



synerzine™

SAFETY DATA SHEET

Nootkatone Natural 98%

According to Regulation (EC) No 1907/2006, Annex II, as amended. Commission Regulation (EU) No 2015/830 of 28 May 2015.

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

1.1. Product identifier

Product name	Nootkatone Natural 98%
Product number	W1491N-98
Synonyms; trade names	[4R-(4.alpha.,4a.alpha.,6.beta.)]-4,4a,5,6,7,8-Hexahydro-4,4a-dimethyl-6-(1-methylvinyl)naphthalen-2(3H)-one Nootkatone 2(3H)-Naphthalenone, 4,4a,5,6,7,8-hexahydro-4,4a-dimethyl-6-(1-methylethenyl)-, (4R,4aS,6R)- 4,4a,5,6,7,8-Hexahydro-6-isopropenyl-4,4a-dimethyl-2,3H-naphthalenone (4R,4aS,6R)-4,4a,5,6,7,8-Hexahydro-4,4a-dimethyl-6-(1-methylethenyl)-2(3H)-naphthalenone, 2(3H)-Naphthalenone, 4,4a,5,6,7,8-hexahydro-4,4a-dimethyl-6-(1-methylethenyl)-, [4R-(4.alpha.,4a.alpha.,6.beta.)]-
CAS number	4674-50-4
EC number	225-124-4

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

Identified uses	Laboratory chemicals, Manufacture of substances.
Uses advised against	No specific uses advised against are identified.

1.3. Details of the supplier of the safety data sheet

Supplier	Synerzine 5340 Highway 42 Ellenwood, GA 30294 United States +1 404-524-6744 info@synerzine.com
Contact person	Patrick O'Connor

1.4. Emergency telephone number

Emergency telephone	INFOTRAC +1 352-323-3500 (Reference Contract # 102471)
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SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (EC 1272/2008)	
Physical hazards	Not Classified
Health hazards	Skin Sens. 1 - H317
Environmental hazards	Not Classified

2.2. Label elements

EC number	225-124-4
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Hazard pictograms



Signal word	Warning
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Hazard statements	<i>H317 May cause an allergic skin reaction.</i>
Precautionary statements	<i>P261 Avoid breathing dust.</i> <i>P272 Contaminated work clothing should not be allowed out of the workplace.</i> <i>P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.</i> <i>P302+P352 IF ON SKIN: Wash with plenty of water.</i> <i>P321 Specific treatment (see medical advice on this label).</i> <i>P333+P313 If skin irritation or rash occurs: Get medical advice/ attention.</i> <i>P362+P364 Take off contaminated clothing and wash it before reuse.</i> <i>P501 Dispose of contents/ container in accordance with national regulations.</i>

2.3. Other hazards

This substance is not classified as PBT or vPvB according to current EU criteria.

SECTION 3: Composition/information on ingredients

3.1. Substances

Product name	<i>Nootkatone Natural 98%</i>
CAS number	<i>4674-50-4</i>
EC number	<i>225-124-4</i>
Chemical formula	<i>C15H22O</i>
Composition comments	<i>Named component present at ≤100%.</i>

SECTION 4: First aid measures

4.1. Description of first aid measures

General information	<i>Get medical attention immediately. Show this Safety Data Sheet to the medical personnel.</i>
Inhalation	<i>Remove affected person from source of contamination. Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. Maintain an open airway. Loosen tight clothing such as collar, tie or belt. When breathing is difficult, properly trained personnel may assist affected person by administering oxygen. Place unconscious person on their side in the recovery position and ensure breathing can take place.</i>
Ingestion	<i>Rinse mouth thoroughly with water. Give a few small glasses of water or milk to drink. Stop if the affected person feels sick as vomiting may be dangerous. Do not induce vomiting unless under the direction of medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Never give anything by mouth to an unconscious person. Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. Place unconscious person on their side in the recovery position and ensure breathing can take place. Maintain an open airway. Loosen tight clothing such as collar, tie or belt.</i>
Skin contact	<i>It is important to remove the substance from the skin immediately. In the event of any sensitisation symptoms developing, ensure further exposure is avoided. Remove contamination with soap and water or recognised skin cleansing agent. Get medical attention if symptoms are severe or persist after washing.</i>
Eye contact	<i>Rinse immediately with plenty of water. Remove any contact lenses and open eyelids wide apart. Continue to rinse for at least 10 minutes.</i>
Protection of first aiders	<i>First aid personnel should wear appropriate protective equipment during any rescue. Wash contaminated clothing thoroughly with water before removing it from the affected person, or wear gloves. It may be dangerous for first aid personnel to carry out mouth-to-mouth resuscitation.</i>

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

General information	<i>See Section 11 for additional information on health hazards. The severity of the symptoms described will vary dependent on the concentration and the length of exposure.</i>
Inhalation	<i>A single exposure may cause the following adverse effects: Temporary irritation.</i>
Ingestion	<i>May cause sensitisation or allergic reactions in sensitive individuals. May cause discomfort if swallowed. May cause stomach pain or vomiting.</i>

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Skin contact *May cause skin sensitisation or allergic reactions in sensitive individuals. Prolonged contact may cause dryness of the skin.*

Eye contact *May be slightly irritating to eyes.*

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

Notes for the doctor *Treat symptomatically. May cause sensitisation or allergic reactions in sensitive individuals.*

Specific treatments *No special treatment required.*

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media *The product is not flammable. Extinguish with alcohol-resistant foam, carbon dioxide, dry powder or water fog. Use fire-extinguishing media suitable for the surrounding fire.*

Unsuitable extinguishing media *Do not use water jet as an extinguisher, as this will spread the fire.*

5.2. Special hazards arising from the substance or mixture

Specific hazards *None known.*

Hazardous combustion products *Thermal decomposition or combustion products may include the following substances: Harmful gases or vapours.*

5.3. Advice for firefighters

Protective actions during firefighting *Avoid breathing fire gases or vapours. Evacuate area. Cool containers exposed to heat with water spray and remove them from the fire area if it can be done without risk. Cool containers exposed to flames with water until well after the fire is out. Control run-off water by containing and keeping it out of sewers and watercourses. If risk of water pollution occurs, notify appropriate authorities.*

Special protective equipment for firefighters *Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing. Firefighter's clothing conforming to European standard EN469 (including helmets, protective boots and gloves) will provide a basic level of protection for chemical incidents.*

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions *No action shall be taken without appropriate training or involving any personal risk. Keep unnecessary and unprotected personnel away from the spillage. Wear protective clothing as described in Section 8 of this safety data sheet. Follow precautions for safe handling described in this safety data sheet. Wash thoroughly after dealing with a spillage. Ensure procedures and training for emergency decontamination and disposal are in place. Do not touch or walk into spilled material. Avoid contact with skin and eyes.*

6.2. Environmental precautions

Environmental precautions *Large Spillages: Inform the relevant authorities if environmental pollution occurs (sewers, waterways, soil or air).*

6.3. Methods and material for containment and cleaning up

Methods for cleaning up *Wear protective clothing as described in Section 8 of this safety data sheet. Clear up spills immediately and dispose of waste safely. Approach the spillage from upwind. Collect spillage with a shovel and broom, or similar and reuse, if possible. Collect and place in suitable waste disposal containers and seal securely. Flush contaminated area with plenty of water. Wash thoroughly after dealing with a spillage. Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority.*

6.4. Reference to other sections

Reference to other sections *For personal protection, see Section 8. See Section 11 for additional information on health hazards. See Section 12 for additional information on ecological hazards. For waste disposal, see Section 13.*

SECTION 7: Handling and storage

7.1. Precautions for safe handling

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Usage precautions	<i>Read and follow manufacturer's recommendations. Wear protective clothing as described in Section 8 of this safety data sheet. Keep away from food, drink and animal feeding stuffs. Keep container tightly sealed when not in use. Do not handle until all safety precautions have been read and understood. Do not handle broken packages without protective equipment. Do not reuse empty containers.</i>
Advice on general occupational hygiene	<i>Wash promptly if skin becomes contaminated. Take off contaminated clothing. Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Wash at the end of each work shift and before eating, smoking and using the toilet. Change work clothing daily before leaving workplace.</i>

7.2. Conditions for safe storage, including any incompatibilities

Storage precautions	<i>Store away from incompatible materials (see Section 10). Store in accordance with local regulations. Keep only in the original container. Keep container tightly closed, in a cool, well ventilated place. Keep containers upright. Protect containers from damage. Bund storage facilities to prevent soil and water pollution in the event of spillage. The storage area floor should be leak-tight, jointless and not absorbent.</i>
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Storage class	<i>Chemical storage.</i>
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7.3. Specific end use(s)

Specific end use(s)	<i>The identified uses for this product are detailed in Section 1.2.</i>
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SECTION 8: Exposure controls/Personal protection

8.1. Control parameters

Ingredient comments	<i>No exposure limits known for ingredient(s).</i>
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8.2. Exposure controls

Protective equipment



Appropriate engineering controls	<i>Provide adequate ventilation. Personal, workplace environment or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Use process enclosures, local exhaust ventilation or other engineering controls as the primary means to minimise worker exposure. Personal protective equipment should only be used if worker exposure cannot be controlled adequately by the engineering control measures. Ensure control measures are regularly inspected and maintained. Ensure operatives are trained to minimise exposure.</i>
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Eye/face protection	<i>Eyewear complying with an approved standard should be worn if a risk assessment indicates eye contact is possible. Personal protective equipment for eye and face protection should comply with European Standard EN166. Unless the assessment indicates a higher degree of protection is required, the following protection should be worn: Tight-fitting safety glasses.</i>
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Hand protection	<i>Chemical-resistant, impervious gloves complying with an approved standard should be worn if a risk assessment indicates skin contact is possible. The most suitable glove should be chosen in consultation with the glove supplier/manufacturer, who can provide information about the breakthrough time of the glove material. To protect hands from chemicals, gloves should comply with European Standard EN374. Considering the data specified by the glove manufacturer, check during use that the gloves are retaining their protective properties and change them as soon as any deterioration is detected. Frequent changes are recommended.</i>
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Other skin and body protection	<i>Appropriate footwear and additional protective clothing complying with an approved standard should be worn if a risk assessment indicates skin contamination is possible.</i>
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Hygiene measures	<i>Provide eyewash station and safety shower. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reuse. Clean equipment and the work area every day. Good personal hygiene procedures should be implemented. Wash at the end of each work shift and before eating, smoking and using the toilet. When using do not eat, drink or smoke. Preventive industrial medical examinations should be carried out. Warn cleaning personnel of any hazardous properties of the product.</i>
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Respiratory protection	<i>Respiratory protection complying with an approved standard should be worn if a risk assessment indicates inhalation of contaminants is possible. Ensure all respiratory protective equipment is suitable for its intended use and is 'CE'-marked. Check that the respirator fits tightly and the filter is changed regularly. Gas and combination filter cartridges should comply with European Standard EN14387. Full face mask respirators with replaceable filter cartridges should comply with European Standard EN136. Half mask and quarter mask respirators with replaceable filter cartridges should comply with European Standard EN140.</i>
Environmental exposure controls	<i>Keep container tightly sealed when not in use.</i>

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance	<i>Crystalline solid.</i>
Colour	<i>White to Light Yellow</i>
Odour	<i>Citrus Odor</i>
Odour threshold	<i>Not available.</i>
pH	<i>Not available.</i>
Melting point	<i>Not available.</i>
Flash point	<i>140°C / 284°F Method: Tag closed cup.</i>
Evaporation rate	<i>Not available.</i>
Upper/lower flammability or explosive limits	<i>Not available.</i>
Vapour pressure	<i>Not available.</i>
Vapour density	<i>Not available.</i>
Relative density	<i>Not available.</i>
Solubility(ies)	<i>Not available.</i>
Partition coefficient	<i>Not available.</i>
Auto-ignition temperature	<i>Not available.</i>
Decomposition Temperature	<i>Not available.</i>
Viscosity	<i>Not available.</i>
Explosive properties	<i>Not available.</i>
Oxidising properties	<i>Not available.</i>

9.2. Other information

Molecular weight	<i>218.33 g/mol</i>
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SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity	<i>See the other subsections of this section for further details.</i>
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10.2. Chemical stability

Stability	<i>Stable at normal ambient temperatures and when used as recommended. Stable under the prescribed storage conditions.</i>
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10.3. Possibility of hazardous reactions

Possibility of hazardous reactions	<i>No potentially hazardous reactions known.</i>
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10.4. Conditions to avoid

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Conditions to avoid *There are no known conditions that are likely to result in a hazardous situation.*

10.5. Incompatible materials

Materials to avoid *No specific material or group of materials is likely to react with the product to produce a hazardous situation.*

10.6. Hazardous decomposition products

Hazardous decomposition products *Does not decompose when used and stored as recommended. Thermal decomposition or combustion products may include the following substances: Harmful gases or vapours.*

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity - oral

Summary *Based on available data the classification criteria are not met.*

Acute toxicity - dermal

Summary *Based on available data the classification criteria are not met.*

Acute toxicity - inhalation

Summary *Based on available data the classification criteria are not met.*

Skin corrosion/irritation

Summary *Based on available data the classification criteria are not met.*

Serious eye damage/irritation

Summary *Based on available data the classification criteria are not met.*

Respiratory sensitisation

Summary *Based on available data the classification criteria are not met.*

Skin sensitisation

Summary *May cause an allergic skin reaction.*

Germ cell mutagenicity

Summary *Based on available data the classification criteria are not met.*

Carcinogenicity

Summary *Based on available data the classification criteria are not met.*

IARC carcinogenicity

None of the ingredients are listed or exempt.

Reproductive toxicity

Summary *Based on available data the classification criteria are not met.*

Specific target organ toxicity - single exposure

Summary *Based on available data the classification criteria are not met.*

Specific target organ toxicity - repeated exposure

Summary *Based on available data the classification criteria are not met.*

Aspiration hazard

Summary *Not relevant. Solid.*

General information

The severity of the symptoms described will vary dependent on the concentration and the length of exposure.

Inhalation

A single exposure may cause the following adverse effects: Temporary irritation.

Ingestion

May cause sensitisation or allergic reactions in sensitive individuals. May cause discomfort if swallowed. May cause stomach pain or vomiting.

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Skin contact	<i>May cause skin sensitisation or allergic reactions in sensitive individuals. Prolonged contact may cause dryness of the skin.</i>
Eye contact	<i>May be slightly irritating to eyes.</i>
Route of exposure	<i>Ingestion Inhalation Skin and/or eye contact</i>
Target organs	<i>No specific target organs known.</i>
Medical considerations	<i>Skin disorders and allergies.</i>
Other Hazards	

SECTION 12: Ecological information

Ecotoxicity	<i>Not regarded as dangerous for the environment. However, large or frequent spills may have hazardous effects on the environment.</i>
12.1. Toxicity	
Acute aquatic toxicity	
Summary	<i>Based on available data the classification criteria are not met.</i>
Chronic aquatic toxicity	
Summary	<i>Based on available data the classification criteria are not met.</i>
12.2. Persistence and degradability	
Persistence and degradability	<i>The degradability of the product is not known.</i>
12.3. Bioaccumulative potential	
Bioaccumulative potential	<i>No data available on bioaccumulation.</i>
Partition coefficient	<i>Not available.</i>
12.4. Mobility in soil	
Mobility	<i>No data available.</i>
12.5. Results of PBT and vPvB assessment	
12.6. Other adverse effects	
Other adverse effects	<i>None known.</i>

SECTION 13: Disposal considerations

13.1. Waste treatment methods	
General information	<i>The generation of waste should be minimised or avoided wherever possible. Reuse or recycle products wherever possible. This material and its container must be disposed of in a safe way. Disposal of this product, process solutions, residues and by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any local authority requirements. When handling waste, the safety precautions applying to handling of the product should be considered. Care should be taken when handling emptied containers that have not been thoroughly cleaned or rinsed out. Empty containers or liners may retain some product residues and hence be potentially hazardous.</i>
Disposal methods	<i>Do not empty into drains. Dispose of surplus products and those that cannot be recycled via a licensed waste disposal contractor. Waste, residues, empty containers, discarded work clothes and contaminated cleaning materials should be collected in designated containers, labelled with their contents. Incineration or landfill should only be considered when recycling is not feasible.</i>

SECTION 14: Transport information

General	<i>The product is not covered by international regulations on the transport of dangerous goods (IMDG, IATA, ADR/RID).</i>
14.1. UN number	
	<i>Not applicable.</i>

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14.2. UN proper shipping name

Not applicable.

14.3. Transport hazard class(es)

No transport warning sign required.

14.4. Packing group

Not applicable.

14.5. Environmental hazards

Environmentally hazardous substance/marine pollutant

No.

14.6. Special precautions for user

Not applicable.

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

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code *Not applicable.*

SECTION 15: Regulatory information

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

National regulations	<i>Health and Safety at Work etc. Act 1974 (as amended).</i> <i>The Carriage of Dangerous Goods and Use of Transportable Pressure Equipment Regulations 2009 (SI 2009 No. 1348) (as amended) ["CDG 2009"].</i> <i>EH40/2005 Workplace exposure limits.</i>
EU legislation	<i>Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) (as amended).</i> <i>Commission Regulation (EU) No 2015/830 of 28 May 2015.</i> <i>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 (as amended).</i>

15.2. Chemical safety assessment

No chemical safety assessment has been carried out.

Inventories

EU - EINECS/ELINCS

None of the ingredients are listed or exempt.

SECTION 16: Other information

Abbreviations and acronyms used in the safety data sheet	<i>ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road.</i> <i>ADN: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways.</i> <i>RID: European Agreement concerning the International Carriage of Dangerous Goods by Rail.</i> <i>IATA: International Air Transport Association.</i> <i>ICAO: Technical Instructions for the Safe Transport of Dangerous Goods by Air.</i> <i>IMDG: International Maritime Dangerous Goods.</i> <i>CAS: Chemical Abstracts Service.</i> <i>ATE: Acute Toxicity Estimate.</i> <i>LC₅₀: Lethal Concentration to 50 % of a test population.</i> <i>LD₅₀: Lethal Dose to 50% of a test population (Median Lethal Dose).</i> <i>EC₅₀: 50% of maximal Effective Concentration.</i> <i>PBT: Persistent, Bioaccumulative and Toxic substance.</i> <i>vPvB: Very Persistent and Very Bioaccumulative.</i>
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Classification abbreviations and acronyms	<i>Skin Sens. = Skin sensitisation</i>
Classification procedures according to Regulation (EC) 1272/2008	<i>Skin Sens. 1 - H317: : Expert judgement.</i>
Training advice	<i>Read and follow manufacturer's recommendations. Only trained personnel should use this material.</i>
Revision comments	<i>NOTE: Lines within the margin indicate significant changes from the previous revision.</i>
Revision date	<i>02/08/2024</i>
Revision	<i>1</i>
SDS number	<i>863</i>
Hazard statements in full	<i>H317 May cause an allergic skin reaction.</i>
End of Safety Data Sheet	

This information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. Such information is, to the best of the company's knowledge and belief, accurate and reliable as of the date indicated. However, no warranty, guarantee or representation is made to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability of such information for his own particular use.