SAFETY DATA SHEET (SDS)

Regulation (EC) No. 1907/2006 (REACH), Annex II, as amended by Regulation (EU) 2020/878 and GHS.

Green Mandarin Essential Oil

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND COMPANY

Product Name: Green Mandarin Essential Oil
CAS Number: 8008-31-9
EC Number: 284-521-0
REACH Registration Number: 01-2120074120-72
Product Code: 020269
Other CAS Number: 84929-38-4

Recommended Uses: Industrial use, fragrance ingredient and flavour ingredient.

Supplier:

Aromology Trading LLC
G05 Al Ghazal Building
Nadd Al Hamar
Dubai, United Arab Emirates

Website: www.aromology.com
Email: info@aromology.com
Telephone: +971 505197601

SECTION 2: HAZARDS IDENTIFICATION

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

Classification	Category	Hazard Code
Flammable Liquids	Category 3	H226
Skin Irritation	Category 2	H315
Skin Sensitisation	Category 1	H317
Reproductive Toxicity	Category 2	H361
Aspiration Hazard	Category 1	H304
Aquatic Chronic Hazard	Category 2	H411

Signal Word: Danger

Hazard Pictograms: GHS02, GHS07, GHS08, GHS09

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.
H361 — Suspected of damaging fertility or the unborn child.
H411 — Toxic to aquatic life with long lasting effects.

Precautionary Statements:

P201 — Obtain special instructions before use.
P202 — Do not handle until all safety precautions have been read and understood.
P210 — Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P233 — Keep container tightly closed.
P240 — Ground and bond container and receiving equipment.
P241 — Use explosion-proof electrical/ventilating/lighting equipment.

Other Hazards: Contains no PBT or vPvB substances at concentrations ≥0.1%, assessed according to REACH Annex XIII.

SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS

Substance: Mandarin orange, ext.
CAS Number: 8008-31-9
EC Number: 284-521-0
Substance Type: UVCB

Chemical Component	CAS Number	Concentration (%)
Limonene	5989-27-5 / 138-86-3 / 5989-54-8	50–80
p-Mentha-1,4-diene	99-85-4	20–25
Alpha-Pinene	80-56-8	1–5
Myrcene	123-35-3	1–5
Beta-Pinene	127-91-3	1–5
Terpinolene	586-62-9	0.1–1
p-Cymene	99-87-6	0.1–1
Methyl N-methylanthranilate	85-91-6	0.1–1
Linalool	78-70-6	0.1–1
Alpha-Terpineol	98-55-5	0.1–1
Beta-Caryophyllene	87-44-5	0.1–1
Decanal	112-31-2	0.1–1
Octanal	124-13-0	0.1–1
Delta-3-Carene	13466-78-9	Below 0.1

Geraniol	106-24-1	Below 0.1
Citral	5392-40-5	Below 0.1

SECTION 4: FIRST AID MEASURES

General: Call a physician immediately. Never give anything by mouth to an unconscious person. If exposed or concerned, seek medical advice.

Inhalation: Remove the affected person to fresh air and keep comfortable for breathing. Allow the person to rest.

Skin Contact: Remove contaminated clothing immediately. Rinse skin with water or shower. Wash thoroughly with water. Seek medical attention if irritation or rash develops.

Eye Contact: Rinse immediately with plenty of water. Seek medical attention if pain, blinking or redness persists.

Ingestion: Rinse mouth. Do not induce vomiting. Immediately contact a poison centre or physician.

Symptoms: Suspected reproductive toxicity, skin irritation, allergic skin reaction and risk of lung oedema following ingestion and aspiration.

Treatment: Treat symptomatically.

SECTION 5: FIRE-FIGHTING MEASURES

Suitable Extinguishing Media: Foam, dry powder, carbon dioxide, water spray and sand.

Unsuitable Extinguishing Media: Heavy water stream.

Fire Hazard: Flammable liquid and vapour.

Explosion Hazard: May form flammable or explosive vapour-air mixtures.

Hazardous Combustion Products: Toxic fumes may be released.

Firefighter Protection: Self-contained breathing apparatus and complete protective clothing.

Use water spray or fog to cool exposed containers. Prevent firefighting water from entering the environment.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Remove ignition sources. Avoid sparks, open flames and smoking.
Ventilate the affected area and evacuate unnecessary personnel.
Avoid contact with skin and eyes and inhalation of vapours.
Prevent entry into sewers and public waterways.
Absorb spills with inert material such as clay or diatomaceous earth.
Collect in appropriate containers and dispose of at an authorised facility.
Notify authorities if the product enters sewers or public waterways.

SECTION 7: HANDLING AND STORAGE

Handling:

Ensure adequate workplace ventilation.
Keep away from heat, sparks, open flames and other ignition sources.
Use explosion-proof equipment and non-sparking tools.
Ground and bond containers and receiving equipment.
Avoid contact with skin and eyes and inhalation of vapours.
Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Wear appropriate protective equipment.
Do not eat, drink or smoke during handling.
Wash hands thoroughly after handling.

Storage:

Store in original tightly closed containers in a cool, dry, dark and well-ventilated area.
Keep containers locked up and protected from direct sunlight and heat.

Incompatible Materials: Strong acids, strong bases and ignition sources.

Maximum Storage Period: 24 months.

SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

Occupational Exposure Limits:

Substance	Exposure Limit
Delta-3-Carene — ACGIH TWA	20 ppm
Citral — ACGIH TWA	5 ppm (inhalable fraction and vapour)

Engineering Controls: Ensure adequate workplace ventilation.

Eye Protection: Chemical goggles or safety glasses.

Hand Protection: Protective gloves.

Skin Protection: Suitable protective clothing.

Respiratory Protection: Appropriate respiratory protection where ventilation is inadequate.

Environmental Controls: Avoid release into the environment.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Property	Value
Physical State	Liquid
Appearance	Liquid
Colour	Pale yellow to amber yellow with slight blue fluorescence
Odour	Characteristic of the fresh outer part of the fruit
Odour Threshold	Not available
Melting Point	Not applicable
Freezing Point	Not available
Boiling Point	Not available
Flammability	Flammable liquid and vapour
Lower Explosion Limit	Not available
Upper Explosion Limit	Not available
Flash Point (Closed Cup)	49°C
Auto-Ignition Temperature	Not available
Decomposition Temperature	Not available
pH	Not available
Kinematic Viscosity	Not available
Solubility	Not available
Partition Coefficient (Log Kow)	Not available
Vapour Pressure	Not available
Density	Not available
Specific Gravity (20°C)	0.8470–0.8550
Refractive Index (20°C)	1.4732–1.4758
Relative Vapour Density	Not available
Particle Characteristics	Not applicable

SECTION 10: STABILITY AND REACTIVITY

Reactivity: Flammable liquid and vapour.

Chemical Stability: Stable under normal conditions. May form flammable or explosive vapour-air mixtures.

Hazardous Reactions: Not established.

Conditions to Avoid: Hot surfaces, direct sunlight, extreme temperatures, overheating, heat, sparks, open flames and ignition sources.

Incompatible Materials: Strong acids and strong bases.

Hazardous Decomposition Products: Under normal storage and use, hazardous decomposition products should not be produced. Decomposition may release fumes, carbon monoxide, carbon dioxide and flammable gases.

SECTION 11: TOXICOLOGICAL INFORMATION

Acute Oral Toxicity: Not classified.

Acute Dermal Toxicity: Not classified.

Acute Inhalation Toxicity: Not classified.

Skin Irritation: Causes skin irritation.

Serious Eye Damage/Irritation: Not classified.

Skin Sensitisation: May cause an allergic skin reaction.

Germ Cell Mutagenicity: Not classified.

Carcinogenicity: Not classified.

Reproductive Toxicity: Suspected of damaging fertility or the unborn child.

STOT — Single Exposure: Not classified.

STOT — Repeated Exposure: Not classified.

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

SECTION 12: ECOLOGICAL INFORMATION

Classification: Aquatic Chronic Category 2.

H411: Toxic to aquatic life with long lasting effects.

Ecotoxicity — Mandarin Green Essential Oil:

Test	Result
LC50 Fish	Greater than 100 mg/L
EC50 Crustacea	8.9 mg/L
EC50 Algae (72 hours)	9.7 mg/L

Avoid release into the environment.

SECTION 13: DISPOSAL CONSIDERATIONS

Dispose of contents and containers in accordance with applicable local, regional, national and international regulations.

Use an authorised hazardous or special waste collection facility.

Handle empty containers carefully because residual vapours may be flammable.

Avoid release into the environment.

SECTION 14: TRANSPORT INFORMATION

Parameter	Classification
UN Number	UN 1197
Proper Shipping Name	EXTRACTS, LIQUID
Transport Hazard Class	3
Packing Group	III
Environmentally Hazardous	Yes
Marine Pollutant	Yes
ADR Tunnel Restriction Code	D/E
IMDG Emergency Schedule	F-E, S-D

Applicable Transport Regulations: ADR, IMDG, IATA, ADN and RID.

SECTION 15: REGULATORY INFORMATION

Applicable Regulations:

Regulation (EC) No. 1907/2006 (REACH).
Regulation (EU) 2020/878.
Regulation (EC) No. 1272/2008 (CLP).

REACH Annex XVII: Not listed.
REACH Annex XIV: Not listed.
REACH Candidate List (SVHC): Contains no listed substances.
PIC Regulation (EU 649/2012): Not listed.
POP Regulation (EU 2019/1021): Not listed.
Ozone Regulation (EU 2024/590): Not listed.
Explosives Precursors Regulation (EU 2019/1148): Contains no listed substances.
Drug Precursors Regulation (EC 273/2004): Contains no listed substances.
Germany Water Hazard Class: WGK 3 — Highly hazardous to water.

SECTION 16: OTHER INFORMATION

Original Issue Date: 20 July 2018
Original Revision Date: 09 May 2025
Superseded Version: 09 January 2024

SDS Version: 3.1

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Authorised by:
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