

SWEET ORANGE OIL

Version 1RME07 (Revision Number: 1 - Revision Date: October 26, 2023)

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1. IDENTIFICATION OF THE SUBSTANCE AND OF THE COMPANY/UNDERTAKING**1.1 Product identifier**

product trade name: Sweet Orange Essential Oil
 EC name/registration name: Orange, sweet, ext.
 EC number: 232-433-8
 CAS number (EC inventory): 8028-48-6
 REACH Registration Number: 01-2119493353-35-0006

1.2 Relevant identified uses of the substance and uses advised against

relevant uses: odour agent / flavouring agent - ingredient for industrial manufacturing.
 uses advised against: not for personal use in this form or concentration.

1.3 Details of the supplier of the safety data sheet

company: EcoFlores, ul. Waksmundzka 34, 34-400 Nowy Targ, Poland
 telephone number: +48-604-508-229
 www: www.ecoflores.eu
 email: kontakt@ecoflores.eu

1.4 Emergency telephone number

supplier:

poison control center:

112

2. HAZARDS IDENTIFICATION**2.1 Classification of the substance**

Reg. (EC) No 1272/2008:	Flam. Liq. 3	Asp. Tox. 1	Skin Irrit. 2	Skin Sens. 1	Aquatic Chronic 2
hazard categories:	FL3	AH1	SCI2	SS1	EHC2
hazard statements:	H226	H304	H315	H317	H411
hazard pictograms:	GHS02	GHS08	GHS07		GHS09

2.2 Label elements

hazard pictograms:



signal word: danger
 hazard statements: H226, H304, H315, H317, H411
 precautionary statement: P210, P241, P262, P273, P280, P301/310, P303/361/353, P331, P405, P501

2.3 Other hazards

Ecological information:

according to Annex XIII of REACH Regulation, the substance contains no constituent considered either Persistent, Bioaccumulative and Toxic (PBT), or very Persistent and very Bioaccumulative (vPvB) at a concentration equal to or greater than 0.1%.

The substance contains no constituent identified as having endocrine disrupting properties according to REACH Article 59(1) or in accordance with the criteria set out in Commission Regulation (EU) 2018/605 at a concentration equal to or greater than 0.1%.

Toxicological information:

the substance contains no constituent identified as having endocrine disrupting properties according to REACH Article 59(1) or Commission Delegated regulation (EU) 2017/2100 at a concentration equal to or greater than 0.1%.

3. COMPOSITION/INFORMATION ON INGREDIENTS**3.1 Substance**

botanical origin: *Citrus sinensis*, (L) OSBECK / PERSON
 production process: obtained by physical means from fresh orange fruits.
 status: 100% Natural Complex Substance
 EU name: Orange, sweet, ext.
 EC number: 232-433-8
 CAS number (EC inventory): 8028-48-6
 other CAS number: 8008-57-9
 REACH Status: registered substance
 REACH tonnage band: between 100 to 1000 tonnes/year

3.1.1 Substance: main constituents & typical values

common name	EINECS	CAS	hazards classification	content (%)
limonene	227-813-5	5989-27-5	Flam. Liq. 3; H226 Skin Irrit. 2; H315 Skin Sens. 1B; H317 Asp. Tox. 1; H304 Aquatic Acute 1; H400 Aquatic Chronic 3; H412	90.00÷99.00
myrcene	204-622-5	123-35-3	Flam. Liq. 3; H226 Skin Irrit. 2; H315 Eye Irrit. 2A; H319 Asp. Tox. 1; H304 Aquatic Acute 1; H400 Aquatic Chronic 2; H411	<2.50

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4. FIRST AID MEASURES

4.1 Description of first aid measures

inhalation: move to fresh air for at least 15 minutes, in case of complaints seek medical attention.
 contact with the skin: remove contaminated clothing and wash with water and soap the contaminated part - make sure you have eliminated the contamination - in case of complaints seek medical attention.
 contact with the eyes: abundant eye-wash for several minutes with pure water, make sure you have eliminated the contamination, in case of complaints seek medical attention.
 ingestion: ask **immediately** medical assistance - mouth washing with water and **do not provoke vomiting**.

4.2 Most important symptoms and effects, both acute and delayed

symptoms: inhalation: can cause slight headache - contact: can cause bloodshot eyes - can cause slight skin rash.
 acute and delayed effects: no post-disorder effects are reported.

4.3 Indication of any immediate medical attention and special treatment needed

immediate medical assistance: see point 4.1.
 immediate/special treatment: see point 4.1.
 first aid specific means: eye wash fountain / safety shower should be available in the work area.

5. FIREFIGHTING MEASURES

5.1 Extinguishing media

suitable extinguishing media: SMALL FIRE: use CO₂, foam, dry powder - LARGE FIRE: use water spray or fog - cool containing vessels with water jet in order to prevent pressure build-up, autoignition or explosion.
 unsuitable extinguishing media: pressurized water jet.

5.2 Special hazards arising from the substance

vapours may form explosive mixture with air - in case of fire, the following can be released: carbon monoxide (CO), carbon dioxide (CO₂), smoke, soot.

5.3 Advice for firefighters

standard procedure for chemical fires - spray extinguishing media to base of flames - use adequate protections for respiratory apparatus, avoid vapour inhalation.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

for non emergency personnel: in an emergency (i.e. unintentional release of the substance exceeding the DNEL) respiratory protection (Gas filter A, Colour code brown) must be worn. Consider the maximum duration for wear. Use insulating device for respiratory protection with an independent air supply if the concentration is above the usage this for filter devices or for oxygen concentrations below 17 volume % or in circumstances which are unclear - use adequate protections solvent resistant: security shoes, bodysuit, gloves and protective goggles (see section 8).
 for emergency responders: as per non emergency personnel.
 emergency procedures: remove any ignition source and ensure adequate ventilation in working areas following accidental releases.

6.2 Environmental precautions

keep away from drains - keep away from surface and ground water.

6.3 Methods and material for containment and cleaning up

keep away from heat and use non-combustible absorbing sawdust (sand, specific binder). Refer to section 13 for the appropriate methods of waste treatment.

6.4 Reference to other sections

see section 4, 8 & 13

7. HANDLING AND STORAGE

7.1 Precautions for safe handling

safe handling: during handling keep original container closed - avoid contact with skin and eyes - wear adequate protective gloves and eye/face protection - avoid any sources of ignition - avoid exposing to high temperature during processing - maintain adequate local and general ventilation where product is handled.
 hygiene at work: do not ingest or apply to the skin as such - no smoking - remove contaminated clothing - good personal washing routines should be followed - if at risk of contamination, foods, beverages and other articles of consumption must not be stored or consumed at the work areas.

7.2 Conditions for safe storage, including any incompatibilities

container: to be stored in stainless steel drums, preferably under inert atmosphere (nitrogen) with minimum head space, protected from day-light. • **take note:** the container used during transportation must be considered only as a temporary container and it must not be considered in any case adequate for medium or long-term warehousing.
 conditions: stored in a dry, aerated place, away from any heat source and ignition source.
 temperature: from 5 °C to 21 °C.

7.3 Specific end uses

use as odour agent / flavouring agent - the information of this section are not related to the use of the product in combination with any other material or any other process altering its characteristics.

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8. EXPOSURE CONTROL/PERSONAL PROTECTION**8.1 Control parameters**

occupational exposure limit: Component with limit values that require monitoring at the workplace:

CAS 5989-27-5, (R)-p-mentha-1,8-diene

AGW (Germany): 110 mg/m³, 20 ppm, 2(II); DFG, Sh, Y**8.2 Exposure control**

see Exposure Scenario in annex.

8.2.1 Appropriate engineering controls

where appropriate, use closed system to transfer and process this material - if appropriate, isolate mixing rooms and other areas where this material is used or openly handled - maintain these areas under negative air pressure relative to the rest of the plant.

8.2.2 Individual protection measures, such as personal protective equipment

eye/face protection: protective goggles with built-in-frame tested to EN166 (should be checked regularly).
 skin protection - hand: suitable gloves tested to EN374 (should be checked regularly) - always use with clean, dry hands.
 skin protection - other: protective work clothing solvent resistant (should be checked regularly).
 respiratory protection: not necessary in adequate local with general ventilation - avoid breathing vapors.
 thermal hazards: none.

8.2.3 Environmental exposure controls

see Exposure Scenario in annex.

9. PHYSICAL AND CHEMICAL PROPERTIES**9.1 Information on basic physical and chemical properties**

physical form: liquid
 colour: orange to dark orange-reddish
 odour: citrusy
 odour threshold: N/D
 pH: N/A
 initial boiling point (& range): 160 °C (±10 °C) at 1026 hPa
 melting point/freezing point: N/D
 flash point: 53 °C (127.4 °F)
 evaporation rate: N/D
 upper/lower explosive limits: N/D
 vapour pressure: 186.4 Pa at 25 °C
 vapour density: N/D
 relative density d_4^{20} : 0.8390 ÷ 0.8540
 solubility: in alcohol & other oils / negligible in H₂O
 partition coefficient n-octanol/H₂O: N/D
 auto-ignition temperature: 235 °C at 1012.2 - 1016.5 hPa
 decomposition temperature: N/D
 viscosity: 0.99 mPa*s (dynamic) / 1.17 mm²/s (kinematic) at 20 °C
 explosive properties: none
 oxidizing properties: none

9.2 Other information**9.2.1. Information with regard to physical hazard classes**

none

9.2.2. Other safety characteristics

none

10. STABILITY AND REACTIVITY**10.1 Reactivity**

substance not reactive with water - substance not reactive if used according to storage & handling conditions & identified uses (see subsection 1.2).

10.2 Chemical stabilitysubstance stable if used according to storage & handling conditions & identified uses (see subsection 1.2). • **shelf life:** 365 days, as per recommended storage & handling conditions (see section 7).**10.3 Possibility of hazardous reactions**

none if used according to storage & handling conditions & identified uses (see subsection 1.2).

10.4 Conditions to avoid

avoid exposure to heat.

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10.5 Incompatible materials

highly oxidizing agents.

10.6 Hazardous decomposition productsno known hazardous decomposition products under recommended storage & handling conditions - in case of combustion: carbon monoxide (CO), carbon dioxide (CO₂).**11. TOXICOLOGICAL INFORMATION****11.1 Information on toxicological effects**

acute toxicity:	LD50: >5000 mg/kg bw (oral rat, similar to OECD 401) LD50: >5000 mg/kg bw (dermal rabbit, similar to OECD 402)
skin corrosion/irritation:	irritating (test according to OECD guideline 404)
serious eye damage/irritation:	not classified as irritating to the eye (tested according to OECD guideline no. 405)
respiratory sensitization:	no data available.
skin sensitization:	sensitizing based on read across to limonene (tested according to OECD guideline 429)
germ cell mutagenicity:	not mutagenic (mammalian cell gene mutation assay OECD Guideline No. 476), not clastogenic (OECD Guideline 473), not mutagenic (Ames test OECD 471)
carcinogenicity:	conclusive but not sufficient for classification; limonene tested according to OECD Guideline 451 shows nephrocarcinogenicity in the male rat, of which the mechanism is not relevant for humans.
reproductive toxicity:	conclusive but not sufficient for classification (based on read across to limonene in prenatal developmental toxicity studies with rats, mice and rabbits)
STOT-single exp.:	conclusive but not sufficient for classification
STOT-repeated exp.:	NOAEL and LOAEL resp. 100 and 1000 mg/kg bw/day (read across to limonene OECD test 409 with beagle dogs).
aspiration hazard:	no data available.

11.2 Information on other hazards**11.2.1 Endocrine disrupting properties**

the substance contains no constituent identified as having endocrine disrupting properties according to REACH Article 59(1) or Commission Delegated regulation (EU) 2017/2100 at a concentration equal to or greater than 0.1%.

11.2.2 Other information

no data available

12. ECOLOGICAL INFORMATION**12.1 Toxicity**

algae/aquatic plants (acute tox.): 72h-ELr50 *Desmodesmus subspicatus* 150 mg/l (WAF). 72h-NOECr ~50 mg/l (OECD 201, WAF)
fish (acute tox.): 96h-EL50 *Danio rerio* 5.65 mg/l / 96h-LC50 2.76 mg/l (OECD 203, WAF)
aquatic invertebrates (acute tox.): 48h-EL50 *Daphnia magna* 1.1 mg/l / NOEL 0.48 mg/l (OECD 202, WAF)

12.2 Persistence and degradability

this oil is to be considered as a readily biodegradable substance. Based on its ready biodegradability, oil does not fulfill the criteria for persistence.

12.3 Bioaccumulative potential

as the constituents are readily biodegradable, it is likely that they will also be bio transformed in higher organisms so bioaccumulation is actually not expected.

12.4 Mobility in soil

this substance is considered as a readily biodegradable NCS. Based on the ready biodegradability of the NCS, simulation tests in surface water, sediment and soil are not required.

12.5 Results of PBT and vPvB assessment

according to Annex XIII of REACH Regulation, the substance contains no constituent considered either Persistent, Bioaccumulative and Toxic (PBT), or very Persistent and very Bioaccumulative (vPvB) at a concentration equal to or greater than 0.1%.

12.6 Endocrine disrupting properties

the substance contains no constituent considered to have endocrine disrupting properties according to REACH Article 59(1) or Commission Regulation (EU) 2018/605 at a concentration equal to or greater than 0.1%.

12.7 Other adverse effects

no data available

13. DISPOSAL CONSIDERATIONS**13.1 Waste treatment methods**

the containers used for this product must completely empty before disposal. Dispose product and/or contaminated packaging in accordance with federal, state and local environmental control regulations - disposal through the waste water is illegal.

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14. TRANSPORT INFORMATION14.1 UN Number

1197

14.2 UN proper shipping name

extracts, liquid, for flavour or aroma

14.3 Transport hazard class

Class 3

14.3.1 Transport hazard symbols

for IMDG-ADR/RID: fish and tree - flame

for ICAO/IATA: flame

14.4 Packing group

III

14.5 Environmental hazards

marine pollutant

14.6 Special precautions for user

this product contains constituents flammables & dangerous for the environment - in case of pouring out, make sure to label new package accordingly, reproducing original label with relevant symbols.

14.7 Transport in bulk according to Annex II of MARPOL and the IBC Code

not applicable

15. REGULATORY INFORMATION15.1 Safety, health and environmental regulations/legislation specific for the substance

Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006.

Commission Regulation (EU) 2020/878 of 18 June 2020 amending Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorization and Restriction of Chemicals (REACH).

15.2 Chemical Safety Assessment

a Chemical Safety Assessment according to the rules stipulated in the REACH directive has been performed.

16. OTHER INFORMATIONa Revision**Version 1RME07 - Revision Number 1 (October 26, 2023)**

- first issue of the document

from**to**

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b Legend

CLP: Regulation (EC) No 1272/2008 / **CSR:** Chemical Safety Report / **Asp. Tox.:** aspiration hazard / **Aquatic Chronic:** aquatic hazard / **Skin Irrit.:** skin irritation hazard / **Skin Sens.:** skin sensitization hazard / **Flam. Liq.:** flammable liquid hazard

c Literature references and source of data

RIFM - FEMA database / CSR Sweet Orange Oil

d List of relevant hazard and precautionary 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**H411** toxic to aquatic life with long lasting effects**P210** keep away from heat/sparks/open flames/hot surfaces – no smoking**P241** use explosion-proof electrical/ventilating/lighting/equipment**P262** do not get in eyes, on skin or on clothing**P273** avoid release to the environment**P280** wear protective gloves/eye protection/face protection**P301/310** if swallowed: immediately call a poison center or doctor/physician**P303/361/353** if on skin (or hair): remove/take off immediately all contaminated clothing. rinse skin with water/shower**P331** do not induce vomiting**P405** store locked up**P501** dispose product/container in accordance with applicable regulations

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e Inventories & other

	CAS	ID	NOTE
EINECS	8028-48-6	232-433-8	
TSCA	8008-57-9	-	
IECSC	8028-48-6	-	
KECI	8028-48-6	KE-27409	
DSL	8028-48-6	-	
AICS	8028-48-6	-	
ENCS - ISHL	8028-48-6	11-(1)-100	
NZIOC	8028-48-6	-	
PICCS	8028-48-6	-	
FDA	-	21CFR182.20	
CoE	-	143	
FEMA	8028-48-6	2825	
RIFM	8028-48-6	192-G2.5	
HS Code	-	3301121000	EU TARIC

f Further information

the information on this SDS is correct to the best of our knowledge, covering the involved product at the date of its publication. They apply to the product as such as per the described specifications. The information are not related to the use of the product in combination with any other material or any other process altering its characteristics. The end user should apply to the existing normative and laws covering the use of the product, the hygiene and security at work. The container used during transportation must be considered only as a temporary container and it must not be considered in any case adequate for medium or long-term warehousing. Upon receipt, our product must be stored as soon as possible in compliance with point 7.2 of this SDS. The information given in this SDS is in accordance with the Reg. (EU) No 2020/878.

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ANNEX

a Exposure Scenarios

ES_Orange_Oil → 