

Safety data sheet

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ISOBIONICS safety data sheet. This is a translation of the country-specific safety data sheet into a language other than that required by law. This document does not replace the safety data sheet provided according to Regulation (EC) No 1907/2006.

Date / Revised: 14.07.2023

Version: 2.0

Date previous version: 25.03.2022

Previous version: 1.0

Date / First version: 25.03.2022

Product: **Isobionics® Natural α -Bisabolene 98**

(ID no. 30797310/SDS_GEN_IT/EN)

Date of print 18.09.2023

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

1.1. Product identifier

Isobionics® Natural α -Bisabolene 98

Chemical name: Cyclohexene, 4-(1,5-dimethyl-1,4-hexadien-1-yl)-1-methyl-

CAS Number: 17627-44-0

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

Relevant identified uses: flavoring substance

Recommended use: flavoring substance

1.3. Details of the supplier of the safety data sheet

Company:

ISOBIONICS B.V.

Urmonderbaan 22

Building: 220

6167 RD Geleen

NETHERLANDS

Telephone: +31 (0)433 020212

E-mail address: info@isobionics.com

1.4. Emergency telephone number

International emergency number:

Telephone: +49 180 2273-112

CAV "Osp. Pediatrico Bambino Gesù"

Az. Osp. Univ. Foggia

Az. Osp. "A. Cardarelli"

Roma 06 68593726

Foggia 800183459

Napoli 081-5453333

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| | |
|--|---------------------|
| CAV Policlinico "Umberto I" | Roma 06-49978000 |
| CAV Policlinico "A. Gemelli" | Roma 06-3054343 |
| Az. Osp. "Careggi" U.O. Tossicologia Medica | Firenze 055-7947819 |
| CAV Centro Nazionale di Informazione Tossicologica | Pavia 0382-24444 |
| Osp. Niguarda Ca' Granda | Milano 02-66101029 |
| Azienda Ospedaliera Papa Giovanni XXII | Bergamo 800883300 |
| Azienda Ospedaliera Integrata Verona | Verona 800011858 |

SECTION 2: Hazards Identification

2.1. Classification of the substance or mixture

According to Regulation (EC) No 1272/2008 [CLP]

| | |
|---------------------|--|
| Asp. Tox. 1 | H304 May be fatal if swallowed and enters airways. |
| Skin Corr./Irrit. 2 | H315 Causes skin irritation. |
| Skin Sens. 1 | H317 May cause an allergic skin reaction. |

For the classifications not written out in full in this section the full text can be found in section 16.

2.2. Label elements

According to Regulation (EC) No 1272/2008 [CLP]

Pictogram:



Signal Word:

Danger

Hazard Statement:

| | |
|------|---|
| H315 | Causes skin irritation. |
| H317 | May cause an allergic skin reaction. |
| H304 | May be fatal if swallowed and enters airways. |

Precautionary Statements (Prevention):

| | |
|------|--|
| P280 | Wear protective gloves. |
| P261 | Avoid breathing mist or vapour or spray. |

Precautionary Statements (Response):

| | |
|-------------|--|
| P301 + P310 | IF SWALLOWED: Immediately call a POISON CENTER or physician. |
| P302 + P352 | IF ON SKIN: Wash with plenty of soap and water. |

Precautionary Statements (Storage):

| | |
|------|------------------|
| P405 | Store locked up. |
|------|------------------|

Precautionary Statements (Disposal):

| | |
|------|---|
| P501 | Dispose of contents and container to hazardous or special waste collection point. |
|------|---|

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2.3. Other hazards

According to Regulation (EC) No 1272/2008 [CLP]

The product does not fulfill the criteria for PBT (Persistent/bioaccumulative/toxic) and vPvB (very persistent/very bioaccumulative). Product does not contain a substance above legal limits included in the list established in accordance with Article 59(1) of Regulation (EC) No 1907/2006 for having endocrine disrupting properties or is identified to have endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605. Attention - The product has not yet been fully tested.

SECTION 3: Composition/Information on Ingredients

3.1. Substances

Chemical nature

6-Methyl-2-(4-methylcyclohex-3-enyl)hept-2,5-diene

CAS Number: 17627-44-0

EC-Number: 241-610-9

For the classifications not written out in full in this section, including the hazard classes and the hazard statements, the full text is listed in section 16.

3.2. Mixtures

Not applicable

SECTION 4: First-Aid Measures

4.1. Description of first aid measures

First aid personnel should pay attention to their own safety. If the patient is likely to become unconscious, place and transport in stable sideways position (recovery position). Immediately remove contaminated clothing.

If inhaled:

Keep patient calm, remove to fresh air, seek medical attention.

On skin contact:

Immediately wash thoroughly with soap and water, seek medical attention.

On contact with eyes:

Wash affected eyes for at least 15 minutes under running water with eyelids held open, consult an eye specialist.

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On ingestion:

Immediately rinse mouth and then drink 200-300 ml of water, seek medical attention.

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

Symptoms: Information, i.e. additional information on symptoms and effects may be included in the GHS labeling phrases available in Section 2 and in the Toxicological assessments available in Section 11., (Further) symptoms and / or effects are not known so far

4.3. Indication of any immediate medical attention and special treatment needed

Treatment: Treat according to symptoms (decontamination, vital functions), no known specific antidote.

SECTION 5: Fire-Fighting Measures

5.1. Extinguishing media

Suitable extinguishing media:
carbon dioxide, foam, dry powder

Unsuitable extinguishing media for safety reasons:
water jet

5.2. Special hazards arising from the substance or mixture

Endangering substances: carbon oxides, harmful vapours
Advice: The substances/groups of substances mentioned can be released in case of fire.

5.3. Advice for fire-fighters

Special protective equipment:
Wear self-contained breathing apparatus and chemical-protective clothing.

Further information:
Dispose of fire debris and contaminated extinguishing water in accordance with official regulations.
Cool endangered containers with water-spray.

SECTION 6: Accidental Release Measures

High risk of slipping due to leakage/spillage of product.

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6.1. Personal precautions, protective equipment and emergency procedures

Use personal protective clothing. Information regarding personal protective measures, see section 8. Ensure adequate ventilation. Do not breathe vapour/spray. Avoid contact with the skin, eyes and clothing.

6.2. Environmental precautions

Do not discharge into drains/surface waters/groundwater.

6.3. Methods and material for containment and cleaning up

For small amounts: Contain with absorbent material (e.g. sand, silica gel, acid binder, general purpose binder, sawdust).

For large amounts: Dike spillage. Pump off product.

Dispose of absorbed material in accordance with regulations.

6.4. Reference to other sections

Information regarding exposure controls/personal protection and disposal considerations can be found in section 8 and 13.

SECTION 7: Handling and Storage

7.1. Precautions for safe handling

Ensure thorough ventilation of stores and work areas. Wear suitable protective clothing and eye/face protection. Avoid contact with the skin, eyes and clothing. Keep container tightly sealed.

Protection against fire and explosion:

Take precautionary measures against static discharges. Avoid all sources of ignition: heat, sparks, open flame.

7.2. Conditions for safe storage, including any incompatibilities

Further information on storage conditions: Keep container tightly closed and dry. Keep in a cool, well-ventilated place. Protect from direct sunlight.

7.3. Specific end use(s)

For the relevant identified use(s) listed in Section 1 the advice mentioned in this section 7 is to be observed.

SECTION 8: Exposure Controls/Personal Protection

8.1. Control parameters

Components with occupational exposure limits

No substance specific occupational exposure limits known.

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8.2. Exposure controls

Personal protective equipment

Respiratory protection:

Respiratory protection in case of vapour/aerosol release. Particle filter with medium efficiency for solid and liquid particles (e.g. EN 143 or 149, Type P2 or FFP2)

Hand protection:

Suitable chemical resistant safety gloves (EN ISO 374-1) also with prolonged, direct contact (Recommended: Protective index 6, corresponding > 480 minutes of permeation time according to EN ISO 374-1): E.g. nitrile rubber (0.4 mm), chloroprene rubber (0.5 mm), butyl rubber (0.7 mm) etc.

Supplementary note: The specifications are based on tests, literature data and information of glove manufacturers or are derived from similar substances by analogy. Due to many conditions (e.g. temperature) it must be considered, that the practical usage of a chemical-protective glove in practice may be much shorter than the permeation time determined through testing.

Manufacturer's directions for use should be observed because of great diversity of types. butyl rubber (butyl) - 0.7 mm coating thickness

Eye protection:

Safety glasses with side-shields (frame goggles) (e.g. EN 166)

Body protection:

Body protection must be chosen depending on activity and possible exposure, e.g. apron, protecting boots, chemical-protection suit (according to EN 14605 in case of splashes or EN ISO 13982 in case of dust).

General safety and hygiene measures

Handle in accordance with good industrial hygiene and safety practice. Wearing of closed work clothing is required additionally to the stated personal protection equipment. Avoid contact with the skin, eyes and clothing. No eating, drinking, smoking or tobacco use at the place of work. Hands and/or face should be washed before breaks and at the end of the shift. Store work clothing separately.

SECTION 9: Physical and Chemical Properties

9.1. Information on basic physical and chemical properties

| | |
|------------------|---|
| State of matter: | liquid |
| Form: | oil |
| Colour: | yellow clear |
| Odour: | No data available. |
| Odour threshold: | No data available. |
| Melting point: | No data available. |
| Boiling point: | 276 °C |
| Flammability: | hardly combustible (derived from flash point) |

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| | | |
|---|--|--|
| Lower explosion limit: | For liquids not relevant for classification and labelling. | |
| Upper explosion limit: | For liquids not relevant for classification and labelling. | |
| Flash point: | 101 °C | |
| Auto-ignition temperature: | No data available. | |
| Thermal decomposition: | approx. 305 °C (DSC (DIN 51007)) | |
| pH value: | not soluble, not applicable | |
| Viscosity, dynamic: | No data available. | |
| Solubility in water: | not soluble | |
| Partitioning coefficient n-octanol/water (log Kow): | No data available. | |
| Vapour pressure: | 0,008 hPa (20 °C) | |
| Relative density: | 0,859 (20 °C) | |
| Relative vapour density (air):> 1 | (calculated) | |
| | (20 °C) Heavier than air. | |

Particle characteristics

Particle size distribution: The substance / product is marketed or used in a non solid or granular form. -

9.2. Other information

Information with regard to physical hazard classes

Explosives

Explosion hazard: Based on the chemical structure there is no indication of explosive properties.

Oxidizing properties

Fire promoting properties: Based on its structural properties the product is not classified as oxidizing.

Corrosion to metals

Corrosive effects to metal are not anticipated.

Other safety characteristics

Molar mass: 204,36 g/mol

SAPT-Temperature: Study scientifically not justified.

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Evaporation rate:

No data available.

SECTION 10: Stability and Reactivity

10.1. Reactivity

No hazardous reactions if stored and handled as prescribed/indicated.

Corrosion to metals: Corrosive effects to metal are not anticipated.

10.2. Chemical stability

The product is stable if stored and handled as prescribed/indicated.

10.3. Possibility of hazardous reactions

No hazardous reactions if stored and handled as prescribed/indicated.

10.4. Conditions to avoid

See SDS section 7 - Handling and storage.

10.5. Incompatible materials

Substances to avoid:

oxidizing agents, acids, alkalis

10.6. Hazardous decomposition products

Hazardous decomposition products:

No hazardous decomposition products if stored and handled as prescribed/indicated.

SECTION 11: Toxicological Information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity

Assessment of acute toxicity:

Virtually nontoxic after a single ingestion. Virtually nontoxic after a single skin contact. Virtually nontoxic by inhalation.

Irritation

Assessment of irritating effects:

Skin contact causes irritation.

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Respiratory/Skin sensitization

Assessment of sensitization:

Sensitization after skin contact possible.

Germ cell mutagenicity

Assessment of mutagenicity:

No data available.

Carcinogenicity

Assessment of carcinogenicity:

No data available.

Reproductive toxicity

Assessment of reproduction toxicity:

No data available.

Developmental toxicity

Assessment of teratogenicity:

No data available.

Specific target organ toxicity (single exposure)

Remarks: No data available.

Repeated dose toxicity and Specific target organ toxicity (repeated exposure)

Assessment of repeated dose toxicity:

No data available.

Aspiration hazard

May be fatal if swallowed and enters airways.

Interactive effects

No data available.

11.2. Information on other hazards

Endocrine disrupting properties

The substance is not identified to have endocrine disrupting properties according to Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 nor is included in the Candidate List of substances of very high concern according to EU REACH Article 59 for having endocrine disrupting properties.

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Other information

Other relevant toxicity information

Attention - The product has not yet been fully tested.

SECTION 12: Ecological Information

12.1. Toxicity

Assessment of aquatic toxicity:

No data available.

12.2. Persistence and degradability

Assessment biodegradation and elimination (H₂O):

No data available.

12.3. Bioaccumulative potential

Assessment bioaccumulation potential:

No data available.

12.4. Mobility in soil

Assessment transport between environmental compartments:

Adsorption in soil: not determined

12.5. Results of PBT and vPvB assessment

According to Annex XIII of Regulation (EC) No.1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH): The product does not fulfill the criteria for PBT (Persistent/bioaccumulative/toxic) and vPvB (very persistent/very bioaccumulative). Self classification

12.6. Endocrine disrupting properties

The substance is not identified to have endocrine disrupting properties according to Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 nor is included in the Candidate List of substances of very high concern according to EU REACH Article 59 for having endocrine disrupting properties.

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12.7. Other adverse effects

The substance is not listed in Regulation (EC) 1005/2009 on substances that deplete the ozone layer.

12.8. Additional information

Other ecotoxicological advice:

Attention - The product has not yet been fully tested.

SECTION 13: Disposal Considerations

13.1. Waste treatment methods

Observe national and local legal requirements.

SECTION 14: Transport Information

Land transport

ADR

| | |
|------------------------------|--|
| | Not classified as a dangerous good under transport regulations |
| UN number or ID number: | Not applicable |
| UN proper shipping name: | Not applicable |
| Transport hazard class(es): | Not applicable |
| Packing group: | Not applicable |
| Environmental hazards: | Not applicable |
| Special precautions for user | None known |

RID

| | |
|------------------------------|--|
| | Not classified as a dangerous good under transport regulations |
| UN number or ID number: | Not applicable |
| UN proper shipping name: | Not applicable |
| Transport hazard class(es): | Not applicable |
| Packing group: | Not applicable |
| Environmental hazards: | Not applicable |
| Special precautions for user | None known |

Inland waterway transport

ADN

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| | |
|-------------------------------|--|
| | Not classified as a dangerous good under transport regulations |
| UN number or ID number: | Not applicable |
| UN proper shipping name: | Not applicable |
| Transport hazard class(es): | Not applicable |
| Packing group: | Not applicable |
| Environmental hazards: | Not applicable |
| Special precautions for user: | None known |

Transport in inland waterway vessel

Not evaluated

Sea transport

IMDG

| | |
|-------------------------------|--|
| | Not classified as a dangerous good under transport regulations |
| UN number or ID number: | Not applicable |
| UN proper shipping name: | Not applicable |
| Transport hazard class(es): | Not applicable |
| Packing group: | Not applicable |
| Environmental hazards: | Not applicable |
| Special precautions for user: | None known |

Air transport

IATA/ICAO

| | |
|-------------------------------|--|
| | Not classified as a dangerous good under transport regulations |
| UN number or ID number: | Not applicable |
| UN proper shipping name: | Not applicable |
| Transport hazard class(es): | Not applicable |
| Packing group: | Not applicable |
| Environmental hazards: | Not applicable |
| Special precautions for user: | None known |

14.1. UN number or ID number

See corresponding entries for "UN number or ID number" for the respective regulations in the tables above.

14.2. UN proper shipping name

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See corresponding entries for "UN proper shipping name" for the respective regulations in the tables above.

14.3. Transport hazard class(es)

See corresponding entries for "Transport hazard class(es)" for the respective regulations in the tables above.

14.4. Packing group

See corresponding entries for "Packing group" for the respective regulations in the tables above.

14.5. Environmental hazards

See corresponding entries for "Environmental hazards" for the respective regulations in the tables above.

14.6. Special precautions for user

See corresponding entries for "Special precautions for user" for the respective regulations in the tables above.

14.7. Maritime transport in bulk according to IMO instruments

Maritime transport in bulk is not intended.

SECTION 15: Regulatory Information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

Regulations (Italy): 1) 1272/2008/CE Regulation and subsequent amendments; 2) 2012/18/EU Directive (Seveso III) and Legislative Decree 105/2015; 3) Legislative Decree 81/2008 and Legislative Decree 152/2006.

15.2. Chemical Safety Assessment

Chemical Safety Assessment not required

SECTION 16: Other Information

Assessment of the hazard classes according to UN GHS criteria (most recent version)

Asp. Tox. 1

Skin Corr./Irrit. 2

Skin Sens. 1

Any other intended applications should be discussed with the manufacturer. Corresponding occupational protection measurements must be followed.

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Full text of the classifications, including the hazard classes and the hazard statements, if mentioned in section 2 or 3:

| | |
|-------------------|---|
| Asp. Tox. | Aspiration hazard |
| Skin Corr./Irrit. | Skin corrosion/irritation |
| Skin Sens. | Skin sensitization |
| H315 | Causes skin irritation. |
| H317 | May cause an allergic skin reaction. |
| H304 | May be fatal if swallowed and enters airways. |

Abbreviations

ADR = The European Agreement concerning the International Carriage of Dangerous Goods by Road.
 ADN = The European Agreement concerning the International Carriage of Dangerous Goods by Inland waterways. ATE = Acute Toxicity Estimates. CAO = Cargo Aircraft Only. CAS = Chemical Abstract Service. CLP = Classification, Labelling and Packaging of substances and mixtures. DIN = German national organization for standardization. DNEL = Derived No Effect Level. EC50 = Effective concentration median for 50% of the population. EC = European Community. EN = European Standards. IARC = International Agency for Research on Cancer. IATA = International Air Transport Association. IBC-Code = Intermediate Bulk Container code. IMDG = International Maritime Dangerous Goods Code. ISO = International Organization for Standardization. STEL = Short-Term Exposure Limit. LC50 = Lethal concentration median for 50% of the population. LD50 = Lethal dose median for 50% of the population. TLV = Threshold Limit Value. MARPOL = The International Convention for the Prevention of Pollution from Ships. NEN = Dutch Norm. NOEC = No Observed Effect Concentration. OEL = Occupational Exposure Limit. OECD = Organization for Economic Cooperation and Development. PBT = Persistent, Bioaccumulative and Toxic. PNEC = Predicted No Effect Level. PPM = Parts per million. RID = The European Agreement concerning the International Carriage of Dangerous Goods by Rail. TWA = Time Weight Average. UN-number = UN number at transport. vPvB = very Persistent and very Bioaccumulative.

The data contained in this safety data sheet are based on our current knowledge and experience and describe the product only with regard to safety requirements. This safety data sheet is neither a Certificate of Analysis (CoA) nor technical data sheet and shall not be mistaken for a specification agreement. Identified uses in this safety data sheet do neither represent an agreement on the corresponding contractual quality of the substance/mixture nor a contractually designated use. It is the responsibility of the recipient of the product to ensure any proprietary rights and existing laws and legislation are observed.

Vertical lines in the left hand margin indicate an amendment from the previous version.