



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

Product Name: Clove Bud Essential Oil CO₂

Botanical Name: *Syzygium aromaticum* (L.) Merr. & L.M.Perry

INCI Name: Syzygium Aromaticum (Clove) Bud Extract

CAS Number: 8000-34-8

EC Number: 284-638-7

Product Type: Natural CO₂ Extract

Plant Part: Flower Buds

Extraction Method: Supercritical Carbon Dioxide (CO₂) Extraction

Origin: Indonesia

Grade: Premium Perfumery Grade

Recommended Use: Professional perfumery, cosmetic and fragrance raw material.

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 – HAZARD IDENTIFICATION

GHS Classification

- Acute Toxicity (Oral) – Category 4
- Skin Irritation – Category 2
- Skin Sensitisation – Category 1
- Serious Eye Damage – Category 1
- Aspiration Hazard – Category 1
- Hazardous to the Aquatic Environment (Chronic) – Category 2

Signal Word



Danger

Hazard Statements

- H302 Harmful if swallowed.
- H304 May be fatal if swallowed and enters airways.
- H315 Causes skin irritation.
- H317 May cause an allergic skin reaction.
- H318 Causes serious eye damage.
- H411 Toxic to aquatic life with long lasting effects.

Precautionary Statements

- P261 Avoid breathing vapours.
- P264 Wash thoroughly after handling.
- P273 Avoid release to the environment.
- P280 Wear protective gloves, protective clothing and eye/face protection.
- P301+P310 IF SWALLOWED: Immediately call a POISON CENTRE or physician.
- P331 Do not induce vomiting.
- P302+P352 IF ON SKIN: Wash thoroughly with soap and water.
- P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes.
- P310 Immediately seek medical attention.
- P391 Collect spillage.
- P501 Dispose of contents/container according to local regulations.

SECTION 3 – COMPOSITION / INFORMATION ON INGREDIENTS

Component	Information
Product	Clove Bud Essential Oil CO ₂
Botanical Name	<i>Syzygium aromaticum</i> (L.) Merr. & L.M.Perry
INCI Name	Syzygium Aromaticum (Clove) Bud Extract
CAS Number	8000-34-8
EC Number	284-638-7
Purity	100% Natural CO ₂ Extract

Typical Naturally Occurring Constituents

- Eugenol
- Eugenyl Acetate
- β -Caryophyllene
- α -Humulene



- Caryophyllene Oxide
 - Methyl Salicylate (Trace)
 - Vanillin (Trace)
 - Acetyl Eugenol
 - Sesquiterpenes
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SECTION 4 – FIRST AID MEASURES

Inhalation: Remove exposed person to fresh air. Seek medical attention if symptoms persist.

Skin Contact: Remove contaminated clothing immediately. Wash thoroughly with soap and water. Obtain medical attention if irritation or sensitisation occurs.

Eye Contact: Flush immediately with water for at least 15 minutes. Seek immediate medical attention.

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

SECTION 5 – FIRE FIGHTING MEASURES

Suitable Extinguishing Media

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

Hazardous Combustion Products

Carbon monoxide, carbon dioxide and irritating organic vapours.

SECTION 6 – ACCIDENTAL RELEASE MEASURES

Wear suitable personal protective equipment.

Prevent release into drains and waterways.



Absorb with inert material and place into suitable disposal containers.

SECTION 7 – HANDLING AND STORAGE

Use only in well-ventilated areas.

Avoid contact with skin and eyes.

Store tightly closed in a cool, dry place away from direct sunlight, heat and oxidising agents.

Recommended Storage Temperature: 5–20 °C

SECTION 8 – EXPOSURE CONTROLS / PERSONAL PROTECTION

- Chemical safety goggles or face shield
 - Nitrile gloves
 - Protective clothing
 - Local exhaust ventilation
 - Organic vapour respirator where ventilation is inadequate
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SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

Property	Specification
Appearance	Clear to slightly viscous liquid
Colour	Pale Yellow to Amber
Odour	Rich spicy clove, warm, sweet, woody
Relative Density (20 °C)	1.035–1.065
Refractive Index (20 °C)	1.530–1.540
Flash Point	>100 °C
Solubility in Water	Insoluble
Solubility	Soluble in ethanol and perfumery solvents

SECTION 10 – STABILITY AND REACTIVITY

Stable under recommended storage conditions.



Avoid:

- Strong oxidising agents
- Heat
- Open flames
- Direct sunlight
- Prolonged exposure to air

Hazardous decomposition products include carbon monoxide and carbon dioxide.

SECTION 11 – TOXICOLOGICAL INFORMATION

Harmful if swallowed.

May be fatal if swallowed and enters airways.

Causes skin irritation.

May cause allergic skin reactions.

Causes serious eye damage.

Contains naturally high concentrations of eugenol, a recognised skin sensitiser.

SECTION 12 – ECOLOGICAL INFORMATION

Toxic to aquatic organisms with long lasting effects.

Avoid uncontrolled release into the environment.

SECTION 13 – DISPOSAL CONSIDERATIONS

Dispose of contents and packaging through an authorised waste contractor in accordance with local regulations.

SECTION 14 – TRANSPORT INFORMATION



Regulation	Status
UN Number	UN3082
Proper Shipping Name	Environmentally Hazardous Substance, Liquid, N.O.S. (Clove Bud CO ₂ Extract)
ADR/RID	Class 9
IMDG	Class 9
IATA	Class 9
Packing Group	III

SECTION 15 – REGULATORY INFORMATION

Prepared in accordance with:

- GHS Revision 9
 - OSHA Hazard Communication Standard (29 CFR 1910.1200)
 - Regulation (EC) No. 1907/2006 (REACH)
 - Regulation (EU) 2020/878
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SECTION 16 – OTHER INFORMATION

Clove Bud Essential Oil CO₂ is produced by supercritical carbon dioxide extraction of the dried flower buds of *Syzygium aromaticum*. Compared with steam-distilled clove bud oil, the CO₂ extract provides a richer, fuller and more faithful representation of the natural spice, preserving delicate aromatic constituents while maintaining a high concentration of eugenol. It is widely used in fine fragrance, oriental accords, carnation accords, spicy compositions and premium flavour applications where exceptional depth and authenticity are desired.

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