

## SAFETY DATA SHEET

Version 8.6  
Revision Date 2023.11.25  
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Date of first issue 2023.11.25  
Product Number Aldrich - W216900

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

- a. Product name : Buchu leaf oil, Crenulata
- Product Number : W216900
- Brand : Aldrich
- b. Recommended use of the chemical and restrictions on use : **Identified uses**  
Laboratory chemicals, For research use only.
- c. Company : 씨그마알드리치코리아(유)  
서울특별시 강남구 테헤란로 508,  
3층 (대치동, 해성2빌딩)
- Sigma-Aldrich Korea  
3F Haesung-2-building Teheran-ro 508 Gangnam-gu,  
SEOUL 06178  
SOUTH KOREA
- Telephone : +82 -2-2185-1700
- Fax :
- Emergency Phone # : 080 880 0468 (CHEMTREC) +82 2 2185  
3800 영업시간 - 09:00~18:00, 월요일 -  
금요일 (공휴일 제외)

**SECTION 2: Hazards identification****a. GHS Classification**

Flammable liquids (Category 3)  
Acute toxicity, Oral (Category 4)  
Skin corrosion/irritation (Category 2)  
Skin sensitization (Category 1)  
Carcinogenicity (Category 2)  
Aspiration hazard (Category 1)  
Long-term (chronic) aquatic hazard (Category 2)

**b. GHS-Labeling**

Pictogram



Signal Word

Danger

Hazard Statements

H226	Flammable liquid and vapor.
H302	Harmful if swallowed.
H304	May be fatal if swallowed and enters airways.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H351	Suspected of causing cancer.
H411	Toxic to aquatic life with long lasting effects.

Precautionary Statements

Prevention

P201	Obtain special instructions before use.
P202	Do not handle until all safety precautions have been read and understood.
P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P233	Keep container tightly closed.
P240	Ground and bond container and receiving equipment.
P241	Use explosion-proof electrical/ ventilating/ lighting/ equipment.
P242	Use non-sparking tools.
P243	Take action to prevent static discharges.
P261	Avoid breathing mist or vapors.
P264	Wash the contact area thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P272	Contaminated work clothing should not be allowed out of the workplace.
P273	Avoid release to the environment.
P280	Wear protective gloves/ protective clothing/ eye protection/ face protection.

Response

P301 + P310	IF SWALLOWED: Immediately call a POISON CENTER/ doctor.
P303 + P361 + P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.
P308 + P313	IF exposed or concerned: Get medical advice/ attention.
P321	Specific treatment (see supplemental first aid instructions on this label).
P331	Do NOT induce vomiting.
P333 + P313	If skin irritation or rash occurs: Get medical advice/ attention.
P362 + P364	Take off contaminated clothing and wash it before reuse.
P370 + P378	In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.
P391	Collect spillage.

Storage

P403 + P235	Store in a well-ventilated place. Keep cool.
P405	Store locked up.

Disposal

P501	Dispose of contents/ container according to waste-related laws
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**c. Other hazards which do not result in classification**

none

**SECTION 3: Composition/information on ingredients****3b Mixtures**

Component		Classification	Concentration
<b>(+)-Pulegone</b>			
CAS-No.	89-82-7	Flam. Liq. 4; Acute Tox. 4; Carc. 2; H227, H302, H351	>= 45 - < 50 %
EC-No.	201-943-2		
<b>(S)-(-)-p-mentha-1,8-diene</b>			
CAS-No.	5989-54-8	Flam. Liq. 3; Skin Corr./Irrit. 2; Skin Sens. 1; Asp. Tox. 1; Aquatic Acute 1; Aquatic Chronic 1; H226, H315, H317, H304, H400, H410	>= 15 - < 20 %
EC-No.	227-815-6		
Index-No.	601-029-00-7		
<b>(R)-3,7-Dimethyl-1,6-octadien-3-ol</b>			
CAS-No.	126-91-0	Skin Corr./Irrit. 2; Eye Dam./Irrit. 2; Skin Sens. 1; STOT SE 3; H315, H319, H317, H335	< 1 %
EC-No.	204-811-2		
Index-No.	603-235-00-2		

For the full text of the H-Statements mentioned in this Section, see Section 16.

**SECTION 4: First aid measures****a. In case of eye contact**

After eye contact: rinse out with plenty of water. Call in ophthalmologist. Remove contact lenses.

**b. In case of skin contact**

In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower. Consult a physician.

**c. If inhaled**

After inhalation: fresh air. Call in physician.

**d. If swallowed**

After swallowing: caution if victim vomits. Risk of aspiration! Keep airways free. Pulmonary failure possible after aspiration of vomit. Call a physician immediately.

**e. Most important acute symptoms/effects**

No data available

**Most important delayed symptoms/effects**

No data available

**f. Notes to physician**

No data available

**General advice**

Show this material safety data sheet to the doctor in attendance.

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**SECTION 5: Firefighting measures****a. Suitable extinguishing media**

Foam Carbon dioxide (CO<sub>2</sub>) Dry powder

**Extinguishing media which shall not be used for safety reasons**

For this substance/mixture no limitations of extinguishing agents are given.

**b. Specific hazards arising from the chemical**

Combustible. Vapors are heavier than air and may spread along floors. Forms explosive mixtures with air at elevated temperatures. Development of hazardous combustion gases or vapours possible in the event of fire.

**c. Special protective actions for fire-fighters**

Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.

**Further information**

Remove container from danger zone and cool with water. Prevent fire extinguishing water from contaminating surface water or the ground water system.

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**SECTION 6: Accidental release measures****a. Personal precautions, protective equipment and emergency procedures**

Advice for non-emergency personnel: Do not breathe vapors, aerosols. Avoid substance contact. Ensure adequate ventilation. Keep away from heat and sources of ignition. Evacuate the danger area, observe emergency procedures, consult an expert.

**b. Environmental precautions**

Do not let product enter drains. Risk of explosion.

**c. Methods and materials for containment and cleaning up**

Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up carefully with liquid-absorbent material (e.g. Chemisorb®). Dispose of properly. Clean up affected area.

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**SECTION 7: Handling and storage****a. Precautions for safe handling**

Work under hood. Do not inhale substance/mixture. Avoid generation of vapours/aerosols. Keep away from open flames, hot surfaces and sources of ignition. Take precautionary measures against static discharge.

**b. Conditions for safe storage**

Keep container tightly closed in a dry and well-ventilated place. Keep away from heat and sources of ignition.

**c. Storage class**

Storage class (TRGS 510): 3: Flammable liquids

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**SECTION 8: Exposure controls/personal protection****a. Control parameters**

Contains no substances with occupational exposure limit values.

**b. Appropriate engineering controls**

No data available

**c. Personal protective equipment****Respiratory protection**

required when vapours/aerosols are generated. Our recommendations on filtering respiratory protection are based on the following standards: DIN EN 143, DIN 14387 and other accompanying standards relating to the used respiratory protection system.

**Hand protection**

required

**Eye protection**

Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). Safety glasses

**Skin and body protection**

Flame retardant antistatic protective clothing.

**Hygiene measures**

Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with substance.

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**SECTION 9: Physical and chemical properties****a. Appearance**

Form	liquid
Color	No data available

**b. Odor**                      characteristic**c. Odor Threshold**        No data available**d. pH**                        No data available**e. Melting point**         No data available**f. Initial boiling point**   No data available**g. Flash point**            No data available**h. Evaporation rate**      No data available

i. Flammability (solid, gas)	No data available
j. Lower explosion limit	No data available
Upper explosion limit	No data available
k. Vapor pressure	No data available
l. Water solubility	insoluble
m. Relative vapor density	No data available
n. Density	0.922 g/cm <sup>3</sup>
o. Partition coefficient: n- octanol/water	No data available
p. Autoignition temperature	No data available
q. Decomposition temperature	No data available
r. Viscosity, dynamic	No data available
Viscosity, kinematic	No data available
s. Molecular weight	No data available

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## SECTION 10: Stability and reactivity

### **a. Chemical stability**

No data available

### **b. Possibility of hazardous reactions**

No data available

### **c. Conditions to avoid**

Heating.

### **d. Incompatible products**

Strong oxidizing agents

**e. Hazardous decomposition products**

Hazardous decomposition products formed under fire conditions. - Nature of decomposition products not known.

Other decomposition products - No data available

Hazardous decomposition products formed under fire conditions. - Carbon oxides

**Thermal decomposition**

No data available

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**SECTION 11: Toxicological information****a. Information on likely routes of exposure**

No data available

**b. Delayed and immediate effects and also chronic effects from short and long term exposure****Acute toxicity**

Oral: No data available

Acute toxicity estimate Oral - 1,045 mg/kg

Inhalation: No data available

Dermal: No data available

**Skin corrosion/irritation**

Remarks: Mixture causes skin irritation.

**Serious eye damage/eye irritation**

No data available

**Respiratory or skin sensitization**

Mixture may cause an allergic skin reaction.

**Carcinogenicity**

Evidence of a carcinogenic effect.

IARC: 2B - Group 2B: Possibly carcinogenic to humans ((+)-Pulegone)

**Germ cell mutagenicity**

No data available

**Reproductive toxicity**

No data available

**Specific target organ toxicity - single exposure**

No data available

**Specific target organ toxicity - repeated exposure**

No data available

**Aspiration hazard**

Aspiration hazard, Aspiration may cause pulmonary edema and pneumonitis.

**Signs and Symptoms of Exposure**

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

**c. Numerical measures of toxicity**

No data available

**Additional Information****Further information**

Other dangerous properties can not be excluded.  
This substance should be handled with particular care.  
Handle in accordance with good industrial hygiene and safety practice.

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## SECTION 12: Ecological information

### a. Ecotoxicity effects

No data available

### b. Elimination information (persistence and degradability)

No data available

### c. Bioaccumulative potential

No data available

### d. Mobility in soil

No data available

### e. Other adverse effects

No data available

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## SECTION 13: Disposal considerations

### a. Disposal methods

Waste material must be disposed of in accordance with the national and local regulations. Leave chemicals in original containers. No mixing with other waste. Handle uncleaned containers like the product itself. See [www.retrologistik.com](http://www.retrologistik.com) for processes regarding the return of chemicals and containers, or contact us there if you have further questions.

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## SECTION 14: Transport information

### IMDG

UN number: 1993    Class: 3    Packing group: III    EMS-No: F-E, S-E  
Proper shipping name: FLAMMABLE LIQUID, N.O.S. ((+)-Pulegone, (S)-(-)-p-mentha-1,8-diene)  
Marine pollutant : yes

### IATA

UN number: 1993    Class: 3    Packing group: III  
Proper shipping name: Flammable liquid, n.o.s. ((+)-Pulegone, (S)-(-)-p-mentha-1,8-diene)

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## SECTION 15: Regulatory information

### a. Regulation under the Occupational Safety and Health Act

Harmful Substances Required Permission for Manufacture - Not applicable

Harmful Substances Prohibited from Manufacturing - Not applicable

Harmful Agents to be kept below Occupational Exposure Limits - Not applicable

Controlled Substances Subject to Environment Monitoring - Not applicable



Controlled Substances Subject to Health Examination - Not applicable  
Hazardous substances requiring management - Not applicable  
Special Management Materials - Not applicable

**b. Act on the Registration and Evaluation, etc. of Chemical Substances, Chemicals Control Act**

Toxic Chemicals - Not applicable  
Restricted Chemicals - Not applicable  
Prohibited Chemicals - Not applicable  
Accident Precaution Chemicals - Not applicable

**c. Dangerous Substances Safety Management Act**

Flammable liquids, Type 2 petroleum - Water insoluble liquid

**d. Waste Control Act**

Follow article 13 of the act to dispose the product waste

**e. Other regulations**

**KECI Number**

Not in compliance with the inventory

CAS-No.  
89-82-7

5989-54-8

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**SECTION 16: Other information**

**a. List of references**

**b. Issuing date:** 2019.11.06

**c. Version:** 8.6 Revision Date 2023.11.25

**e. Further information**

**Text of H-code(s) and R-phrases mentioned in Section 3**

H226	Flammable liquid and vapor.
H227	Combustible liquid.
H302	Harmful if swallowed.
H304	May be fatal if swallowed and enters airways.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.
H351	Suspected of causing cancer.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.

The information is believed to be correct but is not exhaustive and will be used solely as a guideline, which is based on current knowledge of the chemical substance or mixture and is applicable to appropriate safety precautions for the product. It does not represent any guarantee of the properties of the product. Sigma-Aldrich Corporation and its Affiliates shall not be held liable for any damage resulting from handling or from contact with the above product. See [www.sigma-aldrich.com](http://www.sigma-aldrich.com) and/or the reverse side of invoice or packing slip for additional terms and conditions of sale.

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