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

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|---|---|
| **Product Name:** | Ginger Root $CO_2$ Extract (Gingerol-Rich Fraction) |
| **Item Code:** | AF-ZNGO2TSF |
| **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 (pungent ginger note) 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

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|---|---|
| **Company:** | ALTRAFLORA DOĞAL BİTKİ ÜRÜNLERİ SANAYİ VE TİCARET ANONİM ŞİRKETİ |
| **Address:** | Zafer Mah. 1033/2 Sk. No: 16/A, Merkezefendi / Denizli, 20020, Türkiye |
| **Phone:** | +90 538 051 7405 |
| **Email:** | info@altraflora.com |

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.
- 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: Warning. Hazard pictogram: GHS07 (Exclamation mark). Hazard statements: H302 Harmful if swallowed. 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+P312 IF SWALLOWED: Call a POISON CENTER or doctor if you feel unwell. P330 Rinse mouth. 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. P501 Dispose of contents/container in accordance with local/national regulations. Contains: α-zingiberene, 6-gingerol, 8-gingerol.

### 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

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|---|---|
| **Botanical Name:** | Zingiber officinale Roscoe |
| **Plant Part:** | Rhizomes (dried) |
| **Extraction Method:** | Supercritical $CO_2$ extraction of dried rhizomes (gingerol-rich oleoresin fraction); pure extract, no carrier |
| **Origin:** | Türkiye |

**Key Active Compounds:**

| Compound | Content |
|---|---|
| Gingerols and shogaols, total | >40 % |
| 10-Gingerol (CAS 23513-15-7; Aquatic Chronic 4 H413) | >20 % |
| 6-Gingerol (CAS 23513-14-6; Acute Tox. 3 H301, Skin Irrit. 2 H315, Eye Irrit. 2 H319, STOT SE 3 H335) | >15 % |
| 8-Gingerol (CAS 23513-08-8; Skin Sens. 1 H317) | >5 % |
| Zingerone (CAS 122-48-5) | >2.0 % |
| 6-Shogaol (CAS 555-66-8; Acute Tox. 4 H302) | <1 % |
| Volatile oil, total | <50 % |
| α-Zingiberene (CAS 495-60-3, EC 207-804-2; Asp. Tox. 1 H304, Skin Sens. 1 H317) | <25 % |

## 4. First Aid Measures

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| **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** | Rinse mouth with water. Call a POISON CENTER or doctor if the person feels unwell. |
| **Most Important Symptoms** | 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. |

## 5. Firefighting Measures

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| **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: >100 °C. Combustion produces carbon oxides. |

## 6. Accidental Release Measures

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| **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

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| **Storage Temperature** | Store at 15–25 °C. 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.

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| **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

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|---|---|
| **Appearance** | Dark-orange oleoresin |
| **Odor** | Pungent, characteristic of gingerols |
| **pH** | Not applicable |
| **Flash Point** | >100 °C |
| **Density** | 1.0 g/cm³ at 20 °C |
| **Solubility (Water)** | Insoluble in water; soluble in fixed oils and other lipophilic carriers |
| **Viscosity** | Viscous liquid |
| **Solvent Residues** | None ($CO_2$ extraction) |

## 10. Stability and Reactivity

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|---|---|
| **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

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| **Acute Oral Toxicity** | Harmful if swallowed (Acute Tox. 4, H302). Basis (CLP calculation method): ATEmix < 1 667 mg/kg bw, calculated from the 6-gingerol content (> 15 %) and its oral LD50 (mouse, 250 mg/kg; Suekawa et al., 1984). Not classified as an aspiration hazard (viscous oleoresin). |
| **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

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

## 13. Disposal Considerations

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| **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).

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| **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

## 16. Other Information

**Product Specifications**

| | |
|---|---|
| **Botanical Source** | Zingiber officinale Roscoe |
| **Plant Part Used** | Rhizomes (dried) |
| **Extraction Method** | Supercritical $CO_2$ extraction of dried rhizomes (gingerol-rich oleoresin 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-ZNGO2TSF (20260102-ZNGO2TSF); 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