

**CITRONELLA OIL, CHINA**

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**1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND THE COMPANY/UNDERTAKING**

**1.1. Identification of the substance/mixture**

**Trade name:** CITRONELLA OIL, CHINA  
**Substance name:** CITRONELLA OIL  
**CAS Number:** 91771-61-8  
**CE Number:** 294-954-7

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

Raw material for the manufacture of fragrances and/or flavourings.

**1.3. Details of the supplier of the safety data sheet**

**Company:** Ernesto Ventós SA  
**Address:** Carretera Real, 120 B  
08960 Sant Just Desvern – Barcelona – SPAIN  
**Telephone:** (00 34) 934 706 210  
**Fax:** (00 34) 934 733 010  
**E-mail:** info@ventos.com

**1.4. Emergency telephone number**

NCEC (+44) 1865 407333 (24h)  
NCEC (+34) 91 114 2520 (24h) (ES)  
NCEC (+1) 202 464 2554 (24h) (USA, Canada)

**2. HAZARDS IDENTIFICATION**

**2.1. Classification of the substance or mixture**

Acute Toxicity - Category 4 (oral) - H302  
Serious eye damage - Category 1 - H318  
Skin sensitizer - Category 1 - H317  
Aspiration hazard - Category 1 - H304  
Hazardous to the aquatic environment, long-term (chronic) - Category 2 - H411

**2.2. Label Elements**

**Hazard pictograms:**



**Signal Word:**

Danger

**Hazard statements:**

H302 – Harmful if swallowed.  
H304 – May be fatal if swallowed and enters airways.  
H317 – May cause an allergic skin reaction.  
H318 – Causes serious eye damage.  
H411 – Toxic to aquatic life with long lasting effects.

**Precautionary statements:**

P261 – Avoid breathing dust/fume/gas/mist/vapours/spray.  
P280 – Wear protective gloves/protective clothing/eye protection/face protection.  
P301+P310+P330+P331 – IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician. Rinse mouth. Do NOT induce vomiting.  
P302+P352+P333+P313 – IF ON SKIN: Wash with plenty of soap and water. If skin irritation or rash occurs: Get medical advice/attention.  
P305+P351+P338+P310 – IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/physician.

**2.3. Other hazards**

No Information available

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**3. COMPOSITION/INFORMATION ON INGREDIENTS**

**3.1. Substances**

Chemical name: CITRONELLA OIL  
CAS number: 91771-61-8  
EC number: 294-954-7

**Hazardous constituents:**

Chemical Name	% (w/w)	CAS No EC No	Classification according to GHS
CITRONELLAL	≥25; <50	106-23-0 203-376-6	Flammable Liquids - Category 4 - H227 Acute Toxicity - Category 5 (oral) - H303 Acute Toxicity - Category 5 (dermal) - H313 Skin Irritant - Category 2 - H315 Eye Irritant - Category 2A - H319 Skin sensitizer - Category 1B - H317 Hazardous to the aquatic environment, short-term (acute) - Category 2 - H401 Hazardous to the aquatic environment, long-term (chronic) - Category 3 - H412
GERANIOL	≥10; <25	106-24-1 203-377-1	Acute Toxicity - Category 5 (oral) - H303 Skin Irritant - Category 2 - H315 Serious eye damage - Category 1 - H318 Skin sensitizer - Category 1B - H317 Hazardous to the aquatic environment, short-term (acute) - Category 3 - H402
CITRONELLOL	≥10; <25	106-22-9 203-375-0	Acute Toxicity - Category 5 (oral) - H303 Acute Toxicity - Category 5 (dermal) - H313 Skin Irritant - Category 2 - H315 Eye Irritant - Category 2A - H319 Skin sensitizer - Category 1B - H317 Hazardous to the aquatic environment, short-term (acute) - Category 2 - H401
GERANYL ACETATE	≥1; <10	105-87-3 203-341-5	Skin Irritant - Category 2 - H315 Skin sensitizer - Category 1B - H317 Hazardous to the aquatic environment, short-term (acute) - Category 2 - H401 Hazardous to the aquatic environment, long-term (chronic) - Category 3 - H412
LIMONENE	≥1; <10	138-86-3 205-341-0	Flammable Liquids - Category 3 - H226 Skin Irritant - Category 2 - H315 Skin sensitizer - Category 1B - H317 Aspiration hazard - Category 1 - H304 Hazardous to the aquatic environment, short-term (acute) - Category 1 - H400 Hazardous to the aquatic environment, long-term (chronic) - Category 1 - H410
CITRONELLYL ACETATE	≥1; <10	150-84-5 205-775-0	Skin Irritant - Category 2 - H315 Hazardous to the aquatic environment, short-term (acute) - Category 2 - H401 Hazardous to the aquatic environment, long-term (chronic) - Category 2 - H411
ISOPULEGOL	≥1; <10	89-79-2 201-940-6	Flammable Liquids - Category 4 - H227 Acute Toxicity - Category 4 (oral) - H302 Skin Irritant - Category 2 - H315 Eye Irritant - Category 2A - H319 Hazardous to the aquatic environment, short-term (acute) - Category 3 - H402
EUGENOL	≥1; <10	97-53-0 202-589-1	Acute Toxicity - Category 5 (oral) - H303 Skin Irritant - Category 3 - H316 Eye Irritant - Category 2A - H319 Skin sensitizer - Category 1B - H317 Hazardous to the aquatic environment, short-term (acute) - Category 2 - H401
LINALOOL	≥0.1; <1	78-70-6 201-134-4	Flammable Liquids - Category 4 - H227 Acute Toxicity - Category 5 (oral) - H303 Skin Irritant - Category 2 - H315 Eye Irritant - Category 2A - H319 Skin sensitizer - Category 1B - H317 Hazardous to the aquatic environment, short-term (acute) - Category 3 - H402
CITRAL	≥0.1; <1	5392-40-5 226-394-6	Acute Toxicity - Category 5 (dermal) - H313 Skin Irritant - Category 2 - H315 Eye Irritant - Category 2A - H319 Skin sensitizer - Category 1B - H317 Hazardous to the aquatic environment, short-term (acute) - Category 2 - H401

See the full text of the hazard statements in section 16.

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**3.2. Mixtures**

Not applicable.

**4. FIRST-AID MEASURES**

**4.1. Description of necessary first aid measures**

Ingestion:	Rinse mouth with water. Obtain medical advice. Keep at rest. Do not induce vomiting.
Eye contact:	In case of contact with eyes, rinse immediately with plenty of water for at least 15 minutes and seek medical advice.
Inhalation:	Remove person to fresh air and keep at rest. Seek immediate medical advice.
Skin contact:	Take off immediately all contaminated clothing. Thoroughly wash affected skin with soap and water. Seek medical attention if symptoms persist.

**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**

No information available.

**5. FIRE-FIGHTING MEASURES**

**5.1. Extinguishing Media**

Water spray, carbon dioxide, dry chemical powder or appropriate foam.  
For safety reasons do not use full water jet.

**5.2. Special hazards arising from the substance or mixture**

Known or Anticipated Hazardous Products of Combustion: Emits toxic fumes under fire conditions.

**5.3. Advice for firefighters**

High temperatures can lead to high pressures inside closed containers.  
Avoid inhalation of vapors that are created. Use appropriate respiratory protection.  
Do not allow spillage of fire to be poured into drains or watercourses.  
Wear self-contained breathing apparatus and protective clothing.

**6. ACCIDENTAL RELEASE MEASURES**

**6.1. Personal precautions, protective equipment and emergency procedures**

Evacuate surrounding areas. Ensure adequate ventilation. Keep unnecessary and unprotected personnel from entering.  
Do not breathe vapor/spray. Avoid contact with skin and eyes. Information regarding personal protective measures: see section 8.

**6.2. Environmental precautions**

To avoid possible contamination of the environment, do not discharge into any drains, surface waters or groundwaters.

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

Cover with an inert, inorganic, non-combustible absorbent material (e.g. dry-lime, sand, soda ash).  
Place in covered containers using non-sparking tools and transport outdoors.  
Avoid open flames or sources of ignition (e.g. pilot lights on gas hot water heater).  
Ventilate area and wash spill site after material pickup is complete.

**6.4. Reference to other sections**

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

**7. HANDLING AND STORAGE**

**7.1. Precautions for safe handling**

Do not store or handle this material near food or drinking water. Do not smoke.  
Avoid contact with the eyes, skin and clothing. Wear protective clothing and use glasses.  
Observe the rules of safety and hygiene at work.  
Keep in the original container or an alternative made from a compatible material.

**7.2. Conditions for safe storage, including any incompatibilities**

Store in tightly closed and preferably full containers in a cool, dry and ventilated area, protected from light.  
Keep away from sources of ignition (e.g. hot surfaces, sparks, flame and static discharges).  
Keep away from incompatible materials (see section 10).

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**7.3. Specific end use(s)**

No information available.

**8. EXPOSURE CONTROLS AND PERSONAL PROTECTION**

**8.1. Control parameters**

Components with occupational exposure limits:

Chemical Name	CAS No	Norm.	8 hr.		15 min.		
			ppm	mg/m <sup>3</sup>	ppm	mg/m <sup>3</sup>	mg/m <sup>3</sup>
CITRAL	5392-40-5	ES (España) <sup>1</sup>	VLA-ED	5		VLA-EC	
		PL (Polska)	NDS		27	NDSCh	54

<sup>1</sup> Possibility of significant uptake through the skin.

**8.2. Exposure controls**

Measures should be taken to prevent materials from being splashed into the body.  
Provide adequate ventilation, according to the conditions of use. Use a mechanical exhaust if required.

**8.3. Individual protection measures, such as personal protective equipment**

Eye/Face protection: Chemical safety goggles are recommended. Wash contaminated goggles before reuse.  
Hand Protection: Chemical-resistant gloves are recommended. Wash contaminated gloves before reuse.  
Body protection: Personal protective equipment for the body should be selected based on the task being performed and the risks involved.  
Respiratory Protection: In case of insufficient ventilation, use suitable respiratory equipment.  
Environmental exposure controls: Emissions from ventilation or process equipment should be checked to ensure they comply with environmental protection legislation.  
In some cases, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

**9. PHYSICAL AND CHEMICAL PROPERTIES**

**9.1. Information on basic physical and chemical properties**

Appearance: Liquid  
Colour: Conforms to standard  
Odour: Conforms to standard  
Odour threshold: Not determined  
pH: Not determined  
Melting point/freezing point: Not determined  
Boiling point/boiling range (°C): Not determined  
Flash point: 94 °C  
Evaporation rate: Not determined  
Flammability: Not determined  
Lower flammability/Explosive limit: Not determined  
Upper flammability/Explosive limit: Not determined  
Vapour pressure: Not determined  
Vapour Density: Not determined  
Density: 0,87–0,89 g/mL (20°C)  
Relative density: 0,87–0,89 (20°C)  
Water solubility: 1:2 IN ETHANOL 80°  
Solubility in other solvents: SOLUBLE IN ETHANOL  
Partition coefficient n-octanol/water: Not determined  
Auto-ignition temperature: Not determined  
Decomposition temperature: Not determined  
Viscosity, dynamic: Not determined  
Viscosity, kinematic: Not determined  
Explosive properties: Not determined  
Oxidising properties: Not determined

**10. STABILITY AND REACTIVITY**

**10.1. Reactivity**

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

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**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**

Conditions to Avoid: Excessive heat, flame or other ignition sources.

**10.5. Incompatible materials**

Avoid contact with strong acids and bases and oxidizing agents.

**10.6. Hazardous decomposition products**

During combustion may form carbon monoxide and unidentified organic compounds.

**11. TOXICOLOGICAL INFORMATION**

<b>Acute toxicity</b>	Harmful if swallowed. Experimental/calculated data: · LD50(acute/oral) : 300-2000 mg/kg. (Rat). (OECD 420 [2015]). · LD50 (acute/dermal) : >2000 mg/kg. (Rat). (OECD 402 [2015]).
<b>Skin corrosion/irritation</b>	Based on the data available, the criteria for classification are not met. Experimental/calculated data: · Skin irritation : Non-irritant. The product has not been tested. The indication has been derived from the properties of its individual components.
<b>Serious eye damage/irritation</b>	Causes serious eye damage. Experimental/calculated data: · Eye irritation : Irritant. The product has not been tested. The indication has been derived from the properties of its individual components.
<b>Respiratory or skin sensitisation</b>	May cause an allergic skin reaction. Experimental/calculated data: · Skin sensitization : Sensitizing. The product has not been tested. The indication has been derived from the properties of its individual components.
<b>Germ cell mutagenicity</b>	Based on the data available, the criteria for classification are not met.
<b>Carcinogenicity</b>	Based on the data available, the criteria for classification are not met.
<b>Reproductive toxicity</b>	Based on the data available, the criteria for classification are not met.
<b>STOT-single exposure</b>	Based on the data available, the criteria for classification are not met.
<b>STOT-repeated exposure</b>	Based on the data available, the criteria for classification are not met.
<b>Aspiration hazard</b>	May be fatal if swallowed and enters airways.

**12. ECOLOGICAL INFORMATION**

**12.1. Toxicity**

**Assessment:**

Toxic to aquatic life with long lasting effects.

**Experimental/calculated data:**

- Toxicity for fish: LC50 (96h) : 7.5 mg/L. (Oncorhynchus mykiss).
- Toxicity for aquatic invertebrates: EC50 (48h) : 6 mg/L. (Daphnia magna).
- Toxicity for algae: ErC50 (72h) : 34 mg/L. (Pseudokirchneriella subcapitata).

**12.2. Degradability**

Biodegradation : Readily biodegradable.

The product has not been tested. The indication has been derived from the properties of its individual components.

**12.3. Bioaccumulative potential**

No information available.

**12.4. Soil mobility**

No information available.

**12.5. Other adverse effects**

See also sections 6, 7, 13 and 15

Do not allow to get into waste water or waterways.

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**13. DISPOSAL CONSIDERATIONS**

**13.1. Waste treatment methods**

Dispose of in accordance with national and local environmental regulations.

**14. TRANSPORT INFORMATION**

	ADR/RID/ADN	IMDG	IATA-ICAO
<b>14.1. UN Number</b>	UN3082	UN3082	UN3082
<b>14.2. UN Proper Shipping Name</b>	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (LIMONENE)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (LIMONENE)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (LIMONENE)
<b>14.3. Transport Hazard Class(es)</b>	9	9	9
<b>14.4. Packing Group</b>	III	III	III
<b>14.5. Environmental hazards</b>	Yes	Yes	Yes
<b>Additional information</b>			

**14.6 Special precautions for user**

None known

**14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code**

No information available

**15. REGULATORY INFORMATION**

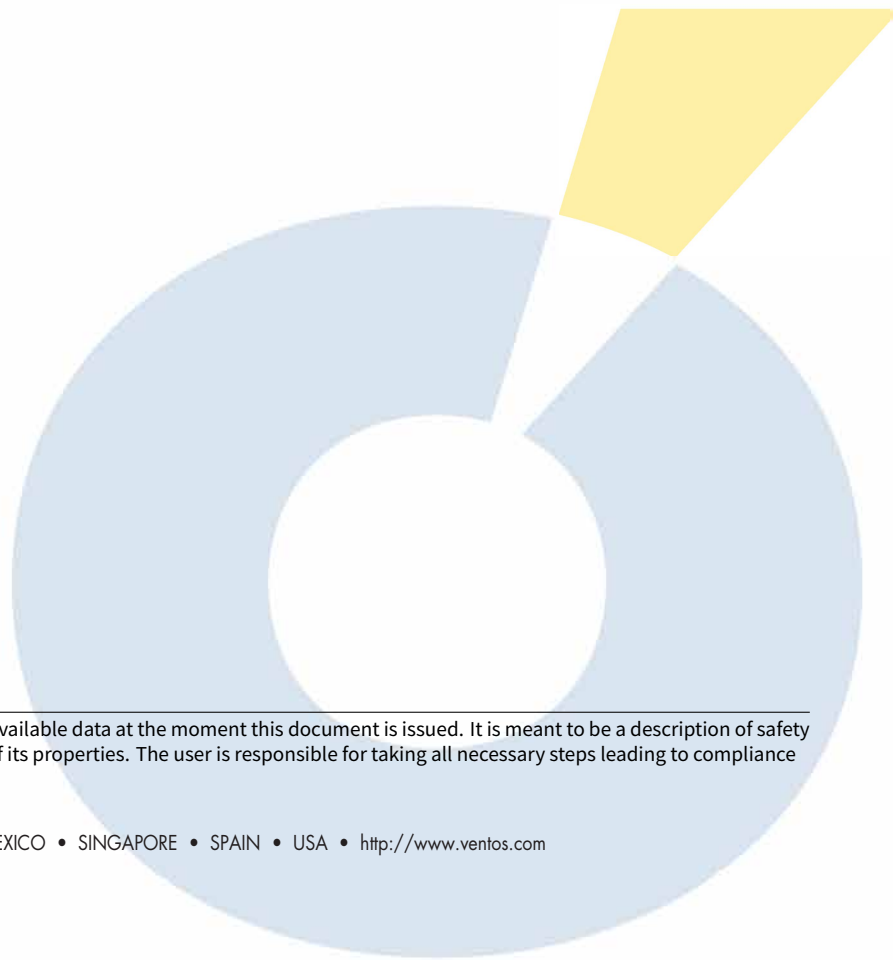
**15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture**

No information available

**16. OTHER INFORMATION**

**Full text of the R-phrases, hazard statements and precautionary statements mentioned in section 3:**

- H226 – Flammable liquid and vapour.
- H227 – Combustible liquid.
- H302 – Harmful if swallowed.
- H303 – May be harmful if swallowed.
- H304 – May be fatal if swallowed and enters airways.
- H313 – May be harmful in contact with skin.
- H315 – Causes skin irritation.
- H316 – Causes mild skin irritation.
- H317 – May cause an allergic skin reaction.
- H318 – Causes serious eye damage.
- H319 – Causes serious eye irritation.
- H400 – Very toxic to aquatic life.
- H401 – Toxic to aquatic life.
- H402 – Harmful to aquatic life.
- H410 – Very toxic to aquatic life with long lasting effects.
- H411 – Toxic to aquatic life with long lasting effects.
- H412 – Harmful to aquatic life with long lasting effects.



The information included in this safety data sheet is based on the available data at the moment this document is issued. It is meant to be a description of safety requirements for our product and does not stand for a guarantee of its properties. The user is responsible for taking all necessary steps leading to compliance with local rules and legislation.