

Safety Data Sheet

according to UK REACH Regulation

NATURAL GAMMA OCTALACTONE

Revision date: 22.05.2024

Product code: 279600

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

1.1. Product identifier

NATURAL GAMMA OCTALACTONE

Substance name: NATURAL GAMMA OCTALACTONE
 CAS No: 104-50-7
 EC No: 203-208-1

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

Use of the substance/mixture

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

1.3. 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: | Safety Team | Telephone: + 49 2822 68561 0 |
| E-mail: | safety-documentation@axxence.com | |
| Internet: | www.axxence.de | |
| Responsible Department: | Safety Management | |

1.4. Emergency telephone number:

+49 2822 68561 99

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

GB CLP Regulation

Skin Irrit. 2; H315
 Aquatic Chronic 3; H412

Full text of hazard statements: see SECTION 16.

2.2. Label elements

GB CLP Regulation

Signal word: Warning

Pictograms:



Hazard statements

H315 Causes skin irritation.
 H412 Harmful to aquatic life with long lasting effects.

Precautionary statements

P264 Wash hands thoroughly after handling.
 P273 Avoid release to the environment.
 P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.
 P302+P352 IF ON SKIN: Wash with plenty of Water and soap.
 P332+P313 If skin irritation occurs: Get medical advice/attention.
 P362+P364 Take off contaminated clothing and wash it before reuse.

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P501 Dispose of contents/container to Organic waste.

2.3. Other hazards

This substance is not listed as Substance of Very High Concern (SVHC) in the Candidate List according to REACH, Article 59. This substance is not identified as a substance of very high concern (SVHC) and is not subject to authorization according to REACH, Annex XIV.

SECTION 3: Composition/information on ingredients

3.1. Substances

Sum formula: C₈ H₁₄ O₂
 Molecular weight: 142,198 g/mol

Relevant ingredients

| CAS No | Chemical name | | | Quantity |
|----------|---|----------|----------|----------|
| | EC No | Index No | REACH No | |
| | Classification (GB CLP Regulation) | | | |
| 104-50-7 | NATURAL GAMMA OCTALACTONE | | | 100 % |
| | 203-208-1 | | | |
| | Skin Irrit. 2, Aquatic Chronic 3; H315 H412 | | | |

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

Specific Conc. Limits, M-factors and ATE

| CAS No | EC No | Chemical name | Quantity |
|----------|--|--|----------|
| | | Specific Conc. Limits, M-factors and ATE | |
| 104-50-7 | 203-208-1 | NATURAL GAMMA OCTALACTONE | 100 % |
| | dermal: LD50 = >5000 mg/kg; oral: LD50 = >5000 mg/kg | | |

SECTION 4: First aid measures

4.1. Description of first aid measures

After inhalation

Provide fresh air.

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. If skin irritation occurs: Get medical advice/attention.

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

Observe risk of aspiration if vomiting occurs. Rinse mouth immediately and drink 1 glass of water. Rinse mouth immediately and drink plenty of water.

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

No information available.

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

Co-ordinate fire-fighting measures to the fire surroundings.

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5.2. Special hazards arising from the substance or mixture

Non-flammable.

5.3. Advice for firefighters

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

Additional information

Suppress gases/vapours/mists with water spray jet. Collect contaminated fire extinguishing water separately.

Do not allow entering drains or surface water.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General advice

Provide adequate ventilation. Do not breathe gas/fumes/vapour/spray. Avoid contact with skin, eyes and clothes. Use personal protection equipment.

6.2. Environmental precautions

Do not allow to enter into surface water or drains.

6.3. 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.

6.4. Reference to other sections

Safe handling: see section 7

Personal protection equipment: see section 8

Disposal: see section 13

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling

No special measures are necessary.

Advice on protection against fire and explosion

No special fire protection measures are necessary.

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.

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

Keep container tightly closed.

Hints on joint storage

No special measures are necessary.

7.3. Specific end use(s)

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

SECTION 8: Exposure controls/personal protection

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8.1. Control parameters

DNEL/DMEL values

| CAS No | Substance | | |
|--------------------------|---------------------------|----------|------------------------|
| DNEL type | Exposure route | Effect | Value |
| 104-50-7 | NATURAL GAMMA OCTALACTONE | | |
| Worker DNEL, long-term | inhalation | systemic | 8,22 mg/m ³ |
| Worker DNEL, long-term | dermal | systemic | 2,33 mg/kg bw/day |
| Consumer DNEL, long-term | inhalation | systemic | 1,45 mg/m ³ |
| Consumer DNEL, long-term | dermal | systemic | 0,833 mg/kg bw/day |
| Consumer DNEL, long-term | oral | systemic | 0,833 mg/kg bw/day |

PNEC values

| CAS No | Substance | |
|--|---------------------------|--|
| Environmental compartment | Value | |
| 104-50-7 | NATURAL GAMMA OCTALACTONE | |
| Freshwater | 0,071 mg/l | |
| Marine water | 0,007 mg/l | |
| Freshwater sediment | 0,721 mg/kg | |
| Marine sediment | 0,072 mg/kg | |
| Micro-organisms in sewage treatment plants (STP) | 2,86 mg/l | |
| Soil | 0,103 mg/kg | |

8.2. Exposure controls



Individual protection measures, such as personal protective equipment

Eye/face protection

Wear eye protection/face protection.

Hand protection

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.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state: Liquid
 Colour: Colourless to pale yellow

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| | |
|---|------------------------|
| Melting point/freezing point: | -65 °C |
| Boiling point or initial boiling point and boiling range: | 132 °C |
| Flammability: | not determined |
| Lower explosion limits: | not determined |
| Upper explosion limits: | not determined |
| Flash point: | 116 °C |
| Auto-ignition temperature: | 350 °C |
| Decomposition temperature: | not determined |
| pH-Value: | not determined |
| Viscosity / kinematic: | not determined |
| Water solubility: (at 20 °C) | 8,1 g/l |
| Solubility in other solvents not determined | |
| Partition coefficient n-octanol/water: | 1,89 |
| Vapour pressure: (at 20 °C) | 1 hPa |
| Density (at 20 °C): | 0,98 g/cm ³ |
| Relative vapour density: (at 20 °C) | >1 |
| Particle characteristics: | not applicable |

9.2. Other information

Information with regard to physical hazard classes

Explosive properties

The product is not: Explosive.

Oxidizing properties

The product is not: oxidising.

Other safety characteristics

Evaporation rate: not determined

Solvent content: 0%

Solid content: 0%

SECTION 10: Stability and reactivity

10.1. Reactivity

No hazardous reaction when handled and stored according to provisions.

10.2. Chemical stability

The product is stable under storage at normal ambient temperatures.

10.3. Possibility of hazardous reactions

No known hazardous reactions.

10.4. Conditions to avoid

none

10.5. Incompatible materials

No information available.

10.6. Hazardous decomposition products

No known hazardous decomposition products.

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in GB CLP Regulation

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Acute toxicity

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

| CAS No | Chemical name | | | | | |
|----------|---------------------------|------------------|---------|---------------|----------|--|
| | Exposure route | Dose | Species | Source | Method | |
| 104-50-7 | NATURAL GAMMA OCTALACTONE | | | | | |
| | oral | LD50 >5000 mg/kg | Rat | REACH Dossier | OECD 401 | |
| | dermal | LD50 >5000 mg/kg | Rabbit | REACH Dossier | OECD 402 | |

Irritation and corrosivity

Skin corrosion/irritation: Causes skin irritation.

Serious eye damage/eye irritation: Based on available data, the classification criteria are not met.

Sensitising effects

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

Carcinogenic/mutagenic/toxic effects for reproduction

Germ cell mutagenicity: Based on available data, the classification criteria are not met.

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

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

STOT-single exposure

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

STOT-repeated exposure

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

Aspiration hazard

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

11.2. Information on other hazards

Endocrine disrupting properties

This substance does not have endocrine disrupting properties with respect to humans.

Other information

This substance is classified as hazardous according to Regulation (EC) No 1272 (2008).

SECTION 12: Ecological information

12.1. Toxicity

Harmful to aquatic life with long lasting effects.

| CAS No | Chemical name | | | | | |
|----------|---------------------------|-----------------------|-----------|---------------------------------|---------------|--------|
| | Aquatic toxicity | Dose | [h] [d] | Species | Source | Method |
| 104-50-7 | NATURAL GAMMA OCTALACTONE | | | | | |
| | Acute fish toxicity | LC50 215 mg/l | 96 h | Leuciscus idus (golden orfe) | REACH Dossier | |
| | Acute algae toxicity | ErC50 mg/l 77,816 | 72 h | Pseudokirchneriella subcapitata | REACH Dossier | |
| | Acute crustacea toxicity | EC50 mg/l 70,79 | 48 h | Daphnia magna (Big water flea) | REACH Dossier | |
| | Fish toxicity | NOEC mg/l 46.4 | 4 d | Leuciscus idus (golden orfe) | REACH Dossier | |
| | Acute bacteria toxicity | EC50 mg/l () 285,629 | 3 h | Activated sludge | REACH Dossier | |

12.2. Persistence and degradability

The product has not been tested.

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| CAS No | Chemical name | | | |
|----------|---------------------------|-------|----|---------------|
| | Method | Value | d | Source |
| | Evaluation | | | |
| 104-50-7 | NATURAL GAMMA OCTALACTONE | | | |
| | | 10% | 2 | REACH Dossier |
| | Not readily biodegradable | | | |
| | | 49% | 21 | REACH Dossier |
| | Not readily biodegradable | | | |
| | OECD 301D | 49% | 28 | REACH Dossier |
| | Not readily biodegradable | | | |

12.3. Bioaccumulative potential

The product has not been tested.

Partition coefficient n-octanol/water

| CAS No | Chemical name | Log Pow |
|----------|---------------------------|---------|
| 104-50-7 | NATURAL GAMMA OCTALACTONE | 1,89 |

12.4. Mobility in soil

The product has not been tested.

12.5. Results of PBT and vPvB assessment

This substance does not meet the PBT/vPvB criteria of UK REACH.

The product has not been tested.

12.6. Endocrine disrupting properties

This substance does not have endocrine disrupting properties with respect to non-target organisms.

12.7. 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.

SECTION 13: Disposal considerations

13.1. 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.

List of Wastes Code - residues/unused products

160305 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; off-specification batches and unused products; organic wastes containing hazardous substances; hazardous waste

List of Wastes Code - used product

160305 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; off-specification batches and unused products; organic wastes containing hazardous substances; hazardous waste

List of Wastes Code - contaminated packaging

150110 WASTE PACKAGING; ABSORBENTS, WIPING CLOTHS, FILTER MATERIALS AND PROTECTIVE CLOTHING NOT OTHERWISE SPECIFIED; packaging (including separately collected municipal packaging waste); packaging containing residues of or contaminated by hazardous substances; hazardous waste

Contaminated packaging

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

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SECTION 14: Transport information

Land transport (ADR/RID)

| | |
|---|--|
| <u>14.1. UN number or ID number:</u> | No dangerous good in sense of this transport regulation. |
| <u>14.2. UN proper shipping name:</u> | No dangerous good in sense of this transport regulation. |
| <u>14.3. Transport hazard class(es):</u> | No dangerous good in sense of this transport regulation. |
| <u>14.4. Packing group:</u> | No dangerous good in sense of this transport regulation. |

Inland waterways transport (ADN)

| | |
|---|--|
| <u>14.1. UN number or ID number:</u> | No dangerous good in sense of this transport regulation. |
| <u>14.2. UN proper shipping name:</u> | No dangerous good in sense of this transport regulation. |
| <u>14.3. Transport hazard class(es):</u> | No dangerous good in sense of this transport regulation. |
| <u>14.4. Packing group:</u> | No dangerous good in sense of this transport regulation. |

Marine transport (IMDG)

| | |
|---|--|
| <u>14.1. UN number or ID number:</u> | No dangerous good in sense of this transport regulation. |
| <u>14.2. UN proper shipping name:</u> | No dangerous good in sense of this transport regulation. |
| <u>14.3. Transport hazard class(es):</u> | No dangerous good in sense of this transport regulation. |
| <u>14.4. Packing group:</u> | No dangerous good in sense of this transport regulation. |

Air transport (ICAO-TI/IATA-DGR)

| | |
|---|--|
| <u>14.1. UN number or ID number:</u> | No dangerous good in sense of this transport regulation. |
| <u>14.2. UN proper shipping name:</u> | No dangerous good in sense of this transport regulation. |
| <u>14.3. Transport hazard class(es):</u> | No dangerous good in sense of this transport regulation. |
| <u>14.4. Packing group:</u> | No dangerous good in sense of this transport regulation. |

14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS: No

14.6. Special precautions for user

No information available.

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 regulatory information

Restrictions on use (REACH, annex XVII):

Entry 3

Directive 2010/75/EU on industrial emissions: 100 % (980 g/l)

Directive 2004/42/EC on VOC in paints and varnishes: 100 % (980 g/l)

Information according to Directive 2012/18/EU (SEVESO III): Not subject to 2012/18/EU (SEVESO III)

Additional information

To follow: 850/2004/EC, 79/117/EEC, 689/2008/EC

National regulatory information

Employment restrictions: Observe restrictions to employment for juveniles according to the 'juvenile work protection guideline' (94/33/EC).

Water hazard class (D): 1 - slightly hazardous to water

15.2. Chemical safety assessment

For this substance a chemical safety assessment has not been carried out.

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SECTION 16: Other information**Abbreviations and acronyms**

Skin Irrit: Skin irritation

Aquatic Chronic: Chronic aquatic hazard

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

MARPOL: International Convention for the Prevention of Marine Pollution from Ships

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>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

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

EC/EEC: European Community/European Economic Community

EU: European Union

M-factor: Multiplying factor

IATA: International Air Transport Association

DGR: Dangerous Goods Regulations

ICAO: International Civil Aviation Organization

TI: Technical Instructions

VOC: volatile organic compound

Relevant H and EUH statements (number and full text)

H315 Causes skin irritation.

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H412 Harmful to aquatic life with long lasting effects.

Further Information

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.