

Safety Data Sheet

according to 29 CFR 1910.1200(g)

NATURAL OCTANAL 50% ENRICHED ORANGE OIL FRACTION

Revision date: 07/21/2023

Product code: 279700US

Page 1 of 12

1. Identification**Product identifier**

NATURAL OCTANAL 50% ENRICHED ORANGE OIL FRACTION

CAS No: 68606-94-0

Recommended use of the chemical and restrictions on use**Use of the substance/mixture**

Manufacturing of: - Air care products - Perfumes, fragrances - Pharmaceuticals - Cosmetics, personal care products - Flavouring Substances - Other

Details of the supplier of the safety data sheet

Company name:	Axxence Aromatic GmbH	
Street:	Tackenweide 28	
Place:	D-46446 Emmerich am Rhein	
Telephone:	+ 49 2822 68561 0	Telefax: + 49 2822 68561 39
e-mail:	info@axxence.com	
Contact person:	Andreas Goertz	Telephone: + 49 2822 68561 37
e-mail:	andreas.goertz@axxence.com	
Internet:	www.axxence.de	
Responsible Department:	QM - Regulatory Affairs	

Emergency phone number: +49 2822 68561 99**2. Hazard(s) identification****Classification of the chemical****29 CFR Part 1910.1200**

Flammable liquids: Flam. Liq. 3
Skin corrosion/irritation: Skin Irrit. 2
Serious eye damage/eye irritation: Eye Irrit. 2A
Respiratory or skin sensitization: Skin Sens. 1

Label elements**29 CFR Part 1910.1200****Signal word:** Warning**Pictograms:****Hazard statements**

Flammable liquid and vapor
Causes skin irritation
May cause an allergic skin reaction
Causes serious eye irritation

Precautionary statements

Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
Keep container tightly closed.
Ground/bond container and receiving equipment.
Use explosion-proof electrical/ventilating/lighting equipment.
Use only non-sparking tools.
Take precautionary measures against static discharge.
Avoid breathing dust/fume/gas/mist/vapors/spray.
Wash hands thoroughly after handling.

Safety Data Sheet

according to 29 CFR 1910.1200(g)

NATURAL OCTANAL 50% ENRICHED ORANGE OIL FRACTION

Revision date: 07/21/2023

Product code: 279700US

Page 2 of 12

Contaminated work clothing must not be allowed out of the workplace.
 Wear protective gloves/protective clothing/eye protection/face protection.
 If on skin: Wash with plenty of water.
 If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
 If skin irritation or rash occurs: Get medical advice/attention.
 Take off contaminated clothing and wash it before reuse.
 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.
 Continue rinsing.
 If eye irritation persists: Get medical advice/attention.
 In case of fire: Use Foam / Carbon dioxide (CO₂) / Extinguishing powder to extinguish.
 Store in a well-ventilated place. Keep cool.
 Dispose of contents/container to Organic waste.

Hazards not otherwise classified

No information available.

3. Composition/information on ingredients

Mixtures

Hazardous components

CAS No	Components	Quantity
124-13-0	NATURAL ALDEHYDE C-8 (OCTANAL)	25 - 55 %
5989-27-5	(R)-p-mentha-1,8-diene, d-limonene	25 - 55 %
123-35-3	NATURAL MYRCENE	2,5 - 10 %
80-56-8	NATURAL ALPHA-PINENE	1,0 - 2,5 %
127-91-3	NATURAL BETA-PINENE	0,1 - 1,0 %
6728-26-3	NATURAL TRANS-2-HEXENAL	0,1 - 1,0 %
78-70-6	NATURAL LINALOOL	0,0 - 0,1 %

4. First-aid measures

Description of first aid measures

After inhalation

Provide fresh air. When in doubt or if symptoms are observed, get medical advice.

After contact with skin

After contact with skin, wash immediately with plenty of water and soap. Take off immediately all contaminated clothing and wash it before reuse. Medical treatment necessary.

After contact with eyes

After contact with the eyes, rinse with water with the eyelids open for a sufficient length of time, then consult an ophthalmologist immediately.

After ingestion

Rinse mouth immediately and drink 1 glass of water.

Most important symptoms and effects, both acute and delayed

No information available.

Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

5. Fire-fighting measures

Extinguishing media

Safety Data Sheet

according to 29 CFR 1910.1200(g)

NATURAL OCTANAL 50% ENRICHED ORANGE OIL FRACTION

Revision date: 07/21/2023

Product code: 279700US

Page 3 of 12

Suitable extinguishing mediaCarbon dioxide (CO₂), Foam, Extinguishing powder.**Unsuitable extinguishing media**

Water.

Specific hazards arising from the chemical

Flammable. Vapors may form explosive mixtures with air.

Special protective equipment and precautions for fire-fighters

Wear a self-contained breathing apparatus and chemical protective clothing. Full protection suit.

Additional information

Use water spray/stream to protect personnel and to cool endangered containers. Suppress gases/vapors/mists with water spray jet. Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.

6. Accidental release measures**Personal precautions, protective equipment and emergency procedures****General advice**

Remove all sources of ignition. Do not breathe gas/fume/vapor/spray. Avoid contact with skin, eyes and clothes. Use personal protection equipment.

Environmental precautions

Do not allow uncontrolled discharge of product into the environment. Explosion risk.

Methods and material for containment and cleaning up**For cleaning up**

Absorb with liquid-binding material (sand, diatomaceous earth, acid- or universal binding agents). Treat the recovered material as prescribed in the section on waste disposal.

Other information

Absorb with liquid-binding material (sand, diatomaceous earth, acid- or universal binding agents). Treat the recovered material as prescribed in the section on waste disposal.

Reference to other sections

Safe handling: see section 7

Personal protection equipment (PPE): see section 8

Disposal: see section 13

7. Handling and storage**Precautions for safe handling****Advice on safe handling**

No special measures are necessary.

Advice on protection against fire and explosion

Keep away from sources of ignition - No smoking. Take precautionary measures against static discharges. Vapors may form explosive mixtures with air.

Advice on general occupational hygiene

Remove contaminated, saturated clothing immediately. Draw up and observe skin protection programme. Wash hands and face before breaks and after work and take a shower if necessary. When using do not eat, drink, smoke, sniff. Remove contaminated, saturated clothing immediately. Draw up and observe skin protection programme. Wash hands and face before breaks and after work and take a shower if necessary. When using do not eat, drink, smoke, sniff.

Conditions for safe storage, including any incompatibilities**Requirements for storage rooms and vessels**

Keep container tightly closed. Keep in a cool, well-ventilated place. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

Safety Data Sheet

according to 29 CFR 1910.1200(g)

NATURAL OCTANAL 50% ENRICHED ORANGE OIL FRACTION

Revision date: 07/21/2023

Product code: 279700US

Page 4 of 12

Hints on joint storage

Do not store together with: Oxidizing agent. Pyrophoric or self-heating substances.

8. Exposure controls/personal protection

Control parameters

Exposure limits

CAS No	Substance	ppm	mg/m ³	f/cc	Category	Origin
127-91-3	Selected monoterpenes: pin-2(10)-ene	20			TWA (8 h)	ACGIH-2022
80-56-8	Selected monoterpenes: pin-2(3)-ene	20			TWA (8 h)	ACGIH-2022

Exposure controls



Individual protection measures, such as personal protective equipment

Eye/face protection

Suitable eye protection: goggles.

Hand protection

Suitable gloves type: Disposable gloves + NBR (Nitrile rubber)

When handling with chemical substances, protective gloves must be worn with the CE-label including the four control digits. The quality of the protective gloves resistant to chemicals must be chosen as a function of the specific working place concentration and quantity of hazardous substances. 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.

Skin protection

Use of protective clothing.

Respiratory protection

In case of inadequate ventilation wear respiratory protection.

9. Physical and chemical properties

Information on basic physical and chemical properties

Physical state:	Liquid
Color:	colorless
Melting point/freezing point:	not determined
Boiling point or initial boiling point and boiling range:	167 °C
Flammability:	not determined
Lower explosion limits:	0,7 vol. %
Upper explosion limits:	6,5 vol. %
Flash point:	39 °C
Auto-ignition temperature:	196 °C
Decomposition temperature:	not determined
pH-Value:	not determined
Water solubility:	No
Solubility in other solvents	not determined
Partition coefficient n-octanol/water:	not determined

Safety Data Sheet

according to 29 CFR 1910.1200(g)

NATURAL OCTANAL 50% ENRICHED ORANGE OIL FRACTION

Revision date: 07/21/2023

Product code: 279700US

Page 5 of 12

Vapor pressure: (at 20 °C)	2,78 hPa
Vapor pressure: (at 50 °C)	12,4 hPa
Density:	0,83 g/cm ³
Relative vapour density:	not determined

Other information**Information with regard to physical hazard classes****Explosive properties**

The product is not: Explosive. not hazard of explosion according to EU A.14

Oxidizing properties

The product is not: oxidising.

Other safety characteristics

Evaporation rate:	not determined
Solvent content:	0%
Solid content:	0%

10. Stability and reactivity**Reactivity**

Flammable.

Chemical stability

The product is stable under storage at normal ambient temperatures.

Possibility of hazardous reactions

No known hazardous reactions.

Conditions to avoid

Keep away from sources of heat (e.g. hot surfaces), sparks and open flames. Vapors may form explosive mixtures with air.

Incompatible materials

No information available.

Hazardous decomposition products

No known hazardous decomposition products.

11. Toxicological information**Information on toxicological effects****Acute toxicity**

Based on available data, the classification criteria are not met.

ATEmix calculated

ATE (oral) 8795,0 mg/kg; ATE (dermal) 125000,0 mg/kg

Safety Data Sheet

according to 29 CFR 1910.1200(g)

NATURAL OCTANAL 50% ENRICHED ORANGE OIL FRACTION

Revision date: 07/21/2023

Product code: 279700US

Page 6 of 12

CAS No	Components				
	Exposure route	Dose	Species	Source	Method
124-13-0	NATURAL ALDEHYDE C-8 (OCTANAL)				
	oral	LD50 mg/kg 4617	Rat	REACH Dossier	
	dermal	LD50 mg/kg 5207	Rabbit	REACH Dossier	
5989-27-5	(R)-p-mentha-1,8-diene, d-limonene				
	oral	LD50 mg/kg 5300	Rat	IFA GESTIS	
	dermal	LD50 mg/kg >5000	Rabbit	REACH registration	OECD 402
123-35-3	NATURAL MYRCENE				
	oral	LD50 mg/kg >11390	Rat	REACH registration	
	dermal	LD50 mg/kg >5000	Rabbit	REACH registration	OECD 402
80-56-8	NATURAL ALPHA-PINENE				
	oral	LD50 mg/kg 3700	Rat	GESTIS	
	dermal	LD50 mg/kg >2000	Rat	REACH registration	OECD 402
127-91-3	NATURAL BETA-PINENE				
	oral	LD50 mg/kg >5000	Rat	REACH Dossier	
	dermal	LD50 mg/kg >5000	Rabbit	REACH Dossier	
6728-26-3	NATURAL TRANS-2-HEXENAL				
	oral	LD50 mg/kg 780	Rat	REACH Dossier	
	dermal	LD50 mg/kg 600	Rabbit		
78-70-6	NATURAL LINALOOL				
	oral	LD50 mg/kg 2790	Rat	REACH registration	OECD 401
	dermal	LD50 mg/kg 5610	Rabbit	REACH registration	OECD 402

Irritation and corrosivity

- Causes skin irritation
- Causes serious eye irritation

Sensitizing effects

May cause an allergic skin reaction ((R)-p-mentha-1,8-diene, d-limonene; NATURAL ALPHA-PINENE; NATURAL BETA-PINENE; NATURAL TRANS-2-HEXENAL; NATURAL LINALOOL)

Carcinogenic/mutagenic/toxic effects for reproduction

Based on available data, the classification criteria are not met.

Specific target organ toxicity (STOT) - single exposure

Based on available data, the classification criteria are not met.

Specific target organ toxicity (STOT) - repeated exposure

Based on available data, the classification criteria are not met.

Safety Data Sheet

according to 29 CFR 1910.1200(g)

NATURAL OCTANAL 50% ENRICHED ORANGE OIL FRACTION

Revision date: 07/21/2023

Product code: 279700US

Page 7 of 12

Carcinogenicity (OSHA): No ingredient of this mixture is listed.
Carcinogenicity (IARC): d-Limonene (CAS 5989-27-5) is listed in group 3. beta-Myrcene (CAS 123-35-3) is listed in group 2B.
Carcinogenicity (NTP): No ingredient of this mixture is listed.

Aspiration hazard

Based on available data, the classification criteria are not met.

Information on other hazards**Endocrine disrupting properties**

No information available.

Further information

The mixture is classified as hazardous according to regulation (EC) No 1272/2008 [CLP].

12. Ecological information**Ecotoxicity**

Very toxic to aquatic life with long lasting effects.

Safety Data Sheet

according to 29 CFR 1910.1200(g)

NATURAL OCTANAL 50% ENRICHED ORANGE OIL FRACTION

Revision date: 07/21/2023

Product code: 279700US

Page 8 of 12

CAS No	Components					
	Aquatic toxicity	Dose	[h] [d]	Species	Source	Method
124-13-0	NATURAL ALDEHYDE C-8 (OCTANAL)					
	Acute algae toxicity	ErC50 mg/l	1,79	72 h	Pseudokirchneriella subcapitata	REACH Dossier OECD 201
	Acute crustacea toxicity	EC50 mg/l	1,54	48 h	Daphnia magna (Big water flea)	REACH Dossier OECD 202
5989-27-5	(R)-p-mentha-1,8-diene, d-limonene					
	Acute fish toxicity	LC50 mg/l	0,72	96 h	Pimephales promelas (fathead minnow)	REACH registration OECD 203
	Acute algae toxicity	ErC50 mg/l	0,32	72 h	Pseudokirchneriella subcapitata	REACH registration OECD 201
	Acute crustacea toxicity	EC50 mg/l	0,307	48 h	Daphnia magna (Big water flea)	REACH registration OECD 202
	Fish toxicity	NOEC mg/l	0,37	8 d	Pimephales promelas (fathead minnow)	REACH Registration OECD 212
	Acute bacteria toxicity	(EC50 mg/l)	209	3 h	Activated sludge	REACH registration OECD 209
123-35-3	NATURAL MYRCENE					
	Acute fish toxicity	LC50	1,3 mg/l	96 h	Danio rerio (zebrafish)	REACH registration OECD 203
	Acute algae toxicity	ErC50 mg/l	0,34	72 h	Pseudokirchneriella subcapitata	REACH Registration OECD 201
	Acute crustacea toxicity	EC50 mg/l	1,47	48 h	Daphnia magna (Big water flea)	REACH registration OECD 202
80-56-8	NATURAL ALPHA-PINENE					
	Acute fish toxicity	LC50 mg/l	0,27	96 h	Cyprinus carpio (Common Carp)	REACH registration OECD 203
	Acute crustacea toxicity	EC50 mg/l	0,475	48 h	Daphnia magna (Big water flea)	REACH registration OECD 202
127-91-3	NATURAL BETA-PINENE					
	Acute fish toxicity	LC50 mg/l	0,502	96 h	Pimephales promelas (fathead minnow)	REACH Dossier OECD 203
	Acute algae toxicity	ErC50 mg/l	0,826	72 h	Pseudokirchneriella subcapitata	REACH Dossier OECD 201
	Acute crustacea toxicity	EC50	1,2 mg/l	48 h	Daphnia magna (Big water flea)	REACH Dossier OECD 202
	Acute bacteria toxicity	(EC50 mg/l)	326		Activated sludge	REACH Dossier OECD 209
6728-26-3	NATURAL TRANS-2-HEXENAL					
	Acute algae toxicity	ErC50 mg/l	8,16	72 h	Pseudokirchneriella subcapitata	REACH registration QSAR Predictions
	Acute crustacea toxicity	EC50 mg/l	22,8	48 h	Daphnia magna (Big water flea)	REACH registration OECD Toolbox software
78-70-6	NATURAL LINALOOL					
	Acute fish toxicity	LC50 mg/l	27,8	96 h	Oncorhynchus mykiss (Rainbow trout)	REACH registration OECD 203
	Acute algae toxicity	ErC50 mg/l	88,3	96 h	Desmodesmus subspicatus	REACH registration DIN 38412 L9
	Acute crustacea toxicity	EC50	59 mg/l	48 h	Daphnia magna (Big water flea)	REACH registration OECD 202

Safety Data Sheet

according to 29 CFR 1910.1200(g)

NATURAL OCTANAL 50% ENRICHED ORANGE OIL FRACTION

Revision date: 07/21/2023

Product code: 279700US

Page 9 of 12

	Acute bacteria toxicity (EC50 >100 mg/l)	0,5 h Activated sludge	REACH registration	OECD 209
--	---	------------------------	--------------------	----------

Persistence and degradability

The product has not been tested.

Bioaccumulative potential

The product has not been tested.

Partition coefficient n-octanol/water

CAS No	Components	Log Pow
124-13-0	NATURAL ALDEHYDE C-8 (OCTANAL)	3,5
5989-27-5	(R)-p-mentha-1,8-diene, d-limonene	4,5
123-35-3	NATURAL MYRCENE	4,82
80-56-8	NATURAL ALPHA-PINENE	4,83
127-91-3	NATURAL BETA-PINENE	4,4
6728-26-3	NATURAL TRANS-2-HEXENAL	1,58
78-70-6	NATURAL LINALOOL	2,97

BCF

CAS No	Components	BCF	Species	Source
124-13-0	NATURAL ALDEHYDE C-8 (OCTANAL)	94,69		REACH Registration
5989-27-5	(R)-p-mentha-1,8-diene, d-limonene	690,1	aquatic species	REACH registration
80-56-8	NATURAL ALPHA-PINENE	1248		REACH registration
127-91-3	NATURAL BETA-PINENE	838		REACH Dossier

Mobility in soil

The product has not been tested.

Endocrine disrupting properties

This product does not contain a substance that has endocrine disrupting properties with respect to non-target organisms as no components meets the criteria.

Other adverse effects

No information available.

Further information

Do not allow to enter into surface water or drains. Do not allow to enter into soil/subsoil.

13. Disposal considerations

Waste treatment methods

Disposal recommendations

Do not allow to enter into surface water or drains. Do not allow to enter into soil/subsoil. Dispose of waste according to applicable legislation.

Contaminated packaging

Non-contaminated packages may be recycled. Handle contaminated packages in the same way as the substance itself.

14. Transport information

U.S. DOT 49 CFR 172.101

UN number or ID number:

UN 1989

Proper shipping name:

ALDEHYDES, N.O.S.

Transport hazard class(es):

3

Packing group:

III

Safety Data Sheet

according to 29 CFR 1910.1200(g)

NATURAL OCTANAL 50% ENRICHED ORANGE OIL FRACTION

Revision date: 07/21/2023

Product code: 279700US

Page 10 of 12

Hazard label: 3



Marine transport (IMDG)

UN number or ID number: UN 1989
UN proper shipping name: ALDEHYDES, N.O.S.
Transport hazard class(es): 3
Packing group: III
 Hazard label: 3



Special Provisions: 223 274
 Limited quantity: 5 L
 Excepted quantity: E1
 EmS: F-E, S-D

Air transport (ICAO-TI/IATA-DGR)

UN number or ID number: UN 1989
UN proper shipping name: ALDEHYDES, N.O.S.
Transport hazard class(es): 3
Packing group: III
 Hazard label: 3



Special Provisions: A3
 Limited quantity Passenger: 10 L
 Passenger LQ: Y344
 Excepted quantity: E1
 IATA-packing instructions - Passenger: 355
 IATA-max. quantity - Passenger: 60 L
 IATA-packing instructions - Cargo: 366
 IATA-max. quantity - Cargo: 220 L

Environmental hazards

ENVIRONMENTALLY HAZARDOUS: Yes



Danger releasing substance: NATURAL OCTANAL
NATURAL D-LIMONENE

Special precautions for user

Warning: Combustible liquid.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

not applicable

15. Regulatory information

U.S. Regulations

National regulatory information

SARA Section 311/312 Hazards:

Safety Data Sheet

according to 29 CFR 1910.1200(g)

NATURAL OCTANAL 50% ENRICHED ORANGE OIL FRACTION

Revision date: 07/21/2023

Product code: 279700US

Page 11 of 12

NATURAL ALDEHYDE C-8 (OCTANAL) (124-13-0): Fire hazard, Immediate (acute) health hazard
(R)-p-mentha-1,8-diene, d-limonene (5989-27-5): Fire hazard, Immediate (acute) health hazard
NATURAL MYRCENE (123-35-3): Fire hazard, Immediate (acute) health hazard
NATURAL ALPHA-PINENE (80-56-8): Fire hazard, Immediate (acute) health hazard
NATURAL BETA-PINENE (127-91-3): Fire hazard, Immediate (acute) health hazard
NATURAL TRANS-2-HEXENAL (6728-26-3): Fire hazard, Immediate (acute) health hazard
NATURAL LINALOOL (78-70-6): Immediate (acute) health hazard

State Regulations

Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65, State of California)

WARNING: This product can expose you to chemicals including beta-Myrcene (cancer), which are known to the State of California to cause cancer, birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

16. Other information

Changes

Revision date: 07/21/2023

Revision No: 103

This data sheet contains changes from the previous version in section(s): 11.

Abbreviations and acronyms

ADR: Accord européen sur le transport des marchandises dangereuses par Route
(European Agreement concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
GHS: Globally Harmonized System of Classification and Labelling of Chemicals
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service
LC50: Lethal concentration, 50%
LD50: Lethal dose, 50%
CLP: Classification, labelling and Packaging
REACH: Registration, Evaluation and Authorization of Chemicals
GHS: Globally Harmonised System of Classification, Labelling and Packaging of Chemicals
UN: United Nations
DNEL: Derived No Effect Level
DMEL: Derived Minimal Effect Level
PNEC: Predicted No Effect Concentration
ATE: Acute toxicity estimate
LL50: Lethal loading, 50%
EL50: Effect loading, 50%
EC50: Effective Concentration 50%
ErC50: Effective Concentration 50%, growth rate
NOEC: No Observed Effect Concentration
BCF: Bio-concentration factor
PBT: persistent, bioaccumulative, toxic
vPvB: very persistent, very bioaccumulative
RID: Regulations concerning the international carriage of dangerous goods by rail
ADN: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
(Accord européen relatif au transport international des marchandises dangereuses par voies de navigation intérieures)
EmS: Emergency Schedules
MFAG: Medical First Aid Guide
ICAO: International Civil Aviation Organization
MARPOL: International Convention for the Prevention of Marine Pollution from Ships

Safety Data Sheet

according to 29 CFR 1910.1200(g)

NATURAL OCTANAL 50% ENRICHED ORANGE OIL FRACTION

Revision date: 07/21/2023

Product code: 279700US

Page 12 of 12

IBC: Intermediate Bulk Container

VOC: Volatile Organic Compounds

SVHC: Substance of Very High Concern

For abbreviations and acronyms, see table at <http://abbrev.esdscom.eu>

For abbreviations and acronyms, see: ECHA Guidance on information requirements and chemical safety assessment, chapter R.20 (Table of terms and abbreviations).

Other data

The information is based on the present level of our knowledge. It does not, however, give assurance of product properties and establishes no contract legal rights. The receiver of our product is singularly responsible for adhering to existing laws and regulations.

(The data for the hazardous ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.)