

Material Safety Data Sheet According to EU Regulation 1907/2006 in the current version NEROLI ESSENTIAL OIL

1. Identification of the substance/mixture and company

| Trade name: | Neroli Essential Oil |
|-------------------------------------|---|
| | Obtained by steam distillation from the flowers of Citrus aurantium L. var amara L. |
| I.N.C.I. | Citrus Aurantium Flower Oil |
| CAS No. : | 8016-38-4 / 72968-50-4 |
| EINESCS No. : | 277-143-2 |
| REACH pre-registration No. : | 05-2117971783-29-0000 |
| Utilization: | Raw material for personal care, aromatherapy |
| Supplier company identification: | Elemental SRL, Piața Cazărmii no.15, 410188-Oradea, jud.Bihor, Romania |
| | Tel/Fax: +40259-436.755, www.ellemental.com |
| Emergency: | RO: număr național pentru cazuri de urgență: 021 3183606 Institutul de |
| | Sănătate Publică București. |
| | International emergency number: +49 180 2273-112 |

2. Hazards Identification

2.1 Classification of the substance or mixture

The product is classified as dangerous according to the provisions of the Directive 67/548 / EEC and 1999/45 / EC and subsequent amendments and adjustments. It is also classified dangerous according to EC Regulation 1272/2008. The product therefore requires a safety data sheet in accordance with the provisions of the EC Regulation 1907/2006 and subsequent amendments.

The full text of the risk phrases and precautionary phrases cited below is shown in point 16 of this sheet.

Classification according to EC Reg. 1272/2008 (Norm. GHS-CLP).

AH1 - Toxicity in case of aspiration Cat. 1 EDI1 - Serious eye damage / eye irritation Cat.1 EHA1 - Hazardous to the aquatic environment, acute toxicity 1 EHC1 - Hazardous to the aquatic environment, long-term dangers Cat. 1 SCI2 - Skin corrosion / irritation Cat. 2 SS1A - Skin sensitizer Cat. 1A

Hazards: H304 – H315 – H317 – H318 – H400 - H410 Precautions: P264 – P272 - P273 - P280 - P301+P310 – P302+P352 Special instructions: none

2.2 Label elements

Hazard pictograms:

Hazard statement:



H304 -May be fatal if swallowed and enters airways.

H315 - Causes skin irritation.

H317 - May cause an allergic skin reaction.

H318 - Causes serious eye damage.



H400 - Very toxic to aquatic organisms. H410 - Very toxic to aquatic life with long lasting effects.

Precautionary statement:

P264 - Wash hands thoroughly after use.

P272 - Contaminated work clothing should not be carried out of the workplace.

P273 - Do not disperse in the environment.

P280 - Wear protective gloves / protective clothing / eye protection / face protection.

P301 + P310 - In case of ingestion: immediately contact a poison control center or a doctor.

P302 + P352 - In case of skin contact: wash thoroughly with water and soap.

Special instructions: none

2.3 Other hazards

Contains: Linalool, d-Limonene, Linalyl acetate, Beta-Pinène, Alpha-terpineol, Geraniol, Geranyl acetate, Myrcene, Farnesol.

3. Declaration of ingredients

3.1. Substances

The product contains the following components to declare:

| | - | | | |
|--------------------------------|-----------|-----------|---------------------------------------|-------------|
| Substance | C.A.S. | EINECS | Hazard symbols | Percent % |
| Linalool | 78-70-6 | 201-134-4 | Н315, Н317, Н319 | [30 ; 50] |
| Linalyl acetate | 115-95-7 | 204-116-4 | H315, H319 | [10 ; 15] |
| d-Limonene | 5989-27-5 | 227-813-5 | H226, H304, H315, H317, H400, H410 | [10 ; 15] |
| Beta-Pinène | 127-91-3 | 204-872-5 | H226, H304, H315, H317, H400, H410 | [5;10] |
| Alpha-Terpineol | 98-55-5 | 202-680-6 | H315, H319 | [1;5] |
| Farnesol | 4602-84-4 | 225-004-1 | Н315, Н317, Н319 | [1;5] |
| Geraniol | 106-24-1 | 203-377-1 | H315, H317, H318 | [1;5] |
| Geranyl acetate | 105-87-3 | 203-341-5 | H315, H317, H412 | [1;5] |
| Myrcene | 123-35-3 | 204-622-5 | H226, H304, H315, H319 | [1;5] |
| Nerolidol (isomer unspecified) | 7212-44-4 | 230-597-5 | H319, H400, H410 | [1;5] |
| alpha-Terpineol | 98-55-5 | 202-680-6 | H315, H319 | [1;5] |
| Citral | 5392-40-5 | 226-394-6 | Н315, Н317, Н319 | [0;1] |
| Geranyl acetate | 105-87-3 | 203-341-5 | H315, H317, H412 | [0;1] |
| Nerol | 106-25-2 | 203-378-7 | H315, H317, H319 | [0;1] |

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| Terpinolene | 586-62-9 | 209-578-0 | H226, H304, H317, H400, H410 | [0;1] |
|---------------|----------|-----------|---------------------------------|-------|
| 3.2. Mixtures | | | | |

Not Applicable

4. First aid measures

4.1 Description of first aid measures

General Information: In case of accident or unwellness, seek medical advice immediately, show directions for use or safety data sheet if possible.

After inhalation

In case of accident by inhalation: remove casualty to fresh air and keep at rest. In case of respiratory tract irritation, consult a physician.

After contact with skin

Gently wash with plenty of soap and water. In case of skin irritation, seek medical treatment.

After contact with eyes

Rinse cautiously with water for several minutes. In case of troubles or persistent symptoms, consult an ophthalmologist.

After ingestion

Rinse mouth thoroughly with water. Do NOT induce vomiting. In all cases of doubt, or when symptoms persist, seek medical advice.

4.2 Main symptoms and effects, both acute and delayed

Generally, if in doubt or if symptoms persist, consult a doctor. Never give anything by mouth to an unconscious person. It is recommended that those who provide first aid have a personal protective equipment. No action shall be taken involving any personal risk or without suitable training.

4.3 Indication to consult a physician immediately or any special treatments In case of illness contact your physician immediately. Treat symptomatically. Contact a specialist for treatment of poisoning if large amounts are ingested or inhaled.

5. Fire fighting measures

5.1 Means of extinction

Suitable extinguishing media: Foam, Co2, Dry Chemical Powder. Unsuitable extinguishing media: High power water jet.

5.2 Special hazards arising from the substance or mixture

During the fire toxic fumes could be released, use protective masks. Overpressure can be created in containers exposed to fire with danger of explosion, cool the containers before handling them

5.3 Recommendations for fire-fighters

Always wear full fire protection equipment: protective helmet with visor, fireproof clothing, intervention gloves, breathing apparatus.

6. Accidental release measures



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6.1 Personal precautions, protective devices and emergency procedures In case of loss or spillage of the product, remove any flames or other sources of heat from the area where the leak occurred. Use protection if necessary for airways; protective clothing must be worn (eg. safety glasses or masks). Do not handle damaged containers or spilled product without wearing the appropriate protective equipment.

6.2 Environmental precautions

Discharge into the environment must be avoided. Prevent the product from entering drains, superficial drains, groundwater and confined areas. In case of such contamination inform the competent authorities.

6.3 Methods and materials for containment and remediation

Absorb spilled product with inert absorbent material: sand, vermiculite, diatomaceous earth. Collect most of the resulting material and deposit it in containers for disposal. Ensure adequate ventilation of the site.

6.4 Reference to other sections Refer to section 7, 8 and 13

7. Handling and storage

7.1 Precautions for safe handling

Handle in accordance with good hygiene and safety practice. Keep containers sealed when not in use. Prevent spills & leaks to avoid slip hazard. Always wear personal protective clothing (refer to section 8). Do not eat, drink, or smoke whilst handling this product. Provide suitable mechanical equipment for the safe handling of drums & heavy packages.

7.2 Conditions for safe storage, including any incompatibilities

Keep the product container tightly closed, in a dry, ventilated area. Keep away from potential sources of ignition and protected from heat and light. Maintain limited contact with oxygen. Do not smoke. Store in original container or other container approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain residue product.

7.3 Specific end uses

No other that mentioned in section 1. Comply with regulations and specifications of the product.

8. Exposure controls / personal protection

8.1 Control parameters

Handle in accordance with good industrial hygiene and safety practice.

8.2 Exposure controls

Hand protection: Protect hands with category I work gloves (ref. Directive 89/686 / EEC and standard EN 374) such as latex, PVC or equivalent.

Skin protection: Wear work clothes with long sleeves and safety footwear for professional use of category I (ref. Directive 89/686 / EEC and standard EN 344). Wash with soap and water after removing protective clothing. Respiratory protection: Use protective masks. The use of respiratory protection is necessary in the absence of technical measures to limit worker exposure.

Eye protection: it is recommended to wear airtight protective goggles (ref. Standard EN 166).



8.3 Environmental exposure controls Environmental protection legislation for every country must be observed.

9. Physical and chemical properties

9.1 Information on physical and chemical properties Appearance: liquid Color: from pale yellow to amber yellow Odor: floral, pleasant Relative density (d 20 / 20): [0.850; 0.990] Refractive index at 20°C: [1.440 ; 1.485] Optical rotation (°): [0 ; +12] Flash point: 68°C Odor threshold: NA pH: not relevant Melting point / freezing point: NA Initial boiling point and boiling range: NA Flash point: NA Evaporation rate: NA Flammability (solid, gas): NA Upper / lower flammability or explosive limits: NA Vapor tension: NA Vapor density: NA Solubility in water: NA Partition coefficient: n-octanol / water NA Auto-ignition temperature: NA Decomposition temperature: NA Viscosity: NA Explosive properties: NA Oxidizing properties: NA

9.2 Other information None

10. Stability and reactivity

10.1 Reactivity

The product is stable under storage at normal ambient temperatures. In the presence of light and heat, oxidation can occur.

10.2 Chemical stability

The product is chemically stable under recommended conditions of storage, use and temperature. No significant changes in the composition in time respecting the storage conditions

10.3 Possibility of dangerous reactions

According to our knowledge none in normal use. No hazardous reactions known if stored and handled as recommended.

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10.4 Conditions to avoid Do not heat to high temperature. Do not expose sealed containers in the sun. Keep away from sources of ignition.

10.5 Incompatible materials Concentrated acids, alkalis and oxidising agents.

10.6 Hazardous decomposition products

This product does not decompose under normal conditions. Under fire conditions the product will produce a mixture of irritating fumes and smoke.

11. Toxicological information

11.1 Information on toxicological effects

Acute Toxicity

In compliance with generally accepted uses and quantities are no negative impacts to be expected.

LD50 oral: not determined

LD50 dermal: not determined

LC50: not determined

Skin irritation in compliance with generally accepted uses and quantities are no negative impacts to be expected.

Eye damage or irritation in compliance with generally accepted uses and quantities are no negative impacts to be expected.

Respiratory or skin sensitivity in compliance with generally accepted uses and quantities are no negative impacts to be expected.

Germ cell mutagenicity There is not expected negative impact.

Carcinogenicity There is not expected negative impact.

Reproductive toxicity There is not expected negative impact.

STOT – single exposure No information available.

STOT – repeated exposure No information available.

Aspiration hazard No information available

Other information No information available.

12. Ecological information

12.1 Toxicity

Do not allow the product, even if diluted or in small quantities, to penetrate the ground aquifers or drain pipes.

12.2 Persistence and degradability No data available

12.3 Bioaccumulation potential No data available

12.4 Ground mobility No data available

12.5 Results of PBT and vPvB assessment



This product does not meet the PBT/vPvB criteria of REACH, Annex XIII.

12.6 Other adverse effects

No information available. Avoid release to the environment. Do not allow to enter into surface water or drains.

13. Disposal considerations

13.1 Waste treatment methods

Always recover spilled product. Discard waste material with authorized waste management services. Act in accordance with local and national waste regulations.

14. Transport information



14.1 UN number ADR: 3082 (Tunnel restriction code: E) IMDG: 3082 IATA: 3082

14.2 UN shipping name

ADR: DANGEROUS SUBSTANCE FOR THE ENVIRONMENT, LIQUID, N.A.S. (D-Limonene) IMDG: DANGEROUS SUBSTANCE FOR THE ENVIRONMENT, LIQUID, N.A.S. (D-Limonene) IATA: DANGEROUS SUBSTANCE FOR THE ENVIRONMENT, LIQUID, N.A.S. (D-Limonene)

14.3 Class of danger for transport ADR: 9 IMDG: 9 IATA: 9

14.4 Packing group ADR: III IMDG: III IATA: III

14.5 Environmental hazards IMDG: marine pollutant

14.6 Special precautions for users

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Not applicable

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC code Not applicable

15. Regulatory information

15.1 Regulations and legislation on health, safety and environment specific to the substance or mixture The regulatory information given above only indicates the principal regulations specifically applicable to the product. 15.2 Chemical safety assessment.

According to our knowledge, no assessment has been conducted on the product.

16. Additional information

16.1 Abbreviations:

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR -Agreement concerning the International Carriage of Dangerous Goods by Road; AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Test-ing of Materials; bw - Body weight; CLP - Classification Labelling Packaging Regulation; Regula-tion (EC) No 1272/2008; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN -Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECHA - European Chemicals Agency; EC-Number - European Community number; ECx - Concentration associated with x% response; ELx -Loading rate associated with x% response; EmS - Emergen-cy Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration as-sociated with x% growth rate response; GHS - Globally Harmonized System; GLP -Good La-boratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships car-rying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - Interna-tional Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; INCI: International Nomenclature of Cosmetic Ingredients; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 -Lethal Concentration to 50 % of a test popula-tion; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - Interna-tional Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Ef-fect Level; NOELR - No Observable Effect Loading Rate; NZIOC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT -Persistent, Bioaccumulative and Toxic sub-stance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quanti-tative) Structure Activity Relationship; PNEC: Predicted No Effect Concentration; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Re-striction of Chemicals; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; SVHC - Substance of Very High Concern; STE: Short-term exposure; STEL: Short Term Exposure limit; STOT: Specific Target Organ Toxicity; TCSI -Taiwan Chemical Substance Inventory; TECI - Thailand Existing Chemicals Inventory; TRGS - Technical Rule for Hazardous Substances; TSCA - Toxic Substances Control Act (United States); UN - United Nations; vPvB - Very Persistent and Very Bioaccumulative

16.2 Full text of the H phrases mentioned in section 3:

H226 - Flammable liquid and vapor.

H304 - May be fatal if swallowed and enters airways.



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H315 - Causes skin irritation.

H317 - May cause an allergic skin reaction.

H318 - Causes serious eye damage.

H319 - Causes serious eye irritation.

H400 - Very toxic to aquatic organisms.

 $\ensuremath{\mathsf{H410}}\xspace$ - Very toxic to a quatic life with long lasting effects.

H412 - Harmful to aquatic life with long lasting effects.

P261 - Avoid from breathing dust / fumes / gases / mist / vapors / aerosols.

DECLARATION OF ALLERGENS

7th Amendment to Directive 76/768/EC, annex III, part I (2003/15/EC)

| I.N.C.I. | C.A.S. | Max % |
|---|------------|---------|
| Alpha-Hexyl cinnamic aldehyde (HCA) | 101-86-0 | - |
| Amyl cinnamic alcohol | 101-85-9 | - |
| Amyl cinnamic aldehyde (ACA) | 122-40-7 | - |
| Anisyl alcohol | 105-13-5 | - |
| Benzyl salicylate | 118-58-1 | - |
| Benzyl benzoate | 120-51-4 | - |
| Benzyl cinnamate | 103-41-3 | - |
| Benzyl alcohol | 100-51-6 | - |
| Cinnamic alcohol | 104-54-1 | - |
| Cinnamic aldehyde | 104-55-2 | - |
| Citral | 5392-40-5 | 0,3579 |
| Citronellol | 106-22-9 | - |
| Coumarin (2p-1-benzopyran-2-one) | 91-64-5 | - |
| d-Limonene | 5989-27-5 | 14,9745 |
| Eugenol | 97-53-0 | - |
| Farnesol | 4602-84-0 | 1,2259 |
| Geraniol | 106-24-1 | 2,9990 |
| Lyral (Hydroxymethylpentyl cyclohexene carbaldoxaldehyde) | 31906-04-4 | - |
| Hydroxycitronellal | 107-75-5 | - |
| Isoeugenol | 97-54-1 | - |
| alpha-Iso-methyl ionone | 127-51-5 | - |
| Linalool | 78-70-6 | 42,1780 |

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| Methyl heptine carbonate | 12/06/11 | - |
|--|------------|---|
| Oakmoss absolute | 9000-50-4 | - |
| p-tert-Butyl-alpha- methylhydrocinnamic aldehyde | 80-54-6 | - |
| Tree moss | 68648-41-9 | - |

Disclaimer:

This material safety data sheet does not constitute a guarantee of the properties of the product and is not a contractual legal report. The information is given in good faith on the basis of our best knowledge of the product at the indicated time. However, we cannot accept responsibility or liability for any consequences arising from its use, no warranty for correctness and completeness is given. We caution the users against the incurred possible risks when the product is used at other ends than the use for which it was initially planned. It is the user's responsibility during handling, storage and product use to consult the main regulatory texts in force regarding workers and environment protection.