

Safety Data Sheet

according to UN GHS (ST/SG/AC.10/11/Rev.9)

NATURAL BORNEOL

Revision date: 30.08.2023

Product code: 215700WW

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

1.1. Product identifier

NATURAL BORNEOL

Substance name: NATURAL BORNEOL
CAS No: 507-70-0

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
e-mail: info@axxence.com
Contact person: Andreas Goertz
e-mail: andreas.goertz@axxence.com
Internet: www.axxence.de
Responsible Department: QM - Regulatory Affairs

Telefax: + 49 2822 68561 39

Telephone: + 49 2822 68561 37

1.4. Emergency telephone number:

+49 2822 68561 99

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

UN GHS (ST/SG/AC.10/11/Rev.9)

Flammable solid: Flam. Sol. 2
Acute toxicity: Acute Tox. 4 (oral)
Acute toxicity: Acute Tox. 5 (dermal)
Skin corrosion/irritation: Skin Irrit. 2
Serious eye damage/eye irritation: Eye Dam. 1
Hazardous to the aquatic environment: Aquatic Acute 2
Hazardous to the aquatic environment: Aquatic Chronic 2

2.2. Label elements

UN GHS (ST/SG/AC.10/11/Rev.9)

Signal word: Danger

Pictograms:



Hazard statements

H228 Flammable solid.
H302 Harmful if swallowed.
H313 May be harmful in contact with skin.
H315 Causes skin irritation.
H318 Causes serious eye damage.
H411 Toxic to aquatic life with long lasting effects.

Precautionary statements

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No

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smoking.
P240 Ground and bond container and receiving equipment.
P241 Use explosion-proof electrical/ventilating/lighting equipment.
P270 Do not eat, drink or smoke when using this product.
P273 Avoid release to the environment.
P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.
P301+P317 IF SWALLOWED: Get medical help.
P330 Rinse mouth.
P302+P352 IF ON SKIN: Wash with plenty of Water and soap.
P332+P317 If skin irritation occurs: Get medical help.
P362+P364 Take off contaminated clothing and wash it before reuse.
P305+P354+P338 IF IN EYES: Immediately rinse with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P317 Get medical help.
P370+P378 In case of fire: Use Water spray jet / alcohol resistant foam / Extinguishing powder / Carbon dioxide (CO₂) to extinguish.
P391 Collect spillage.
P501 Dispose of contents/container to .

2.3. Other hazards

This substance has been listed as SVHC (substance of very high concern) in the Candidate List according to Article 59 of REACH.

This substance is identified as SVHC (substance of very high concern) and is subject to authorisation according to Annex XIV of REACH.

SECTION 3: Composition/information on ingredients

3.1. Substances

Sum formula: C₁₀ H₁₈ O
Molecular weight: 154,25

Hazardous components

| CAS No | Chemical name | Quantity |
|----------|---------------------------------------------------------------------------------------------------------------------------------------------|----------|
| | Classification (UN GHS (ST/SG/AC.10/11/Rev.9)) | |
| 507-70-0 | NATURAL BORNEOL | 100 % |
| | Flam. Sol. 2, Acute Tox. 4, Acute Tox. 5, Skin Irrit. 2, Eye Dam. 1, Aquatic Acute 2, Aquatic Chronic 2; H228 H302 H313 H315 H318 H401 H411 | |

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

In case of contact with eyes flush immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart and consult an ophthalmologist.

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

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Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media

Water spray jet, Carbon dioxide (CO₂), Foam, Extinguishing powder.

5.2. Special hazards arising from the substance or mixture

Flammable. Vapours can form explosive mixtures with air.

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

Remove all sources of ignition. Provide adequate ventilation. Avoid dust formation. Do not breathe dust. Avoid contact with skin, eyes and clothes. Use personal protection equipment.

6.2. Environmental precautions

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

6.3. Methods and material for containment and cleaning up

For cleaning up

Take up mechanically. Treat the recovered material as prescribed in the section on waste disposal.

Other information

Take up mechanically. 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

If handled uncovered, arrangements with local exhaust ventilation have to be used. Avoid dust formation. Do not breathe dust.

Advice on protection against fire and explosion

Keep away from sources of ignition - No smoking. Take precautionary measures against static discharges.

Vapours can 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.

7.2. 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.

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Hints on joint storage

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

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.2. Exposure controls



Appropriate engineering controls

If handled uncovered, arrangements with local exhaust ventilation have to be used. Do not breathe dust.

Individual protection measures, such as personal protective equipment

Eye/face protection

Suitable eye protection: goggles.

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

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

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: | crystalline | |
| Colour: | white | |
| Melting point/freezing point: | | 206 °C |
| Boiling point or initial boiling point and boiling range: | | 194 °C |
| Flammability: | | not determined |
| Lower explosion limits: | | not determined |
| Upper explosion limits: | | not determined |
| Auto-ignition temperature: | | not determined |
| Decomposition temperature: | | not determined |
| pH-Value: | | not determined |
| Water solubility: | | 0,01 g/L |
| (at 20 °C) | | |
| Solubility in other solvents | | |
| not determined | | |
| Partition coefficient n-octanol/water: | | 3,6 |
| Vapour pressure: | | 44,7 hPa |
| (at 25 °C) | | |
| Density (at 20 °C): | | 1,01 g/cm³ |
| Relative vapour density: | | not determined |

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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:

100,00 %

SECTION 10: Stability and reactivity

10.1. Reactivity

Flammable.

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 toxicological effects

Acute toxicity

Harmful if swallowed.

May be harmful in contact with skin.

| CAS No | Chemical name | | | | |
|----------|-----------------|---------------|---------|--------|--------------------------------|
| | Exposure route | Dose | Species | Source | Method |
| 507-70-0 | NATURAL BORNEOL | | | | |
| | oral | LD50 mg/kg | 1310 | Mouse | REACH registration OECD 420 |
| | dermal | LD50 mg/kg | >2000 | Rat | REACH registration OECD 402 |

Irritation and corrosivity

Causes skin irritation.

Causes serious eye damage.

Sensitising effects

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

Carcinogenic/mutagenic/toxic effects for reproduction

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

STOT-single exposure

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

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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

No information available.

Other information

No information available.

Further information

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

SECTION 12: Ecological information

12.1. Toxicity

Toxic to aquatic life with long lasting effects.

| CAS No | Chemical name | | | | | |
|----------|--------------------------|----------------|-----------|---------|------------------------------------|-----------------------|
| | Aquatic toxicity | Dose | [h] [d] | Species | Source | Method |
| 507-70-0 | NATURAL BORNEOL | | | | | |
| | Acute fish toxicity | LC50 mg/l | 33,25 | 96 h | Danio rerio (zebrafish) | REACH registration |
| | Acute algae toxicity | ErC50 mg/l | 1,71 | 72 h | Pseudokirchneriella subcapitata | REACH registration |
| | Acute crustacea toxicity | EC50 mg/l | 4,23 | 48 h | Daphnia magna (Big water flea) | REACH registration |
| | Algae toxicity | NOEC mg/l | 0,032 | 3 d | Pseudokirchneriella subcapitata | REACH registration |
| | Acute bacteria toxicity | (EC50 mg/l) | >100 | 3 h | Activated sludge | REACH registration |

12.2. Persistence and degradability

The product has not been tested.

| CAS No | Chemical name | | | |
|----------|-----------------------------------------------------|-------|----|--------------------|
| | Method | Value | d | Source |
| | Evaluation | | | |
| 507-70-0 | NATURAL BORNEOL | | | |
| | OECD 301F | 51% | 7 | REACH registration |
| | Readily biodegradable (according to OECD criteria). | | | |
| | OECD 301F | 67% | 15 | REACH registration |
| | Readily biodegradable (according to OECD criteria). | | | |
| | OECD 301F | 77% | 28 | REACH registration |
| | Readily biodegradable (according to OECD criteria). | | | |

12.3. Bioaccumulative potential

The product has not been tested.

Partition coefficient n-octanol/water

| CAS No | Chemical name | Log Pow |
|----------|-----------------|---------|
| 507-70-0 | NATURAL BORNEOL | 3,6 |

12.4. Mobility in soil

The product has not been tested.

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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.

Contaminated packaging

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

SECTION 14: Transport information

Marine transport (IMDG)

14.1. UN number or ID number:

UN 1312

14.2. UN proper shipping name:

BORNEOL

14.3. Transport hazard class(es):

4.1

14.4. Packing group:

III

Hazard label:

4.1



Special Provisions:

-

Limited quantity:

5 kg

Excepted quantity:

E1

EmS:

F-A, S-I

Air transport (ICAO-TI/IATA-DGR)

14.1. UN number or ID number:

UN 1312

14.2. UN proper shipping name:

BORNEOL

14.3. Transport hazard class(es):

4.1

14.4. Packing group:

III

Hazard label:

4.1



Special Provisions:

A803

Limited quantity Passenger:

10 kg

Passenger LQ:

Y443

Excepted quantity:

E1

IATA-packing instructions - Passenger:

446

IATA-max. quantity - Passenger:

25 kg

IATA-packing instructions - Cargo:

449

IATA-max. quantity - Cargo:

100 kg

14.5. Environmental hazards

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ENVIRONMENTALLY HAZARDOUS: Yes



Danger releasing substance: NATURAL BORNEOL

14.6. Special precautions for user

Warning: flammable solids.

14.7. Maritime transport in bulk according to IMO instruments

not applicable

SECTION 15: Regulatory information

National regulatory information

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

SECTION 16: Other information

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
IBC: Intermediate Bulk Container
VOC: Volatile Organic Compounds

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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).

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.