



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 OF THE SUBSTANCE/MIXTURE AND COMPANY

Product Identifier

Parameter	Details
Product Name	Co-distilled Grapefruit & Cedarwood Oil
Alternative Name	Grapefruit–Cedarwood Co-distillate
Product Type	Natural complex essential oil
Chemical Identity	Co-distilled volatile oil derived from grapefruit peel and cedarwood
CAS Number	Not assigned to the complete co-distilled product
EC Number	Not assigned to the complete co-distilled product
REACH Registration Number	Not available for the complete mixture
Grade	Professional perfumery grade

Botanical Information

Botanical Component	Botanical Name	Plant Part	Extraction
Grapefruit	<i>Citrus × paradisi</i> Macfad.	Fruit peel	Co-distillation
Cedarwood	Species to be confirmed	Wood	Co-distillation

Recommended Uses

- Fine-fragrance formulation
- Natural perfumery
- Citrus and woody accords
- Cologne compositions
- Aromatic and fougère fragrances
- Amber and oriental compositions
- Home-fragrance products
- Soap and cosmetic fragrance compounds
- Professional olfactory evaluation

Supplier

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SECTION 2: HAZARDS IDENTIFICATION

Representative GHS Classification

Pending confirmation of the exact botanical ratio, cedarwood species, extraction method and batch GC-MS profile, the following conservative classification is recommended:

Hazard Class	Classification
Flammable Liquid	Category 3
Aspiration Hazard	Category 1
Skin Irritation	Category 2
Skin Sensitisation	Category 1
Serious Eye Irritation	Category 2
Aquatic Acute Toxicity	Category 1
Aquatic Chronic Toxicity	Category 1

Label Elements

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

Supplemental Hazard Information

- May cause a phototoxic skin reaction if the grapefruit portion contains significant naturally occurring furocoumarins.
- Oxidised material may have increased sensitisation potential.

Precautionary Statements

- P210: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources.
- P233: Keep container tightly closed.
- P240: Ground and bond container and receiving equipment during bulk transfer.
- P261: Avoid breathing vapours or mist.
- 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 physician.
- 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 where easy to do. Continue rinsing.
- P337+P313: If eye irritation persists: Get medical advice.
- P370+P378: In case of fire: Use dry chemical, carbon dioxide or foam.
- 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.

Other Hazards

- Concentrated vapours may cause headache, dizziness, nausea or respiratory discomfort.
- Spilled oil may create a slipping hazard.
- Natural terpene constituents may oxidise during storage.
- Oxidation products of limonene, linalool and related terpenes may increase sensitisation.
- Expressed grapefruit oil may contain furocoumarins capable of causing phototoxic skin reactions.
- The material is combustible and may form flammable vapour-air mixtures.
- Natural composition varies between crops and distillation batches.

PBT and vPvB Assessment

The complete natural complex substance has not been fully assessed for persistent, bioaccumulative and toxic properties.

Endocrine-Disrupting Properties

No specific endocrine-disruption assessment is available for the complete co-distilled material.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Mixture Description

Natural volatile oil produced through the simultaneous or sequential co-distillation of grapefruit peel and cedarwood.

Component	Botanical Identity	Representative Proportion
Grapefruit Peel Oil Fraction	<i>Citrus × paradisi</i>	Proprietary
Cedarwood Oil Fraction	Species to be confirmed	Proprietary

Representative Ingredient Identifiers

Ingredient	Representative CAS No.	Notes
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Grapefruit Oil	8016-20-4	Common commercial identifier
Atlas Cedarwood Oil	8023-85-6	Applies only if <i>Cedrus atlantica</i>
Virginian Cedarwood Oil	8000-27-9	Applies only if <i>Juniperus virginiana</i>
Chinese Cedarwood Oil	85085-29-6	Applies only if <i>Cupressus funebris</i>
Himalayan Cedarwood Oil	Supplier-specific	Confirmation required

The complete co-distilled product should not automatically be assigned the CAS number of either individual component.

Representative Naturally Occurring Constituents

Constituent	CAS No.	Likely Source
D-Limonene	5989-27-5	Grapefruit
Beta-Myrcene	123-35-3	Grapefruit
Alpha-Pinene	80-56-8	Grapefruit/Cedarwood
Beta-Pinene	127-91-3	Grapefruit/Cedarwood
Sabinene	3387-41-5	Grapefruit
Linalool	78-70-6	Grapefruit
Citral	5392-40-5	Grapefruit
Geraniol	106-24-1	Grapefruit
Nootkatone	4674-50-4	Grapefruit
Alpha-Cedrene	469-61-4	Cedarwood
Beta-Cedrene	546-28-1	Cedarwood
Cedrol	77-53-2	Cedarwood
Thujopsene	470-40-6	Certain cedarwood types
Himachalenes	Various	Atlas/Himalayan cedarwood
Atlantones	Various	Atlas cedarwood
Cedrenol/Cedrol Derivatives	Various	Cedarwood
Furocoumarins	Various	Possible in expressed grapefruit fraction

Representative Hazardous Constituents

Constituent	Representative Classification
D-Limonene	Flammable, aspiration hazard, skin sensitiser, very toxic to aquatic life
Alpha-Pinene	Flammable, aspiration hazard, skin sensitiser, aquatic hazard
Beta-Pinene	Flammable, aspiration hazard, skin sensitiser, aquatic hazard
Beta-Myrcene	Flammable and potentially hazardous depending on concentration
Citral	Skin irritant and sensitiser
Linalool	Skin sensitiser, particularly after oxidation
Cedarwood Terpenes	May contribute to irritation, aspiration and aquatic hazards

Natural Variability

The composition may vary according to:



- Grapefruit variety
- Fruit maturity
- Peel-processing method
- Expressed, distilled or furocoumarin-reduced grapefruit source
- Cedarwood species
- Geographic origin
- Wood maturity
- Ratio of the two botanicals
- Co-distillation time and temperature
- Storage and oxidation history

A batch-specific GC-MS report must prevail over representative information.

SECTION 4: FIRST-AID MEASURES

Inhalation

- Move the affected person to fresh air.
- Keep at rest in a comfortable position.
- Loosen restrictive clothing.
- Obtain medical attention if dizziness, headache, nausea, coughing or respiratory discomfort persists.
- If breathing stops, trained personnel should provide artificial respiration.

Skin Contact

- Remove contaminated clothing and footwear.
- Wash affected skin thoroughly with soap and water.
- Do not use solvents to clean the skin.
- Seek medical advice if irritation, redness, itching or rash develops.
- Wash contaminated clothing before reuse.
- If phototoxic grapefruit constituents may be present, protect affected skin from direct sunlight and ultraviolet exposure until medically assessed.

Eye Contact

- Rinse cautiously with clean water for at least 15 minutes.
- Remove contact lenses where present and easy to do.
- Continue rinsing.
- Obtain medical attention if pain, redness or irritation persists.

Ingestion

- Rinse the mouth.
- Do not induce vomiting.
- Immediately contact a poison centre or physician.
- Never give anything by mouth to an unconscious person.



- If vomiting occurs naturally, keep the head below hip level to reduce aspiration risk.

Most Important Symptoms and Effects

- Skin irritation, redness or allergic rash
- Delayed phototoxic skin reaction following ultraviolet exposure
- Eye pain, redness and watering
- Headache, dizziness or nausea
- Gastrointestinal discomfort
- Coughing and respiratory irritation
- Chemical pneumonitis if aspirated into the lungs

Medical Treatment

Treat symptomatically.

Because of the aspiration hazard, induced vomiting or gastric lavage should not be performed unless directed by qualified medical personnel.

SECTION 5: FIRE-FIGHTING MEASURES

Suitable Extinguishing Media

- Carbon dioxide
- Dry chemical powder
- Alcohol-resistant foam
- Water fog

Unsuitable Extinguishing Media

Do not use a high-pressure water jet, as this may spread the burning liquid.

Specific Hazards

Vapours may travel to an ignition source and flash back.

Heating or combustion may produce:

- Carbon monoxide
- Carbon dioxide
- Dense smoke
- Irritating aldehydes
- Partially oxidised terpene compounds
- Other irritating organic vapours

Protective Equipment for Firefighters



Wear:

- Self-contained breathing apparatus
- Full protective clothing
- Chemical-resistant gloves and footwear

Additional Fire-Fighting Advice

- Cool exposed containers with water spray.
- Remove containers from the fire area where safe.
- Prevent contaminated firefighting water from entering drains or waterways.
- Approach the fire from upwind.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal Precautions

- Restrict access to the affected area.
- Eliminate flames, sparks and ignition sources.
- Provide adequate ventilation.
- Avoid breathing vapours or mist.
- Avoid skin and eye contact.
- Wear chemical-resistant gloves, protective clothing and eye protection.

Environmental Precautions

- Prevent entry into drains, sewers, soil and waterways.
- Contain significant releases.
- Notify the appropriate authority if environmental contamination occurs.

Containment and Cleaning

- Stop the leak where this can be done safely.
- Contain with sand, earth, vermiculite or another non-combustible absorbent.
- Transfer absorbed material into a suitable labelled waste container.
- Clean the affected surface with detergent and water.
- Do not wash uncontrolled quantities into drains.
- Use non-sparking tools where significant quantities are involved.

Reference to Other Sections

See:

- Section 8 for personal protective equipment
- Section 13 for disposal guidance

SECTION 7: HANDLING AND STORAGE



Safe Handling

- Use in a well-ventilated area.
- Avoid breathing concentrated vapours and mist.
- Avoid direct skin and eye contact.
- Keep away from flames, sparks and heated surfaces.
- Take precautions against static discharge during bulk transfer.
- Do not eat, drink or smoke while handling.
- Wear suitable personal protective equipment.
- Use clean, dry and non-reactive dispensing tools.
- Keep containers tightly closed when not in use.
- Avoid prolonged exposure to air.
- Do not pipette by mouth.

Storage Conditions

Store:

- In the original tightly sealed container
- At approximately 15–25 °C
- In a cool, dry and well-ventilated area
- Away from direct sunlight
- Away from heat, sparks and ignition sources
- Away from strong oxidising agents
- Away from food and beverages
- Out of reach of children

For extended storage:

- Minimise container headspace.
- Consider nitrogen blanketing where commercially appropriate.
- Monitor peroxide value and organoleptic quality.
- Do not use severely oxidised material.

Packaging Materials

Recommended:

- Amber glass
- Lacquer-lined aluminium
- Suitable fluorinated or approved chemical-resistant containers

Avoid reactive metals and containers incompatible with citrus terpenes.

Specific End Use

Professional fragrance formulation at appropriately assessed concentrations.



Products intended for sun-exposed skin require phototoxicity assessment where expressed grapefruit constituents are present.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational Exposure Limits

No occupational exposure limit has been established for the complete co-distilled oil.

Workplace exposure limits may apply to individual volatile constituents.

Engineering Controls

- Provide adequate general ventilation.
- Use local exhaust ventilation for bulk filling, blending or heated processing.
- Provide access to an eyewash station.
- Avoid aerosol and mist formation.
- Use explosion-protected electrical equipment where required.

Personal Protective Equipment

Eye and Face Protection

Chemical splash goggles.

Use a face shield for bulk handling where splashing is possible.

Hand Protection

Nitrile, neoprene or butyl-rubber gloves.

The glove manufacturer should confirm material compatibility and breakthrough time.

Skin and Body Protection

- Laboratory coat
- Chemical-resistant apron for bulk handling
- Closed protective footwear

Respiratory Protection

Normally not required under adequate ventilation.

Use an approved organic-vapour respirator where ventilation is inadequate or significant vapour exposure may occur.

Hygiene Measures



- Wash hands thoroughly after handling.
- Remove contaminated clothing promptly.
- Do not eat, drink or smoke in handling areas.
- Do not apply the concentrated oil directly to skin.
- Clean filling and blending equipment after use.

Environmental Exposure Controls

Prevent uncontrolled release into drains, soil and watercourses.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Property	Representative Information
Physical State	Liquid
Appearance	Clear mobile to slightly viscous liquid
Colour	Pale yellow to amber or golden-brown
Odour	Fresh citrus peel, bitter grapefruit, dry cedarwood, woody, slightly smoky
Odour Threshold	Very low
pH	Not applicable
Melting/Freezing Point	Not determined
Initial Boiling Point	Not determined for the natural mixture
Flash Point	Representative range 45–75 °C; batch testing required
Evaporation Rate	Moderate
Flammability	Flammable or combustible liquid
Upper/Lower Explosive Limits	Not determined
Vapour Pressure	Moderate
Vapour Density	Heavier than air
Relative Density at 20 °C	Approximately 0.850–0.980
Refractive Index at 20 °C	Approximately 1.4600–1.5100
Optical Rotation	Batch and botanical-ratio dependent
Water Solubility	Insoluble or very slightly soluble
Ethanol Solubility	Soluble or dispersible
Partition Coefficient	Not determined for complete mixture
Auto-Ignition Temperature	Not determined
Decomposition Temperature	Not determined
Viscosity	Low to moderate
Explosive Properties	Not expected to be explosive
Oxidising Properties	Not expected to be oxidising

All physical values are representative and must be replaced with batch-specific test results before formal issue.



SECTION 10: STABILITY AND REACTIVITY

Reactivity

No hazardous reaction is expected under normal recommended conditions.

Chemical Stability

Stable when stored in tightly sealed containers under recommended conditions.

The material may gradually oxidise following exposure to air, heat or light.

Possibility of Hazardous Reactions

- Hazardous polymerisation is not expected.
- May react with strong oxidising agents.
- Oxidation may produce sensitising hydroperoxides.
- Vapours may form flammable mixtures with air.

Conditions to Avoid

- Excessive heat
- Open flames and sparks
- Direct sunlight
- Static discharge
- Prolonged air exposure
- Moisture contamination
- Repeated heating
- Incompatible packaging materials

Incompatible Materials

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

Hazardous Decomposition Products

- Carbon monoxide
- Carbon dioxide
- Irritating smoke
- Aldehydes
- Oxidised terpenes
- Other organic decomposition products



SECTION 11: TOXICOLOGICAL INFORMATION

Acute Toxicity

No complete-mixture acute-toxicity data are available.

The product is not classified for acute oral toxicity in this representative assessment, but ingestion presents a serious aspiration hazard.

Aspiration Hazard

May be fatal if swallowed and enters the airways.

Essential oils rich in terpenes can enter the lungs during swallowing or vomiting and cause chemical pneumonitis.

Skin Corrosion/Irritation

Causes skin irritation.

Repeated or prolonged contact may cause:

- Redness
- Dryness
- Burning
- Dermatitis

Serious Eye Damage/Irritation

Causes serious eye irritation.

Respiratory or Skin Sensitisation

May cause an allergic skin reaction.

Sensitisation potential may increase when limonene, linalool and other terpene constituents oxidise.

Phototoxicity

Phototoxicity may apply where the grapefruit component is:

- Cold expressed
- Mechanically expressed
- Not furocoumarin reduced
- Not adequately distilled to remove non-volatile phototoxic compounds



The risk may be lower where the grapefruit fraction is fully distilled or certified furocoumarin reduced.

Final phototoxicity assessment requires:

- Grapefruit extraction method
- Furocoumarin analysis
- Batch-specific bergapten or total furocoumarin data
- Intended finished-product category
- Final concentration on skin

Germ-Cell Mutagenicity

No complete-mixture classification is assigned based on available representative information.

Carcinogenicity

No complete-mixture classification is assigned based on available representative information.

Reproductive Toxicity

No complete-mixture classification is assigned.

Specific Target Organ Toxicity—Single Exposure

High vapour exposure may cause:

- Headache
- Dizziness
- Nausea
- Respiratory discomfort

Specific Target Organ Toxicity—Repeated Exposure

No reliable complete-mixture data are available.

Likely Routes of Exposure

- Skin contact
- Eye contact
- Inhalation
- Accidental ingestion

SECTION 12: ECOLOGICAL INFORMATION

Ecotoxicity



The product is conservatively classified as very toxic to aquatic life with long-lasting effects.

Persistence and Degradability

Some naturally occurring constituents may be biodegradable, while others may persist under environmental conditions.

No complete-mixture test data are available.

Bioaccumulative Potential

Hydrophobic terpene and sesquiterpene constituents may have bioaccumulative potential.

Mobility in Soil

Low water solubility may result in adsorption to soil and sediment.

Volatile constituents may partially evaporate from exposed surfaces.

PBT and vPvB Assessment

The complete natural complex substance has not been fully assessed.

Other Adverse Effects

- May form a surface film on water.
- May harm aquatic organisms.
- Avoid uncontrolled environmental release.

SECTION 13: DISPOSAL CONSIDERATIONS

Product Disposal

Dispose of through an authorised chemical-waste contractor.

Do not discharge into:

- Drains
- Sewers
- Soil
- Surface water
- Groundwater

Contaminated Packaging

- Empty containers may retain flammable vapours and hazardous residues.
- Do not reuse uncleaned containers.



- Do not cut, weld, puncture or burn contaminated containers.
- Dispose of or recycle according to applicable regulations.

Waste Treatment

Controlled incineration by an authorised facility may be appropriate where permitted.

SECTION 14: TRANSPORT INFORMATION

The final transport classification must be based on the batch flash point, environmental classification, package size and applicable dangerous-goods rules.

Representative Transport Classification

Transport Parameter	Representative Information
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UN Number	UN 1169 or UN 1197 may apply depending on jurisdiction and product identity
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Proper Shipping Name	Extracts, aromatic, liquid or Extracts, flavouring, liquid
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Transport Hazard Class	3
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Packing Group	III, subject to flash-point confirmation
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Environmental Hazard	May apply
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Marine Pollutant	May apply due to aquatic toxicity
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Special Precautions	Keep sealed, upright and protected from heat
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Bulk Transport	Not intended without specialist assessment
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SECTION 15: REGULATORY INFORMATION

Applicable Regulatory Frameworks

The product should be assessed under applicable requirements, including:

- Regulation (EC) No. 1907/2006 concerning REACH
- Regulation (EC) No. 1272/2008 concerning classification, labelling and packaging
- Regulation (EU) 2020/878 concerning safety-data-sheet requirements
- Regulation (EC) No. 1223/2009 concerning cosmetic products
- Regulation (EU) 2023/1545 concerning fragrance-allergen labelling
- Applicable IFRA Standards
- Applicable UAE occupational-safety and chemical requirements
- Applicable transport regulations

Representative Ingredient Identifiers

Ingredient	Botanical Name	Representative Identifier
Grapefruit Peel Oil	<i>Citrus × paradisi</i>	CAS 8016-20-4
Atlas Cedarwood Oil	<i>Cedrus atlantica</i>	CAS 8023-85-6
Virginian Cedarwood Oil	<i>Juniperus virginiana</i>	CAS 8000-27-9



Chinese Cedarwood Oil *Cupressus funebris* CAS 85085-29-6

Only the identifier corresponding to the actual cedarwood species should be used.

Cosmetic and Perfumery Use

Use in cosmetic or fragranced products requires:

- IFRA conformity assessment
- Phototoxicity assessment
- Quantitative fragrance-allergen assessment
- Finished-product safety evaluation
- Correct ingredient labelling
- Compliance with regional restrictions

Phototoxicity and IFRA

Expressed grapefruit oil is addressed by IFRA in relation to phototoxic effects. The exact restriction applicable to the co-distilled material depends on:

- Whether the grapefruit oil is expressed or distilled
- Furocoumarin concentration
- Co-distillate composition
- Intended product category
- Finished-product use level

Chemical Safety Assessment

No chemical safety assessment has been completed for the specific co-distilled product.

SECTION 16: OTHER INFORMATION

Olfactive Description

Co-distilled Grapefruit & Cedarwood Oil provides:

- Fresh grapefruit peel
- Sparkling citrus
- Mild bitter zest
- Dry cedarwood
- Pencil-shaving nuances
- Soft smoky facets
- Clean woody warmth
- Elegant aromatic diffusion

Recommended Shelf Life



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

Hazard Statement Text

- 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.

BATCH VERIFICATION REQUIREMENTS

Before formal commercial or regulatory issue, confirm:

- Exact grapefruit variety
- Grapefruit extraction method
- Expressed, distilled or furocoumarin-reduced status
- Furocoumarin and bergapten concentration
- Exact cedarwood botanical species
- Ratio used in co-distillation
- Country and region of origin
- Batch-specific GC-MS profile
- Relative density
- Refractive index
- Optical rotation
- Flash point
- Peroxide value
- Quantitative EU fragrance allergens
- Final GHS classification
- Final transport classification
- IFRA conformity

DISCLAIMER

This Material Safety Data Sheet is a representative professional template prepared for Co-distilled Grapefruit & Cedarwood Oil.

It is not evidence that a specific batch has been physically, chemically or toxicologically tested by Aromology Trading LLC.

Because the product is a natural co-distilled material, its composition and classification may vary according to:

- Grapefruit variety and extraction method
- Furocoumarin content



- Cedarwood botanical species
- Botanical ratio
- Geographic origin
- Crop and processing conditions
- Storage and oxidation history

Before formal issue, this document must be verified against:

- Original manufacturer's SDS
- Batch-specific Certificate of Analysis
- GC-MS composition
- Flash-point test
- Furocoumarin or phototoxicity data
- Quantitative allergen declaration
- Toxicological and ecological information
- Current IFRA Standards
- Applicable transport requirements

Aromology Trading LLC, the manufacturer, distributor and finished-product producer remain responsible for correct classification, safe handling, workplace risk assessment, transport compliance, IFRA conformity and finished-product safety.

Authorised By:

Fozia Khot
Director