous reactions.

10.4 Conditions to avoid

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

Hints to prevent fire or explosion

Use explosion-proof electrical/ventilating/lighting/equipment. Use only non-sparking tools. Take precautionary measures against static discharge.

Physical stresses which might result in a hazardous situation and have to be avoided

strong shocks

10.5 Incompatible materials

oxidisers

10.6 Hazardous decomposition products

Reasonably anticipated hazardous decomposition products produced as a result of use, storage, spill and heating are not known. Hazardous combustion products: see section 5.

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH), amended by Regulation (EC) No. 2015/830

Yuzu oil – cold pressed - Citrus junos Sieb. Ex Tanaka

Version number: GHS 1.1

Date of compilation: 2018-06-21

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Classification procedure

The method for classification of the mixture is based on ingredients of the mixture (additivity formula).

Classification according to GHS (1272/2008/EC, CLP)

Acute toxicity

Shall not be classified as acutely toxic.

• Acute toxicity of components of the mixture

Name of substance	CAS No	Exposure route	ATE
p-Mentha-1,3-diene	99-86-5	oral	1,680 mg/kg
Thymol	89-83-8	oral	980 mg/kg

Name of substance	CAS No	Exposure route	Endpoint	Value	Species	Source
p-Mentha-1,4-diene = gamma terpinene	99-85-4	oral	LD50	3,850 mg/kg	unknown	
alpha-Pinene	80-56-8	oral	LD50	3,500 mg/kg	unknown	
p-Cymene	99-87-6	oral	LD50	4,750 mg/kg	unknown	
Terpinolene	586-62-9	oral	LD50	3,850 mg/kg	unknown	
Linalool	78-70-6	oral	LD50	2,790 mg/kg	rat	
Linalool	78-70-6	dermal	LD50	5,610 mg/kg	rabbit	
p-Mentha-1,3-diene	99-86-5	oral	LD50	1,680 mg/kg	unknown	
Thymol	89-83-8	oral	LD50	980 mg/kg	unknown	
Caryophyllene	87-44-5	oral	LD50	>5,000 mg/kg	mouse	European Chemicals Agency, http://echa.europa.eu/

Skin corrosion/irritation

Causes skin irritation.

Serious eye damage/eye irritation

Shall not be classified as seriously damaging to the eye or eye irritant.

Respiratory or skin sensitisation

May cause an allergic skin reaction.

Summary of evaluation of the CMR properties

Shall not be classified as germ cell mutagenic, carcinogenic nor as a reproductive toxicant.

Specific target organ toxicity (STOT)

Shall not be classified as a specific target organ toxicant.

Aspiration hazard

May be fatal if swallowed and enters airways.

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH), amended by Regulation (EC) No. 2015/830

Yuzu oil – cold pressed - Citrus junos Sieb. Ex Tanaka

Version number: GHS 1.1

Date of compilation: 2018-06-21

SECTION 12: Ecological information

12.1 Toxicity

Very toxic to aquatic life with long lasting effects.

Aquatic toxicity (acute)

Aquatic toxicity (acute) of components of the mixture

Name of substance	CAS No	Endpoint	Value	Species	Exposure time
d-Limonene	5989-27-5	LC50	720 µg/l	fish	96 h
d-Limonene	5989-27-5	EC50	688 µg/l	fish	96 h
beta-Pinene	127-91-3	LC50	0.68 mg/l	fish	96 h
beta-Pinene	127-91-3	EC50	1.09 mg/l	aquatic invertebrates	48 h
beta-Pinene	127-91-3	ErC50	0.7 mg/l	algae	72 h
Linalool	78-70-6	LC50	27.8 mg/l	fish	96 h
Linalool	78-70-6	EC50	59 mg/l	aquatic invertebrates	48 h
Linalool	78-70-6	ErC50	156.7 mg/l	algae	96 h
Caryophyllene	87-44-5	EC50	>0.17 mg/l	aquatic invertebrates	48 h
Caryophyllene	87-44-5	ErC50	>0.033 mg/l	algae	72 h

Aquatic toxicity (chronic)

May cause long-term adverse effects in the aquatic environment.

Aquatic toxicity (chronic) of components of the mixture

Name of substance	CAS No	Endpoint	Value	Species	Exposure time
d-Limonene	5989-27-5	EC50	0.85 mg/l	aquatic invertebrates	24 h
Linalool	78-70-6	LC50	27.8 mg/l	fish	24 h
Linalool	78-70-6	EC50	71 mg/l	aquatic invertebrates	24 h

Biodegradation

The relevant substances of the mixture are readily biodegradable.

12.2 Persistence and degradability

Degradability of components of the mixture

Name of substance	CAS No	Process	Degradation rate	Time
beta-Pinene	127-91-3	oxygen depletion	76 %	28 d
Linalool	78-70-6	oxygen depletion	40.9 %	5 d

12.3 Bioaccumulative potential

Data are not available.

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH), amended by Regulation (EC) No. 2015/830

Yuzu oil – cold pressed - Citrus junos Sieb. Ex Tanaka

Version number: GHS 1.1

Date of compilation: 2018-06-21

Bioaccumulative potential of components of the mixture

Name of substance	CAS No	BCF	Log KOW	BOD5/COD
d-Limonene	5989-27-5		4.38 (pH value: 7.2, 37 °C)	
Linalool	78-70-6		2.84 (pH value: 7, 25 °C)	
Caryophyllene	87-44-5		6.23 (pH value: 7, 25 °C)	

12.4 Mobility in soil

Data are not available.

12.5 Results of PBT and vPvB assessment

Data are not available.

12.6 Other adverse effects

Data are not available.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Waste treatment-relevant information

Solvent reclamation/regeneration.

Sewage disposal-relevant information

Do not empty into drains. Avoid release to the environment. Refer to special instructions/safety data sheets.

Waste treatment of containers/packagings

It is a dangerous waste; only packagings which are approved (e.g. acc. to ADR) may be used. Completely emptied packages can be recycled. Handle contaminated packages in the same way as the substance itself.

Relevant provisions relating to waste

Properties of waste which render it hazardous

not assigned

Remarks

Please consider the relevant national or regional provisions. Waste shall be separated into the categories that can be handled separately by the local or national waste management facilities.

SECTION 14: Transport information

- 14.1** UN number **1169**
- 14.2** UN proper shipping name **EXTRACTS, AROMATIC, LIQUID**
- 14.3** Transport hazard class(es)
Class 3 (flammable liquids)
- 14.4** Packing group III (substance presenting low danger)
- 14.5** Environmental hazards hazardous to the aquatic environment: (d-Limonene)
- 14.6** Special precautions for user
Provisions for dangerous goods (ADR) should be complied within the premises.
- 14.7** Transport in bulk according to Annex II of MARPOL and the IBC Code
The cargo is not intended to be carried in bulk.

Information for each of the UN Model Regulations

• Transport of dangerous goods by road, rail and inland waterway (ADR/RID/ADN)

UN number 1169
Proper shipping name EXTRACTS, AROMATIC, LIQUID

Safety Data Sheet

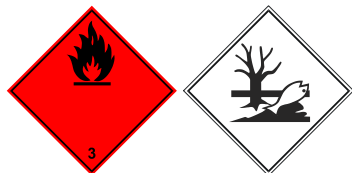
according to Regulation (EC) No. 1907/2006 (REACH), amended by Regulation
(EC) No. 2015/830

Yuzu oil – cold pressed - Citrus junos Sieb. Ex Tanaka

Version number: GHS 1.1

Date of compilation: 2018-06-21

Class	3
Classification code	F1
Packing group	III
Danger label(s)	3 + "fish and tree"



Environmental hazards	yes (hazardous to the aquatic environment)
Special provisions (SP)	601
Excepted quantities (EQ)	E1
Limited quantities (LQ)	5 L
Transport category (TC)	3
Tunnel restriction code (TRC)	D/E
Hazard identification No	30
Emergency Action Code	3YE

• **International Maritime Dangerous Goods Code (IMDG)**

UN number	1169
Proper shipping name	EXTRACTS, AROMATIC, LIQUID
Class	3
Marine pollutant	yes (hazardous to the aquatic environment)
Packing group	III
Danger label(s)	3 + "fish and tree"



Special provisions (SP)	223, 955
Excepted quantities (EQ)	E1
Limited quantities (LQ)	5 L
EmS	F-E, S-D
Stowage category	A
• International Civil Aviation Organization (ICAO-IATA/DGR)	
UN number	1169
Proper shipping name	Extracts, aromatic, liquid
Class	3
Environmental hazards	yes (hazardous to the aquatic environment)
Packing group	III
Danger label(s)	3



Special provisions (SP)	A3
Excepted quantities (EQ)	E1
Limited quantities (LQ)	10 L

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH), amended by Regulation
(EC) No. 2015/830

Yuzu oil – cold pressed - Citrus junos Sieb. Ex Tanaka

Version number: GHS 1.1

Date of compilation: 2018-06-21

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture Relevant provisions of the European Union (EU)

• Seveso Directive

No	Dangerous substance/hazard categories	Qualifying quantity (tonnes) for the application of lower and upper-tier requirements		Notes
E1	environmental hazards (hazardous to the aquatic environment, cat. 1)	100	200	56)
P5c	flammable liquids (cat. 2, 3)	5,000	50,000	51)

Notation

51) Flammable liquids, categories 2 or 3 not covered by P5a and P5b

56) Hazardous to the Aquatic Environment in category Acute 1 or Chronic 1

15.2 Chemical Safety Assessment

Chemical safety assessments for substances in this mixture were not carried out.

SECTION 16: Other information

Abbreviations and acronyms

Abbr.	Descriptions of used abbreviations
Acute Tox.	Acute toxicity
ADN	Accord européen relatif au transport international des marchandises dangereuses par voies de navigation intérieures (European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways)
ADR	Accord européen relatif au transport international des marchandises dangereuses par route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
Aquatic Acute	Hazardous to the aquatic environment - acute hazard
Aquatic Chronic	Hazardous to the aquatic environment - chronic hazard
Asp. Tox.	Aspiration hazard
ATE	Acute Toxicity Estimate
BCF	Bioconcentration factor
BOD	Biochemical Oxygen Demand
CAS	Chemical Abstracts Service (service that maintains the most comprehensive list of chemical substances)
CLP	Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures
CMR	Carcinogenic, Mutagenic or toxic for Reproduction
COD	Chemical oxygen demand
DGR	Dangerous Goods Regulations (see IATA/DGR)
DMEL	Derived Minimal Effect Level
DNEL	Derived No-Effect Level
EC No	The EC Inventory (EINECS, ELINCS and the NLP-list) is the source for the seven-digit EC number, an identifier of substances commercially available within the EU (European Union)
EH40/2005	EH40/2005 Workplace exposure limits (http://www.nationalarchives.gov.uk/doc/open-government-licence/)
EINECS	European Inventory of Existing Commercial Chemical Substances
ELINCS	European List of Notified Chemical Substances
EmS	Emergency Schedule

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH), amended by Regulation
(EC) No. 2015/830

Yuzu oil – cold pressed - Citrus junos Sieb. Ex Tanaka

Version number: GHS 1.1

Date of compilation: 2018-06-21

Abbr.	Descriptions of used abbreviations
Eye Dam.	Seriously damaging to the eye
Eye Irrit.	Irritant to the eye
Flam. Liq.	Flammable liquid
GHS	"Globally Harmonized System of Classification and Labelling of Chemicals" developed by the United Nations
IATA	International Air Transport Association
IATA/DGR	Dangerous Goods Regulations (DGR) for the air transport (IATA)
ICAO	International Civil Aviation Organization
IMDG	International Maritime Dangerous Goods Code
log KOW	n-Octanol/water
MARPOL	International Convention for the Prevention of Pollution from Ships (abbr. of "Marine Pollutant")
NLP	No-Longer Polymer
PBT	Persistent, Bioaccumulative and Toxic
PNEC	Predicted No-Effect Concentration
ppm	Parts per million
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals
RID	Règlement concernant le transport International ferroviaire des marchandises Dangereuses (Regulations concerning the International carriage of Dangerous goods by Rail)
Skin Corr.	Corrosive to skin
Skin Irrit.	Irritant to skin
Skin Sens.	Skin sensitisation
STEL	Short-term exposure limit
TWA	Time-weighted average
vPvB	Very Persistent and very Bioaccumulative
WEL	Workplace exposure limit

Key literature references and sources for data

- Supplier
- Echa.europa.eu/fr

Classification procedure

Physical and chemical properties: The classification is based on tested mixture.

Health hazards/environmental hazards: The method for classification of the mixture is based on ingredients of the mixture (additivity formula).

List of relevant phrases (code and full text as stated in chapter 2 and 3)

Code	Text
H226	Flammable liquid and vapour.
H302	Harmful if swallowed.
H304	May be fatal if swallowed and enters airways.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH), amended by Regulation
(EC) No. 2015/830

Yuzu oil – cold pressed - Citrus junos Sieb. Ex Tanaka

Version number: GHS 1.1

Date of compilation: 2018-06-21

Code	Text
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
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.
H413	May cause long lasting harmful effects to aquatic life.

Disclaimer

This document has been prepared in compliance with the Regulation (EU) 453/2010 of the Commission of 20 May 2010 and the classification has been carried out in compliance with the Regulation (EC) 1272/2008 of the Parliament and the Council of 16 December 2008, from available data on the substance (s) or the mixture concerned by this document at its release date.

Information mentioned in this document is intended to ensure, safety on handling, use, processing, storage, transport, and placing on the market of the substance or the mixture.

This information may not be valid, if the substance or the mixture concerned by this document is used for another usage than the one mentioned in section 1 of this document.

The recipient of this safety data sheet remains responsible for its transmission within the downstream supply chain.

