ALTRAFLORA NATURAL EXTRACTS

SAFETY DATA SHEET

Revision Date: 18.10.2026 | Version: 1.4

1. Identification of the Substance/Mixture and of the Company

1.1 Product Identifier

Product Name:	Ginger Root CO_2 Extract (Terpene-Rich Fraction)
Item Code:	AF-ZNGO1TSF
CAS No.:	84696-15-1
EC No.:	283-634-2
INCI Name:	Zingiber Officinale Root Extract

1.2 Relevant Identified Uses

Identified Uses: Flavouring ingredient (characteristic ginger aroma) for food and beverages, confectionery, bakery products, sauces and seasonings; raw material for food supplements and cosmetic formulations. For industrial and professional formulation use only.

Uses Advised Against: Not for direct consumption. Not for undiluted application to skin or mucous membranes.

1.3 Supplier Details

Company:	ALTRAFLORA DOĞAL BİTKİ ÜRÜNLERİ SANAYİ VE TİCARET ANONİM ŞİRKETİ
Address:	Zafer Mah. 1033/2 Sk. No: 16/A, Merkezefendi / Denizli, 20020, Türkiye
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1.4 Emergency Contact: +90 538 051 7405 (24h)

2. Hazards Identification

2.1 Classification

Classification according to Regulation (EC) No 1272/2008 (CLP):

- Acute Tox. 4 — H302: Harmful if swallowed.
- Asp. Tox. 1 — H304: May be fatal if swallowed and enters airways.
- Skin Irrit. 2 — H315: Causes skin irritation.
- Skin Sens. 1 — H317: May cause an allergic skin reaction.
- Eye Irrit. 2 — H319: Causes serious eye irritation.

2.2 Label Elements

Signal Word: Danger. Hazard pictograms: GHS07 (Exclamation mark), GHS08 (Health hazard). Hazard statements: 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. Precautionary statements: P264 Wash hands thoroughly after handling. P270 Do not eat, drink or smoke when using this product. P280 Wear protective gloves/eye protection. P301+P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor. P331 Do NOT induce vomiting. P302+P352 IF ON SKIN: Wash with plenty of soap and water. P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P333+P313 If skin irritation or rash occurs: Get medical advice/attention. P405 Store locked up. P501 Dispose of contents/container in accordance with local/national regulations. Contains: α-zingiberene, β-bisabolene, citral, 6-gingerol, 8-gingerol. Not more than 40 % of the mixture consists of component(s) of unknown acute toxicity.

2.3 Other Hazards

PBT/vPvB Assessment: Does not meet criteria for PBT or vPvB under REACH.

3. Composition/Information on Ingredients

3.1 Substance/Mixture

Botanical Name: Zingiber officinale Roscoe

Plant Part: Rhizomes (dried)

Extraction Method: Supercritical CO_2 extraction of dried rhizomes (volatile, terpene-rich fraction); pure extract, no carrier

Origin: Türkiye

Key Active Compounds:

Compound	Content
Volatile oil, total	>60 %
α-Zingiberene (CAS 495-60-3, EC 207-804-2; Asp. Tox. 1 H304, Skin Sens. 1 H317)	>35 %
β-Bisabolene (CAS 495-61-4; Asp. Tox. 1 H304, Skin Irrit. 2 H315, Skin Sens. 1 H317, Aquatic Chronic 1 H410 (M = 10))	Present
ar-Curcumene (CAS 644-30-4; Asp. Tox. 1 H304, Skin Irrit. 2 H315, Skin Sens. 1 H317)	Present
Citral (geranial and neral; CAS 5392-40-5, EC 226-394-6; Skin Irrit. 2 H315, Skin Sens. 1 H317)	Present
Camphene (CAS 79-92-5, EC 201-234-8; Flam. Sol. 2 H228, Asp. Tox. 1 H304, Eye Irrit. 2 H319, Aquatic Acute 1 H400, Aquatic Chronic 1 H410)	Present
Gingerols and shogaols, total	<30 %
6-Gingerol (CAS 23513-14-6; Acute Tox. 3 H301, Skin Irrit. 2 H315, Eye Irrit. 2 H319, STOT SE 3 H335)	<15 %
10-Gingerol (CAS 23513-15-7; Aquatic Chronic 4 H413)	<15 %
8-Gingerol (CAS 23513-08-8; Skin Sens. 1 H317)	<5 %
Zingerone (CAS 122-48-5)	<3.0 %
6-Shogaol (CAS 555-66-8; Acute Tox. 4 H302)	<1 %

4. First Aid Measures

General Advice	If medical advice is needed, have the product container or label at hand. Move the person out of the exposure area and take off contaminated clothing.
Inhalation	Move to fresh air. Seek medical attention if symptoms persist.
Skin Contact	Take off contaminated clothing and wash it before reuse. Wash skin with plenty of soap and water. If skin irritation or rash occurs, get medical advice.
Eye Contact	Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists, get medical advice.
Ingestion	Do NOT induce vomiting: vomit may enter the airways (aspiration hazard). Immediately call a POISON CENTER or doctor. If the person is conscious, rinse mouth with water. Never give anything by mouth to an unconscious person.
Most Important Symptoms	Aspiration into the lungs may cause chemical pneumonitis; nausea, vomiting and abdominal discomfort if swallowed; skin redness and irritation; allergic skin reaction (itching, rash); eye redness, watering and irritation.
Notes to Physician	Treat symptomatically. If aspiration is suspected, monitor for respiratory symptoms; do not induce vomiting.

5. Firefighting Measures

Suitable Extinguishing Media	Foam, carbon dioxide (CO_2), dry chemical powder, water spray.
Unsuitable Extinguishing Media	Water jet (may spread fire).
Special Hazards	Flash point: >93 °C. Combustion produces carbon oxides.

6. Accidental Release Measures

Personal Precautions	Avoid contact with skin and eyes. Use protective equipment. Caution: spilled product may create slippery surfaces.
Environmental Precautions	Prevent entry into drains, waterways, and soil. Expected to be biodegradable.
Containment and Cleanup	Absorb with inert absorbent material, sand, or earth. Dispose according to local regulations.

7. Handling and Storage

7.1 Precautions for Safe Handling

Avoid contact with skin and eyes. Wash hands thoroughly after handling. Keep away from heat and ignition sources. Avoid spills. Do not eat, drink or smoke in work areas. Contaminated work clothing should not be allowed out of the workplace.

7.2 Conditions for Safe Storage

Storage Temperature	Store at 15–25 °C in a tightly closed container in a well-ventilated place, locked up. Protect from heat and sunlight.
Packaging Materials	Dark glass, stainless steel, food-grade HDPE.
Shelf Life	12 months when stored properly

8. Exposure Controls/Personal Protection

8.1 Control Parameters: No occupational exposure limits established.

Engineering Controls	Ensure adequate ventilation.
Eye/Face Protection	Wear safety glasses with side shields (EN 166).
Hand Protection	Wear protective gloves (e.g. nitrile rubber, EN ISO 374-1).

9. Physical and Chemical Properties

Appearance	Yellow-green, clear oil
Odor	Slightly sweet and pungent, with peppery, citrus and fruity notes
pH	Not applicable
Flash Point	>93 °C
Density	0.94 g/cm³ at 20 °C
Solubility (Water)	Insoluble in water; soluble in fixed oils and other lipophilic carriers
Viscosity	Oily liquid of low to medium viscosity
Solvent Residues	None (CO_2 extraction)

10. Stability and Reactivity

Chemical Stability	Stable under recommended storage conditions. Prolonged heating converts gingerols into shogaols; may oxidise on exposure to air and light.
Conditions to Avoid	High temperatures, prolonged exposure to air and light, ignition sources.
Incompatible Materials	Strong oxidizers, concentrated acids, strong bases.

11. Toxicological Information

Acute Oral Toxicity	Harmful if swallowed (Acute Tox. 4, H302). Aspiration hazard (Asp. Tox. 1, H304): may be fatal if swallowed and enters airways. Basis (CLP calculation method): ATEmix between 1 000 and 1 667 mg/kg bw at the 6-gingerol specification maximum (15 %), from its oral LD50 (mouse, 250 mg/kg; Suekawa et al., 1984); the lower value includes the CLP Annex I 3.1.3.6.2.3 correction for up to 40 % of ingredients of unknown acute toxicity.
Skin Irritation	Causes skin irritation (Skin Irrit. 2, H315).
Eye Irritation	Causes serious eye irritation (H319) upon direct contact.
Sensitization	May cause an allergic skin reaction (Skin Sens. 1, H317).
Carcinogenicity	Not classified for carcinogenicity.

12. Ecological Information

Toxicity	Not classified as hazardous to the aquatic environment.
Biodegradability	Expected to be readily biodegradable.
Bioaccumulation	No significant bioaccumulation expected.

13. Disposal Considerations

Product Disposal	Dispose according to local regulations. Do not pour into drains.
Waste Code (EU)	EWC 16 03 05* — organic wastes containing hazardous substances

14. Transport Information

Not classified as dangerous goods for transport (ADR/RID/IMDG/IATA).

UN Number	Not regulated
Transport Hazard Class	Not regulated
Environmental Hazards	Environmentally hazardous: No (ADR/RID/IATA); Marine pollutant: No (IMDG)

15. Regulatory Information

EU Legislation: REACH – Compliant | CLP – Classified; see Section 2 | Cosmetics Regulation (EC) No 1223/2009 – Compliant where applicable

US Legislation: FDA – Compliant for intended use | TSCA – Listed where applicable

Contains citral (geranial and neral), a fragrance allergen listed in Annex III to Regulation (EC) No 1223/2009; declare on cosmetic labels above 0.001 % in leave-on and 0.01 % in rinse-off products.

16. Other Information

Product Specifications

Botanical Source	Zingiber officinale Roscoe
Plant Part Used	Rhizomes (dried)
Extraction Method	Supercritical CO_2 extraction of dried rhizomes (volatile, terpene-rich fraction); pure extract, no carrier
Country of Origin	Türkiye
Shelf Life	12 months
Storage	Store at 15–25 °C, protect from light

Revision Information: Revision Date: 18.10.2026 | Version: 1.4 | Changes from the previous version: Sections 2, 3, 4, 7, 11 and 16.

Literature References: Batch TDS AF-ZNGO1TSF (20260102-ZNGO1TSF); European Commission CosIng database (Zingiber Officinale Root Extract); Suekawa M. et al., J. Pharmacobio-Dyn. 7 (1984) 836–848; ECHA C&L Inventory.

Disclaimer: The information provided in this Safety Data Sheet is correct to the best of our knowledge at the date of publication. It is intended as guidance for safe handling, use, storage, transport, and disposal and should not be considered a warranty or quality specification.

End of Safety Data Sheet