



SAFETY DATA SHEET (SDS)

Prepared in accordance with the Globally Harmonized System (GHS) and Regulation (EC) No. 1907/2006 (REACH, as amended)

Zanthoxylum Organic Essential Oil

SECTION 1: IDENTIFICATION

Product Name: Zanthoxylum Organic Essential Oil

Botanical Name: Zanthoxylum armatum D.C.

Synonym: Zanthoxylum alatum Roxb.

INCI Name: Zanthoxylum Alatum Fruit Extract / Zanthoxylum Armatum Oil

CAS Number: 91770-90-0

Country of Origin: Nepal

Extraction Method: Steam Distillation

Plant Part: Fruit / Dried Fruit

Product Type: Natural Essential Oil

Intended Use: Perfumery Raw Material / Fragrance Ingredient

Supplier

Aromology Trading LLC

G05 Al Ghazal Building

Nadd Al Hamar

Dubai, United Arab Emirates

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SECTION 2: HAZARDS IDENTIFICATION

GHS CLASSIFICATION

Hazard Class	Classification
Flammable Liquids	Category 3
Aspiration Hazard	Category 1
Skin Irritation	Category 2
Skin Sensitisation	Category 1
Eye Irritation	Category 2



Hazard Class	Classification
Aquatic Chronic Hazard	Category 2

SIGNAL WORD

DANGER

HAZARD STATEMENTS

H226 – Flammable liquid and vapour.
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.

A current *Zanthoxylum armatum* SDS independently confirms aspiration hazard, skin irritation and sensitisation, while the organic Nepal SDS gives a flash point range of approximately 55–61 °C, supporting treatment as a combustible/flammable essential oil.

PRECAUTIONARY STATEMENTS

P210 – Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P261 – Avoid breathing vapours or mist.
P264 – Wash hands thoroughly after handling.
P272 – Contaminated work clothing should not be allowed out of the workplace.
P273 – Avoid release to the environment.
P280 – Wear protective gloves and eye/face protection.
P301 + P310 – IF SWALLOWED: Immediately call a POISON CENTRE 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.
P403 + P235 – Store in a well-ventilated place. Keep cool.
P501 – Dispose of contents/container in accordance with applicable regulations.

SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS

Substance Type: Natural Essential Oil / Naturally Complex Substance

Component	CAS Number	Typical Concentration
Zanthoxylum armatum Essential Oil	91770-90-0	100%
Linalool	78-70-6	45–55%
Limonene	5989-27-5	10–40%



Component	CAS Number	Typical Concentration
Beta-Phellandrene	555-10-2	5–15%
Methyl Cinnamate	103-26-4	2–15%

The organic Nepal SDS reports Linalool 45–55%, Limonene 10–40%, Beta-Phellandrene 5–15% and Methyl Cinnamate 2–15% as the principal constituents.

Note: Essential oils are naturally variable complex substances. Individual constituent concentrations can vary between harvests and production batches.

SECTION 4: FIRST-AID MEASURES

Exposure	First-Aid Measures
Inhalation	Remove affected person to fresh air. Keep at rest. Obtain medical attention if symptoms persist.
Skin Contact	Remove contaminated clothing. Wash thoroughly with soap and water. Seek medical attention if irritation or sensitisation occurs.
Eye Contact	Rinse cautiously with clean water for at least 15 minutes. Remove contact lenses where easy to do. Obtain medical attention if irritation persists.
Ingestion	Rinse mouth. Do not induce vomiting. Immediately contact a poison centre or physician because of aspiration risk.

SECTION 5: FIRE-FIGHTING MEASURES

Item	Information
Suitable Extinguishing Media	Carbon dioxide (CO ₂), dry chemical powder, alcohol-resistant foam
Unsuitable Media	Direct high-pressure water jet
Special Hazards	Vapours may form flammable mixtures with air
Combustion Products	Carbon monoxide, carbon dioxide and irritating fumes
Protective Equipment	Self-contained breathing apparatus and appropriate protective clothing

Flash Point: Approximately 55–61 °C.

Cool exposed containers with water spray where appropriate.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal Precautions

Remove all ignition sources.
Ensure adequate ventilation.



Avoid contact with skin and eyes.
Avoid breathing vapour or mist.
Wear suitable protective equipment.

Environmental Precautions

Do not allow material to enter:
Drains • Sewers • Surface Water • Groundwater • Soil

Cleaning Method

Contain the spill.
Absorb using inert non-combustible material such as:
Sand • Earth • Vermiculite • Diatomaceous Earth
Collect into suitable labelled containers for disposal according to applicable regulations.

SECTION 7: HANDLING AND STORAGE

HANDLING

Handle in a well-ventilated area.
Avoid direct contact with skin and eyes.
Avoid breathing vapours.
Keep away from ignition sources.
Do not eat, drink or smoke while handling.
Wash hands thoroughly after use.

STORAGE

Store in:
Tightly Closed Original Container • Cool • Dry • Well-Ventilated Area

Protect from:
Heat • Direct Sunlight • Air • Moisture • Ignition Sources • Oxidising Agents

Larger quantities are commonly stored in aluminium or suitable HDPE containers. Organic suppliers recommend cool/dark storage for Zanthoxylum oil.

SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

Protection	Recommendation
Engineering Controls	Provide adequate ventilation
Hand Protection	Nitrile protective gloves
Eye Protection	Safety glasses / chemical splash goggles
Skin Protection	Suitable protective clothing
Respiratory Protection	Use suitable respiratory protection where ventilation is inadequate



The organic Nepal SDS specifically recommends nitrile gloves, protective eyewear and respiratory protection where appropriate.

GENERAL HYGIENE

Avoid contact with skin and eyes.
Keep away from food, beverages and animal feed.
Wash hands before breaks and after handling.
Do not eat, drink or smoke during use.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Property	Specification
Physical State	Mobile, clear liquid
Colour	Pale yellow to light brown
Odour	Woody, spicy, fresh, characteristic
Flash Point	55–61 °C
Relative Density @ 20 °C	0.815–0.905
Refractive Index @ 20 °C	1.475–1.490
Optical Rotation @ 20 °C	+1° to +45°
Water Solubility	Insoluble
Oil Solubility	Soluble
Alcohol Solubility	Soluble

These physical specifications come from the organic Nepal Zanthoxylum SDS. A separate organic product COA also describes Zanthoxylum as a light-to-pale-yellow liquid, soluble in oils and alcohol and insoluble in water.

SECTION 10: STABILITY AND REACTIVITY

Reactivity: No hazardous reaction expected under recommended conditions of use.

Chemical Stability: Stable under normal recommended storage conditions.

Possibility of Hazardous Reactions: No hazardous polymerisation expected.

Conditions to Avoid:

Heat, flames, sparks, direct sunlight and prolonged exposure to air.

Incompatible Materials:

Strong oxidising agents.

Hazardous Decomposition Products:

Carbon monoxide and carbon dioxide may be produced during combustion.

SECTION 11: TOXICOLOGICAL INFORMATION

LIKELY ROUTES OF EXPOSURE



Skin • Eyes • Inhalation • Ingestion

POTENTIAL EFFECTS

Endpoint	Assessment
Skin Irritation	Causes / may cause irritation
Eye Irritation	May cause serious irritation
Skin Sensitisation	May cause an allergic skin reaction
Aspiration Hazard	May be fatal if swallowed and enters airways
Inhalation	Concentrated vapours may cause irritation

The sensitisation potential is consistent with supplier safety information for organic Zanthoxylum essential oil.

SECTION 12: ECOLOGICAL INFORMATION

Aquatic Hazard: Toxic/harmful to aquatic organisms with potential long-lasting effects.
Avoid uncontrolled release into the environment.
Do not discharge into drains, waterways or soil.
Natural essential oils may contain constituents with aquatic toxicity and bioaccumulation potential.

SECTION 13: DISPOSAL CONSIDERATIONS

Dispose of product and contaminated packaging through an authorised waste disposal contractor in accordance with local and national regulations.
Do not discharge into drains, surface waters or soil.
Empty containers may retain product residues and vapours.

SECTION 14: TRANSPORT INFORMATION

Because the reported flash point is **55–61 °C**, transport classification should be checked against the actual batch flash point and applicable mode of transport before shipment.

Transport Information	Classification
UN Number	UN 1169
Proper Shipping Name	EXTRACTS, AROMATIC, LIQUID
Transport Hazard Class	3
Packing Group	III
Marine Pollutant	Applicable where environmentally hazardous classification criteria are met

ADR / RID: Class 3
IMDG: Class 3
IATA: Class 3

Important: The exact transport classification should be confirmed against the flash point of the batch being shipped because the available organic SDS gives a flash-point range crossing 60 °C.



SECTION 15: REGULATORY INFORMATION

This SDS has been prepared with reference to applicable principles of:

Regulation (EC) No. 1907/2006 (REACH)

Regulation (EC) No. 1272/2008 (CLP)

Regulation (EU) 2020/878

Globally Harmonized System (GHS)

CAS Number: 91770-90-0

A regulatory complication worth retaining in your technical records is that suppliers use different identifiers for this botanical material. 91770-90-0 is used for *Zanthoxylum alatum/armatum* fruit extract in Nepal-origin documentation and on your Aromology listing, while some suppliers additionally identify 102242-62-6 as the TSCA CAS.

SECTION 16: OTHER INFORMATION

FULL TEXT OF RELEVANT HAZARD STATEMENTS

H226 – Flammable liquid and vapour.

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H319 – Causes serious eye irritation.

H411 – Toxic to aquatic life with long lasting effects.

DISCLAIMER

The information contained in this Safety Data Sheet is based on available technical and safety information and is intended as guidance for the safe handling, storage, transportation and use of the material.

As essential oils are naturally variable complex substances, composition and certain physical properties may vary between batches. Users are responsible for determining suitability for their intended application and compliance with applicable regulations.

Authorised by:

Fozia Khot

Director