



SAFETY DATA SHEET (SDS)

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

SECTION 1: Identification

Parameter	Details
Product Name	Petitgrain Absolute
Alternative Names	Bitter Orange Leaf Absolute; Petitgrain Bigarade Absolute; Orange Leaf and Twig Absolute
Botanical Name	<i>Citrus aurantium</i> L. var. <i>amara</i>
Botanical Family	Rutaceae
INCI Name	Citrus Aurantium Amara Leaf/Twig Extract
Plant Part	Leaves and young green twigs
Extraction Method	Solvent extraction followed by solvent removal
Product Type	Natural Aromatic Extract / Natural Complex Substance
Representative CAS Number	8014-17-3
EC Number	277-143-2
Physical Form	Viscous liquid, semi-solid or soft extract
Country of Origin	Batch dependent
Grade	Professional Perfumery Grade

The identifier used for this material may vary according to the botanical source, extraction process and supplier registration. The manufacturer's current documentation shall take precedence.

1.2 Relevant Identified Uses

- Professional perfumery
- Fine-fragrance formulations
- Citrus, green, floral and cologne accords
- Soap and cosmetic fragrance
- Home-fragrance products
- Incense and aromatic compositions
- Research and product development

1.3 Uses Advised Against

- Internal consumption
- Food or flavour use unless separately certified
- Medicinal or pharmaceutical use
- Direct undiluted application to skin
- Use by children



- Use without an appropriate finished-product safety assessment

1.4 Supplier Details

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

1.5 Emergency Telephone Number

Contact the nearest Poison Control Centre, emergency medical service or qualified medical professional.

SECTION 2: HAZARDS IDENTIFICATION

2.1 Representative Classification of the Substance

Representative classification according to Regulation (EC) No. 1272/2008:

Hazard Class	Category	Hazard Statement
Flammable Liquid	Category 3	H226
Skin Irritation	Category 2	H315
Skin Sensitisation	Category 1	H317
Serious Eye Irritation	Category 2	H319
Aspiration Hazard	Category 1	H304
Aquatic Acute	Category 1	H400
Aquatic Chronic	Category 1	H410

The exact classification may differ according to:

- Residual extraction solvent
- Batch-specific flash point
- Linalyl acetate content
- Linalool content
- Limonene content
- Terpene and sesquiterpene composition
- Oxidation state

2.2 Label Elements



Signal Word

Danger

Hazard Pictograms

- GHS02 – Flame
- GHS07 – Exclamation Mark
- GHS08 – Health Hazard
- GHS09 – Environment

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.
- H400: Very toxic to aquatic life.
- H410: Very toxic to aquatic life with long-lasting effects.

Precautionary Statements

- 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.
- P261: Avoid breathing vapours, mist or spray.
- P264: Wash 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, protective clothing and eye 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.
- P333+P313: If skin irritation or rash occurs: Get medical advice.
- P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.
- P337+P313: If eye irritation persists: Get medical advice.
- P370+P378: In case of fire: Use foam, dry powder or carbon dioxide to extinguish.
- P391: Collect spillage.
- P403+P235: Store in a well-ventilated place. Keep cool.
- P405: Store locked up.
- P501: Dispose of contents and container according to applicable regulations.

2.3 Other Hazards



- Oxidised terpene constituents may have increased sensitising potential.
- Residual extraction solvent may contribute to flammability.
- Vapours or aerosols may cause headache, dizziness or respiratory discomfort.
- Spilled material may create a slipping hazard.
- The substance is a Natural Complex Substance with variable composition.
- No confirmed endocrine-disrupting properties have been established for the complete product.

SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS

3.1 Substance

Component	Representative Identifier	Concentration
Petitgrain Absolute	CAS 8014-17-3	100%

3.2 Representative Naturally Occurring Constituents

Constituent	Representative Range
Linalyl Acetate	20–50%
Linalool	10–35%
α -Terpineol	1–10%
Geranyl Acetate	1–8%
Neryl Acetate	1–6%
Limonene	1–8%
β -Caryophyllene	Trace–5%
Myrcene	Trace–4%
Geraniol	Trace–4%
Nerol	Trace–3%
Farnesol	Trace–2%
Indole and Leafy Extractives	Trace
Waxes, Pigments and Non-Volatile Extractives	Variable
Other Naturally Occurring Constituents	Balance

3.3 Residual Solvents

Residual extraction solvent should comply with the manufacturer's specification.

Parameter	Representative Specification
Residual Hexane or Extraction Solvent	$\leq 1.0\%$ or supplier specification
Ethanol, if used during processing	Batch dependent

Exact composition must be confirmed through batch-specific GC/MS and residual-solvent analysis.



SECTION 4: FIRST-AID MEASURES

4.1 Description of First-Aid Measures

After Inhalation

- Move the affected person to fresh air.
- Keep the person warm and at rest.
- Seek medical attention if coughing, headache, dizziness or breathing difficulty persists.

After Skin Contact

- Remove contaminated clothing.
- Wash the affected skin thoroughly with soap and plenty of water.
- Do not use solvents to clean the skin.
- Obtain medical advice if irritation, redness or rash develops.

After Eye Contact

- Rinse cautiously with clean water for at least 15 minutes.
- Remove contact lenses if present and easy to do.
- Continue rinsing while holding the eyelids open.
- Obtain medical attention if irritation persists.

After Ingestion

- Immediately contact a Poison Centre or physician.
- Do not induce vomiting.
- Rinse the mouth carefully.
- Keep the affected person at rest.
- Never give anything by mouth to an unconscious person.

Aspiration into the lungs may cause chemical pneumonitis and may be fatal.

4.2 Most Important Symptoms and Effects

Possible symptoms include:

- Skin irritation
- Allergic skin reaction
- Eye irritation
- Headache
- Dizziness
- Nausea
- Vomiting



- Abdominal discomfort
- Coughing
- Breathing difficulty
- Chemical pneumonitis following aspiration

4.3 Indication of Immediate Medical Attention

Immediate medical attention is required following ingestion or suspected aspiration.

Treat symptomatically.

SECTION 5: FIRE-FIGHTING MEASURES

5.1 Suitable Extinguishing Media

Use:

- Carbon dioxide
- Dry chemical powder
- Alcohol-resistant foam
- Water fog for cooling exposed containers

5.2 Unsuitable Extinguishing Media

Do not use a direct high-pressure water jet because it may spread the burning material.

5.3 Specific Hazards

Vapours may form flammable mixtures with air, particularly where residual solvent is present.

Combustion or thermal decomposition may produce:

- Carbon monoxide
- Carbon dioxide
- Dense smoke
- Irritating organic vapours
- Unidentified decomposition products

5.4 Advice for Firefighters

- Wear self-contained breathing apparatus.
- Wear full protective clothing.
- Cool fire-exposed containers using water spray.
- Prevent contaminated fire-fighting water from entering drains or waterways.
- Approach the fire from upwind where practical.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal Precautions

- Remove all ignition sources.
- Ensure adequate ventilation.
- Keep unnecessary personnel away.
- Avoid breathing vapours or mist.
- Avoid contact with skin and eyes.
- Wear suitable gloves, protective clothing and eye protection.
- Use non-sparking equipment where appropriate.
- Exercise caution because spilled material may create slippery surfaces.

6.2 Environmental Precautions

- Prevent entry into drains, soil, groundwater and surface water.
- Contain significant spills.
- Notify the appropriate authority if an uncontrolled environmental release occurs.

6.3 Methods for Containment and Cleaning

- Stop the leak where safe to do so.
- Contain with sand, earth, vermiculite or another inert absorbent.
- Collect absorbed material in a sealed and labelled waste container.
- Use non-sparking tools.
- Clean the affected surface with detergent and water.
- Do not use combustible absorbents such as sawdust.
- Dispose of waste through an authorised contractor.

6.4 Reference to Other Sections

See:

- Section 8 for personal protective equipment
 - Section 13 for disposal considerations
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SECTION 7: HANDLING AND STORAGE

7.1 Precautions for Safe Handling

- Handle in a well-ventilated area.
- Avoid breathing vapours, mist and aerosols.
- Avoid prolonged or repeated skin contact.



- Prevent contact with eyes.
- Keep away from flames, sparks and hot surfaces.
- Use grounded equipment during bulk transfer where appropriate.
- Take precautions against static discharge.
- Do not eat, drink or smoke in handling areas.
- Wash hands thoroughly after use.
- Keep containers tightly closed when not in use.
- Use clean, dry and compatible dispensing equipment.
- Avoid release to the environment.
- Minimise exposure to air to reduce oxidation.

7.2 Conditions for Safe Storage

Store:

- In tightly closed original or compatible containers
- In a cool, dry and well-ventilated area
- Protected from direct sunlight
- Away from heat and ignition sources
- Away from strong oxidising agents
- Preferably between 5 °C and 20 °C
- With minimum container headspace where practical

Suitable container materials include:

- Amber glass
- Aluminium
- Stainless steel
- Fluorinated HDPE
- Suitably lined metal containers

The product may become more viscous or semi-solid at lower temperatures. Gentle warming and mixing may restore uniformity.

7.3 Specific End Uses

For professional perfumery and fragrance formulation.

Finished-product use levels must be established through an appropriate IFRA review and cosmetic safety assessment.

SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Control Parameters



No occupational exposure limit has been established for the complete Petitgrain Absolute Natural Complex Substance.

Where residual extraction solvent is present, the applicable occupational exposure limit for that solvent must be observed.

8.2 Engineering Controls

- Provide adequate general ventilation.
- Use local exhaust ventilation for bulk transfer, heating or aerosol generation.
- Use explosion-resistant equipment where significant vapour concentrations may occur.
- Provide accessible eyewash and washing facilities.
- Use closed transfer systems for large-scale operations where practical.

8.3 Personal Protective Equipment

Eye and Face Protection

Wear chemical safety goggles.

Use a face shield where splash exposure is possible.

Hand Protection

Wear chemical-resistant gloves, such as:

- Nitrile rubber
- Neoprene
- Butyl rubber

Skin and Body Protection

Wear suitable protective clothing to prevent repeated or prolonged contact.

Respiratory Protection

Normally not required under adequate ventilation.

Use an approved organic-vapour respirator where:

- Ventilation is inadequate
- The material is heated
- Mist or aerosol is generated
- Significant solvent vapour may be present

Hygiene Measures



- Wash hands and exposed skin after handling.
- Remove contaminated clothing.
- Wash contaminated workwear before reuse.
- Keep away from food, beverages and animal feed.

Environmental Exposure Controls

Prevent uncontrolled release into drains, soil and waterways.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Property	Representative Information
Physical State	Viscous liquid, soft extract or semi-solid
Appearance	Clear to slightly turbid extract
Colour	Dark green, olive green, brown-green or amber
Odour	Fresh, green, leafy, citrus, floral, woody and slightly bitter
Odour Threshold	Not determined
Melting / Softening Point	Batch dependent
Initial Boiling Range	Not determined for the complete Natural Complex Substance
Flammability	Flammable or combustible depending on residual solvent
Lower Explosive Limit	Not determined
Upper Explosive Limit	Not determined
Flash Point	Representative 45–80 °C, batch dependent
Auto-Ignition Temperature	Not determined
Decomposition Temperature	Not determined
pH	Not applicable
Kinematic Viscosity	Not determined
Water Solubility	Insoluble or practically insoluble
Solubility in Ethanol	Soluble or partly soluble
Vapour Pressure	Low at ambient temperature; dependent on residual solvent
Relative Density at 20 °C	Approximately 0.900–1.000
Refractive Index at 20 °C	Approximately 1.460–1.500
Optical Rotation	Batch dependent
Partition Coefficient	Expected to be high due to terpene content
Particle Characteristics	Not applicable

All values are representative. Batch-specific Certificate of Analysis and manufacturer data take precedence.



SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity

No dangerous reactivity is expected under normal handling conditions.

10.2 Chemical Stability

Stable when stored tightly closed and protected from heat, light, moisture and air.

10.3 Possibility of Hazardous Reactions

Hazardous polymerisation is not expected.

May react strongly with oxidising agents.

10.4 Conditions to Avoid

Avoid:

- Heat
- Direct sunlight
- Flames and sparks
- Static discharge
- Prolonged exposure to air
- Moisture contamination
- Repeated heating
- Cross-contamination

10.5 Incompatible Materials

- Strong oxidising agents
- Strong acids
- Strong alkalis
- Reactive halogen compounds

10.6 Hazardous Decomposition Products

Thermal decomposition may produce:

- Carbon monoxide
 - Carbon dioxide
 - Dense smoke
 - Irritating organic vapours
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SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Information on Hazard Classes

Acute Toxicity

The complete substance is not generally expected to have high acute toxicity under normal professional handling conditions.

Residual solvent may influence acute toxicity.

Skin Corrosion / Irritation

Causes skin irritation under the representative classification.

Serious Eye Damage / Irritation

Causes serious eye irritation.

Respiratory or Skin Sensitisation

May cause an allergic skin reaction.

Oxidation products of linalool, limonene and other terpene constituents may increase sensitisation potential.

Germ-Cell Mutagenicity

No classification established for the complete Natural Complex Substance.

Carcinogenicity

No classification established for the complete Natural Complex Substance.

Reproductive Toxicity

No classification established for the complete Natural Complex Substance.

Specific Target Organ Toxicity – Single Exposure

Excessive vapour exposure may cause headache, dizziness or respiratory discomfort.

Specific Target Organ Toxicity – Repeated Exposure

No classification established based on available representative information.

Aspiration Hazard



May be fatal if swallowed and enters airways.

11.2 Likely Routes of Exposure

- Skin contact
- Eye contact
- Inhalation
- Accidental ingestion

11.3 Symptoms Related to Exposure

- Skin irritation
- Allergic rash
- Eye irritation
- Headache
- Dizziness
- Nausea
- Coughing
- Breathing difficulty following aspiration
- Chemical pneumonitis

11.4 Endocrine-Disrupting Properties

No confirmed endocrine-disrupting properties have been established for the complete product.

SECTION 12: ECOLOGICAL INFORMATION

12.1 Toxicity

Very toxic to aquatic life with long-lasting effects under the representative classification.

12.2 Persistence and Degradability

Complete batch-specific biodegradation data are not available.

Individual natural constituents may biodegrade at different rates.

12.3 Bioaccumulative Potential

Lipophilic terpene constituents may have the potential to bioaccumulate.

12.4 Mobility in Soil

The product is poorly soluble in water and is expected to adsorb to soil and sediment.



12.5 PBT and vPvB Assessment

The complete Natural Complex Substance is not expected to meet PBT or vPvB criteria based on representative information.

12.6 Endocrine-Disrupting Properties

No confirmed endocrine-disrupting properties have been identified.

12.7 Other Adverse Effects

Avoid uncontrolled release into the environment.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1 Waste Treatment Methods

- Dispose of unused product through an authorised chemical-waste contractor.
- Do not discharge into drains, waterways or soil.
- Incineration may be appropriate where legally permitted.
- Dispose of contaminated absorbents as hazardous chemical waste.
- Empty containers may retain flammable vapours and hazardous residues.

13.2 Contaminated Packaging

Dispose of or recycle packaging in accordance with local regulations after appropriate cleaning.

Do not cut, weld, drill or burn uncleaned containers.

Do not reuse contaminated containers for food, beverages or household purposes.

SECTION 14: TRANSPORT INFORMATION

14.1 Representative Transport Classification

Transport Parameter	Details
UN Number	UN 3082
UN Proper Shipping Name	Environmentally Hazardous Substance, Liquid, N.O.S.
Technical Name	Petitgrain Extract / Linalool / Limonene
Transport Hazard Class	9
Packing Group	III
Environmental Hazard	Yes
Marine Pollutant	Yes



ADR / RID	Class 9, UN 3082
IMDG	Class 9, UN 3082
IATA	Class 9, UN 3082
EmS Code	F-A, S-F
Limited Quantity	Subject to applicable transport provisions
Bulk Maritime Transport	Not intended for bulk maritime transport

Where the measured flash point is below 60°C, the product may instead require classification as a flammable liquid under UN 1993, Class 3, Packing Group III.

Transport classification must therefore be confirmed using:

- The measured batch-specific flash point
- Residual-solvent analysis
- Original manufacturer's SDS
- Quantity shipped
- Packaging configuration
- Applicable carrier requirements

SECTION 15: REGULATORY INFORMATION

15.1 Safety, Health and Environmental Regulations

Prepared with reference to:

- Regulation (EC) No. 1907/2006 – REACH
- Regulation (EU) 2020/878
- Regulation (EC) No. 1272/2008 – CLP
- Regulation (EC) No. 1223/2009 on cosmetic products
- Commission Regulation (EU) 2023/1545 concerning fragrance-allergen labelling
- Current IFRA Standards
- ADR
- RID
- IMDG
- IATA dangerous-goods provisions

15.2 Chemical Safety Assessment

A formal chemical safety assessment has not been conducted by Aromology Trading LLC for the complete Natural Complex Substance.

Finished-product manufacturers are responsible for:

- Reviewing the original manufacturer's current SDS



- Confirming the correct CAS and EC identifiers
 - Confirming batch-specific GC/MS composition
 - Confirming residual-solvent levels
 - Confirming the measured flash point
 - Confirming transport classification
 - Reviewing applicable IFRA Standards
 - Assessing fragrance-allergen labelling
 - Determining safe finished-product use levels
 - Conducting the finished cosmetic-product safety assessment
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SECTION 16: OTHER INFORMATION

16.1 Full Text of 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.
- H400: Very toxic to aquatic life.
- H410: Very toxic to aquatic life with long-lasting effects.

16.2 Abbreviations

Abbreviation Meaning

ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
CAS	Chemical Abstracts Service
CLP	Classification, Labelling and Packaging Regulation
EC	European Community
GC/MS	Gas Chromatography–Mass Spectrometry
IATA	International Air Transport Association
IFRA	International Fragrance Association
IMDG	International Maritime Dangerous Goods Code
INCI	International Nomenclature of Cosmetic Ingredients
NCS	Natural Complex Substance
PBT	Persistent, Bioaccumulative and Toxic
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
UVCB	Substance of Unknown or Variable Composition, Complex Reaction Products or Biological Materials
vPvB	Very Persistent and Very Bioaccumulative

16.3 Recommended Shelf Life



24 months from the manufacturing date when stored unopened under recommended conditions.

DISCLAIMER

This Material Safety Data Sheet has been prepared using representative botanical, compositional, physical and safety information for Petitgrain Absolute.

Petitgrain Absolute is a solvent-extracted Natural Complex Substance. Its exact chemical identity, composition, residual-solvent concentration, physical properties, flash point and hazard classification may vary according to:

- Botanical variety
- Plant origin
- Harvest conditions
- Extraction solvent
- Extraction and concentration method
- Solvent-removal efficiency
- Storage conditions
- Oxidation
- Individual production batch

The original manufacturer's current:

- Safety Data Sheet
- Certificate of Analysis
- GC/MS report
- Residual-solvent analysis
- Flash-point result
- IFRA statement
- EU allergen declaration
- Transport classification

shall take precedence wherever available.

This product is supplied exclusively as a professional perfumery raw material. It is not intended for internal consumption, medicinal use, food use or direct undiluted skin application.

Aromology Trading LLC accepts no responsibility for inappropriate handling, storage, formulation, transport, labelling or use outside the recommended professional applications.

AUTHORISED BY

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