

Material Safety Data Sheet

According to EU Regulation 1907/2006 in the current version

GINGER ESSENTIAL OIL

1. Identification of the substance/mixture and company

Trade name:	Pure Ginger essential oil Natural product obtained by steam distillation of the root.
I.N.C.I.	Zingiber Officinale Root Oil
CAS No. :	84696-15-1
EC No. :	283-634-2
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

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

Skin corrosion/irritation, Category 2

Serious eye damage/eye irritation, Category 2

Skin sensitization, Category 1

Aspiration hazard, Category 1

Hazardous to the aquatic environment — Chronic Hazard, Category 2

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

Hazards: H304 – H315 – H317 – H319 – H411

Precautions: P261 – P264 – P280 – P301+P310+P331 – P333+P313 – P337+P313 – P362+P364 – P391

Special instructions: none

Adverse physicochemical, human health and environmental effects

- Causes skin irritation.
- May cause an allergic skin reaction.
- May be fatal if swallowed and enters airways.
- Toxic to aquatic life with long lasting effects.

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.

H319 – Causes serious eye irritation.

H411 – Toxic to aquatic life with long lasting effects.

Precautionary statement:

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P261 – Avoid breathing dust/fume/gas/mist/vapors/spray.
P264 – Wash hands, forearms and face thoroughly after handling.
P280 – Wear protective gloves/protective clothing/eye protection/face protection.
P301+P310+P331 – IF SWALLOWED: Immediately call a POISON CENTER/doctor/. Do NOT induce vomiting.
P333+P313 – If skin irritation or rash occurs: Get medical advice/attention.
P337+P313 – If eye irritation persists: Get medical advice/attention.
P362+P364 – Take off contaminated clothing and wash it before reuse.
P391 – Collect spillage.

Special instructions: none

2.3 Other hazards

No additional information available.

3. Declaration of ingredients

3.1. Substances

The product contains the following components to declare:

Substance	C.A.S.	EINECS	Hazard symbols	Percent %
beta-Bisabolene	495-61-4	-	H315, H317, H304	≤ 13%
Camphene	79-92-5	201-234-8	H228, H319, H400, H410	≤ 10%
(E,E)-alpha-Farnesene	502-61-4	207-948-6	-	≤ 9%
1,8-Cineol	470-82-6	207-431-5	H226, H317	≤ 8%
alpha-Pinene	80-56-8	201-291-9	H226, H302, H315, H317, H304, H400, H410	≤ 4%
Myrcene	123-35-3	204-622-5	H226, H315, H319, H304, H400, H411	≤ 2%
d- limonene	138-86-3	205-341-0	H226, H315, H317, H304, H400, H410	≤ 2%
Geraniol	106-24-1	203-377-1	H317, H315, H318	≤ 1%
Bornéol	507-70-0	208-080-0	H228, H315, H411	≤ 1%
beta-Pinene	127-91-3	204-872-5	H226, H315, H317, H304, H400, H410	≤ 0.8%
Geranial	141-27-5	205-476-5	H315, H319, H317	≤ 0.6%
Neral	106-26-3	203-379-2	H315, H319, H317	≤ 0.6%
trans-Nerolidol	40716-66-3	-	H319, H317, H400, H410	≤ 0.5%
alpha phellandrene	99-83-2	202-792-5	H226, H304	≤ 0.5%
alpha-Terpineol	98-55-5	202-680-6	H315, H319	≤ 0.5%
2-Undecanone	112-12-9	203-937-5	H412, H400	≤ 0.3%

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Terpinolene	586-62-9	209-578-0	H317, H304, H400, H410	≤ 0.3%
1,7,7-Trimethylbicyclo[2.2.1]heptan-2-one	76-22-2	200-945-0	H371, H315, H228, H318, H411, H302, H332	≤ 0.2%
toluene	108-88-3	203-625-9	H225, H315, H361d, H336, H373, H304	≤ 0.1%
beta-Caryophyllene	87-44-5	201-746-1	H317, H304, H413	≤ 0.1%
delta-3-Carene	13466-78-9	236-719-3	H317, H315, H226, H304, H410, H400, H332	≤ 0.1%
p-Cymene	99-87-6	202-796-7	H361, H226, H304, H411	≤ 0.1%
gamma-Terpinene	99-85-4	202-794-6	H361, H226, H304	≤ 0.5%

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.

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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

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.

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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

Physical state: liquid

Appearance: liquid at room temperature

Color: pale yellow, amber

Odor: spicy, resinous, citral-like, earthy, woody

Odor threshold: No data available

pH: No data available

Relative evaporation rate (butylacetate=1): No data available

Melting point: Not applicable

Freezing point: No data available

Boiling point: No data available

Flash point: >63 °C

Auto-ignition temperature: No data available

Decomposition temperature: No data available

Flammability (solid, gas): Not applicable

Vapor pressure: No data available

Relative vapor density at 20 °C: No data available

Relative density: 0.872 - 0.884

Solubility: No data available

Log Pow: No data available

Viscosity, kinematic: < 20 mm²/s

Viscosity, dynamic: No data available

Explosive properties: No data available

Oxidizing properties: No data available

Explosive limits: No data available

9.2 Other information

Refractive index: 1.482 - 1.495

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.

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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.

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 (oral): Not classified

Acute toxicity (dermal): Not classified

Acute toxicity (inhalation): Not classified

Pure Ginger essential oil

LD50 oral rat > 5000 mg/kg

LD50 dermal rabbit > 5000 mg/kg

Skin corrosion/irritation: Causes skin irritation.

Serious eye damage/irritation: Causes serious eye irritation.

Respiratory or skin sensitization: May cause an allergic skin reaction.

Germ cell mutagenicity: Not classified

Carcinogenicity: Not classified

Reproductive toxicity: Not classified

STOT-single exposure: Not classified

STOT-repeated exposure: Not classified

Aspiration hazard: May be fatal if swallowed and enters airways.

Viscosity, kinematic: < 20 mm²/s

12. Ecological information

12.1 Toxicity

Ecology - general: Toxic to aquatic life with long lasting effects.

Acute aquatic toxicity: Not classified

Chronic aquatic toxicity: Toxic to aquatic life with long lasting effects.

12.2 Persistence and degradability

No additional information available.

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12.3 Bioaccumulation potential
No additional information available.

12.4 Ground mobility
No additional information available.

12.5 Results of PBT and vPvB assessment
No additional information available.

12.6 Other adverse effects
No additional information available.

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

ADR / RID		IMDG		IATA	
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14.1 UN number
ADR: 3082
IMDG: 3082
IATA: 3082
Customs Code: 3301294100

14.2 UN shipping name
ADR: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (alpha-Pinene)
IMDG: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (alpha-Pinene)
IATA: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (alpha-Pinene)

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

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

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14.5 Environmental hazards

ADR: - Dangerous for the environment: Yes

IMDG: - Dangerous for the environment: Yes - Marine pollutant: Yes

IATA:- Dangerous for the environment: Yes

14.6 Special precautions for users

Overland transport

Classification code (ADR): M6

Special provisions (ADR): 274, 335, 375, 601

Limited quantities (ADR): 5I

Excepted quantities (ADR): E1

Packing instructions (ADR): P001, IBC03, LP01, R001

Special packing provisions (ADR): PP1

Mixed packing provisions (ADR): MP19

Portable tank and bulk container instructions (ADR): T4

Portable tank and bulk container special provisions (ADR): TP1, TP29

Tank code (ADR): LGBV

Vehicle for tank carriage: AT

Transport category (ADR): 3

Special provisions for carriage - Packages (ADR): V12

Special provisions for carriage - Loading, unloading and handling (ADR): CV13

Hazard identification number (Kemler No.): 90

Orange plates:



Tunnel restriction code (ADR): -

EAC code: •3Z

Transport by sea

Special provisions (IMDG): 274, 335, 969

Packing instructions (IMDG): P001, LP01

Special packing provisions (IMDG): PP1

IBC packing instructions (IMDG): IBC03

Tank instructions (IMDG): T4

Tank special provisions (IMDG): TP2, TP29

EmS-No. (Fire): F-A

EmS-No. (Spillage): S-F

Stowage category (IMDG): A

Air transport

PCA Excepted quantities (IATA): E1

PCA Limited quantities (IATA): Y964

PCA limited quantity max net quantity (IATA): 30kgG

PCA packing instructions (IATA): 964

PCA max net quantity (IATA): 450L

CAO packing instructions (IATA): 964

CAO max net quantity (IATA): 450L

Special provisions (IATA): A97, A158, A197

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ERG code (IATA): 9L

Inland waterway transport

Classification code (ADN): M6

Special provisions (ADN): 274, 335, 375, 601

Limited quantities (ADN): 5 L

Excepted quantities (ADN): E1

Carriage permitted (ADN): T

Equipment required (ADN): PP

Number of blue cones/lights (ADN): 0

Rail transport

Classification code (RID): M6

Special provisions (RID): 274, 335, 375, 601

Excepted quantities (RID): E1

Packing instructions (RID): P001, IBC03, LP01, R001

Special packing provisions (RID): PP1

Mixed packing provisions (RID): MP19

Portable tank and bulk container instructions (RID): T4

Portable tank and bulk container special provisions (RID): TP1, TP29

Tank codes for RID tanks (RID): LGBV

Transport category (RID): 3

Special provisions for carriage – Packages (RID): W12

Special provisions for carriage - Loading, unloading and handling (RID): CW13, CW31

Colis express (express parcels) (RID): CE8

Hazard identification number (RID): 90

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

EU-Regulations

The following restrictions are applicable according to Annex XVII of the REACH Regulation (EC) No 1907/2006:	
Reference code	Applicable on
3(a)	Myrcene; beta-Pinene; dipentene, limonene; 1,8-Cineol; Camphene; alpha-Pinene; toluene; delta-3-Carene
3(b)	Pure Ginger essential oil; Geraniol; Neral; Myrcene; beta-Pinene; dipentene, limonene; Geraniol; 1,8-Cineol; beta-Bisabolene; Terpinolene; Camphene; alpha-Pinene; toluene; delta-3-Carene
3(c)	Pure Ginger essential oil; 2-Undecanone; Myrcene; beta-Pinene; dipentene, limonene; Terpinolene; Camphene; alpha-Pinene; delta-3-Carene
48.	toluene

Pure Ginger essential oil is not on the REACH Candidate List.

Pure Ginger essential oil is not on the REACH Annex XIV List.

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Pure Ginger essential oil is not subject to REGULATION (EU) No 649/2012 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 4 July 2012 concerning the export and import of hazardous chemicals.

Pure Ginger essential oil is not subject to Regulation (EC) No 850/2004 of the European Parliament and of the Council of 29 April 2004 on persistent organic pollutants and amending Directive 79/117/EEC.

15.2 Chemical safety assessment.

No chemical safety assessment has been carried out.

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:

H225 - Highly flammable liquid and vapor.

H226 - Flammable liquid and vapor.

H228 - Flammable solid.

H302 - Harmful if swallowed.

H304 - May be fatal if swallowed and enters airways

H315 - Causes skin irritation.

H317 - May cause an allergic skin reaction.

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H318 - Causes serious eye damage.
H319 - Causes serious eye irritation.
H332 - Harmful if inhaled.
H336 - May cause drowsiness or dizziness.
H361 - Suspected of damaging fertility or the unborn child.
H371 - May cause damage to organs
H373 - May cause damage to organs through prolonged or repeated exposure.
H400 - Very toxic 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.
H413 - May cause long lasting harmful effects to aquatic life.

DECLARATION OF ALLERGENS

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

I.N.C.I.	C.A.S.	%
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	≤ 1.2000
Citronellol	106-22-9	≤ 0.3000
Coumarin (2p-1-benzopyran-2-one)	91-64-5	-
d-Limonene	5989-27-5	≤ 2.0000
Eugenol	97-53-0	-
Farnesol	4602-84-0	-
Geraniol	106-24-1	≤ 1.0000
Lylal (Hydroxymethylpentyl cyclohexene carbaldoxaldehyde)	31906-04-4	-
Hydroxycitronellal	107-75-5	-
Isoeugenol	97-54-1	-
alpha-Iso-methyl ionone	127-51-5	-

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Linalool	78-70-6	≤ 0.5000
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.