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:	Black Pepper CO_2 Extract (> 25 % piperine)
Item Code:	AF-PRNG1TSF
CAS No.:	84929-41-9
EC No.:	284-524-7
INCI Name:	Piper Nigrum (Pepper) Fruit Extract

1.2 Relevant Identified Uses

Identified Uses: Flavouring ingredient for food (processed meats, sauces, snacks, seasoning blends) and raw material for food supplements. 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
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 Sens. 1 — H317: May cause an allergic skin reaction.
- Aquatic Chronic 2 — H411: Toxic to aquatic life with long lasting effects.

2.2 Label Elements

Signal Word: Warning. Hazard pictograms: GHS07 (Exclamation mark), GHS09 (Environment). Hazard statements: H302 Harmful if swallowed. H317 May cause an allergic skin reaction. H411 Toxic to aquatic life with long lasting effects. Precautionary statements: P261 Avoid breathing vapours. P264 Wash hands thoroughly after handling. P270 Do not eat, drink or smoke when using this product. P273 Avoid release to the environment. P280 Wear protective gloves. P301+P312 IF SWALLOWED: Call a POISON CENTER or doctor if you feel unwell. P302+P352 IF ON SKIN: Wash with plenty of soap and water. P330 Rinse mouth. P333+P313 If skin irritation or rash occurs: Get medical advice/attention. P391 Collect spillage. P501 Dispose of contents/container in accordance with local/national regulations. Contains: piperine, β-caryophyllene, δ-3-carene, limonene. Not more than 63 % 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:	Piper nigrum L.
Plant Part:	Fruit (dried)
Extraction Method:	Supercritical CO_2 extraction of dried fruit; pure oleoresin, no carrier
Origin:	Türkiye

Key Active Compounds:

Compound	Content
Piperine (CAS 94-62-2, EC 202-348-0; Acute Tox. 3 H301)	> 25 %
(E)-Caryophyllene (β-caryophyllene; CAS 87-44-5, EC 201-746-1; Asp. Tox. 1 H304, Skin Sens. 1 H317)	> 10 %
δ-3-Carene (CAS 13466-78-9, EC 236-719-3; Flam. Liq. 3 H226, Asp. Tox. 1 H304, Skin Irrit. 2 H315, Skin Sens. 1 H317, Aquatic Chronic 3 H412)	> 1 %
Limonene (CAS 138-86-3, EC 205-341-0; Flam. Liq. 3 H226, Skin Irrit. 2 H315, Skin Sens. 1 H317, Aquatic Acute 1 H400, Aquatic Chronic 1 H410)	> 1 %
α-Pinene (CAS 80-56-8, EC 201-291-9; Flam. Liq. 3 H226, Asp. Tox. 1 H304, Skin Irrit. 2 H315, Skin Sens. 1 H317, Aquatic Acute 1 H400, Aquatic Chronic 1 H410)	Present
β-Myrcene (CAS 123-35-3, EC 204-622-5; Flam. Liq. 3 H226, Asp. Tox. 1 H304, Skin Irrit. 2 H315, Eye Irrit. 2 H319)	Present

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 with water for several minutes. Seek medical attention if irritation persists.
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; allergic skin reaction (itching, rash).
Notes to Physician	Treat symptomatically.

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: > 60 °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	Toxic to aquatic life with long lasting effects. Prevent entry into drains, waterways and soil. Inform the relevant authorities if the product enters surface water or sewers.
Containment and Cleanup	Collect spillage. Absorb with inert absorbent material, sand or earth and place in closed, labelled containers. Dispose of as hazardous waste (see Section 13).

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. Avoid release to the environment; prevent entry into drains, waterways and soil.

7.2 Conditions for Safe Storage

Storage Temperature	Store at 15–25 °C. Protect from heat and sunlight.
Packaging Materials	Dark glass, stainless steel, food-grade HDPE.
Shelf Life	24 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) where splashing is possible.
Hand Protection	Wear protective gloves (e.g. nitrile rubber, EN ISO 374-1).
Environmental Exposure Controls	Avoid release to the environment. Do not discharge the product, rinse water or cleaning water into drains, surface water or soil; collect spills and wastes for disposal (see Sections 6 and 13). Comply with the applicable environmental protection legislation.

9. Physical and Chemical Properties

Appearance	Orange-yellow oleoresin
Odor	Characteristic black pepper
pH	Not applicable
Flash Point	> 60 °C
Relative Density	Not determined
Solubility (Water)	Immiscible with water; soluble in ethanol
Viscosity	Viscous oleoresin
Solvent Residues	None (CO_2 extraction)

10. Stability and Reactivity

Chemical Stability	Stable under recommended storage conditions. May oxidize upon 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).
Basis of Classification	CLP calculation method. Acute Tox. 4 (oral): ATEmix < 1 320 mg/kg bw, calculated from the piperine content (> 25 %) and the lowest reported oral LD50 of piperine (mouse, 330 mg/kg; Piyachaturawat et al., 1983). Skin Sens. 1: contains the skin sensitisers limonene, δ-3-carene and β-caryophyllene, each above 1 %. Not classified for acute dermal or inhalation toxicity. Not classified as an aspiration hazard (viscous oleoresin).
Skin/Eye Irritation	Not classified for skin or eye irritation. Direct contact with the pungent product may cause a temporary burning sensation.
Sensitization	May cause an allergic skin reaction (Skin Sens. 1, H317).
Carcinogenicity	Not classified for carcinogenicity. Contains β-myrcene (IARC Group 2B).

12. Ecological Information

Toxicity	Toxic to aquatic life with long lasting effects (H411).
Basis of Classification	Summation method: Aquatic Chronic 2 from the terpene constituents limonene and α-pinene. No ecotoxicity test data are available for the product.
Degradability and Bioaccumulation	Expected to be biodegradable. No significant bioaccumulation expected.

13. Disposal Considerations

Product Disposal	Dispose of as hazardous waste through a licensed waste management company (e.g. incineration), in accordance with local and national regulations. Do not pour into drains or release to the environment.
Waste Code (EU)	EWC 16 03 05* — organic wastes containing hazardous substances

14. Transport Information

Classified as an environmentally hazardous substance for transport (ADR/RID/IMDG/IATA). Single or inner packagings containing a net quantity of 5 L or less are not subject to these regulations (ADR/RID special provision 375, IMDG Code 2.10.2.7, IATA special provision A197).

UN Number	UN 3082

Proper Shipping Name	Environmentally hazardous substance, liquid, n.o.s. (limonene, alpha-pinene)
Transport Hazard Class	9
Packing Group	III
Environmental Hazards	Environmentally hazardous: Yes (ADR/RID/IATA); Marine pollutant: Yes (IMDG)

15. Regulatory Information

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

Directive 2012/18/EU (Seveso III), Annex I, Part 1: E2 Hazardous to the Aquatic Environment in Category Chronic 2 (qualifying quantities: lower tier 200 t, upper tier 500 t).

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

16. Other Information

Product Specifications

Botanical Source	Piper nigrum L.
Plant Part Used	Fruit (dried)
Extraction Method	Supercritical CO_2 extraction of dried fruit; pure oleoresin, no carrier
Country of Origin	Türkiye
Shelf Life	24 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, 7, 8, 11 and 15.

Literature References: Batch TDS AF-PRNG1TSF (20260301-PRNG1TSF); Piyachaturawat P. et al., Toxicol. Lett. 16 (1983) 351–359; 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