SAFETY DATA SHEET

In accordance with UN GHS latest edition

Product: CLOVE BUD OIL F20533

Version: 2

Section 1. Identification of the substance or the mixture and of the supplier

1.1 Product Identifier

Product identifier: CLOVE BUD OIL F20533(Contains:Eugenol, Eugenyl acetate, beta-Caryophyllene)

Other identifiers: None

1.2 Relevant identified uses of the substance of mixture and uses advised against

Product uses: Fragrances

1.3 Details of the supplier of the safety data sheet

Company name: Aromatic Fragrances International

Company address: 85 Wansley Drive SE
Cartersville, GA 30121
USA

Contact: Regulatory Affairs

E-Mail address: regulatory@afi-usa.com

Company phone: 770-334-3906

1.4 Emergency telephone number

Emergency phone: +1 888 360 3639

Section 2. Hazards identification

2.1 Classification of the substance or mixture

Class and category of danger: Acute Toxicity - Oral Category 5
Skin Corrosion / Irritation Category 3
Eye Damage / Irritation Category 2
Sensitization - Skin Category 1
Hazardous to the Aquatic Environment - Acute Hazard Category 2
H303, May be harmful if swallowed.
H316, Causes mild skin irritation.
H319, Causes serious eye irritation.
H317, May cause an allergic skin reaction.
H401, Toxic to aquatic life.

2.2 Label elements

Signal word: Warning

Hazard statements: H303, May be harmful if swallowed.
H316, Causes mild skin irritation.
H319, Causes serious eye irritation.
H317, May cause an allergic skin reaction.
H401, Toxic to aquatic life.

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Precautionary statements:

P264, Wash hands and other contacted skin thoroughly after handling.
P273, Avoid release to the environment.
P280, Wear protective gloves/eye protection/face protection.
P261, Avoid breathing vapour or dust.
P272, Contaminated work clothing should not be allowed out of the workplace.
P305/351/338, IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P302/352, IF ON SKIN: Wash with plenty of soap and water.
P312, Call a POISON CENTRE or doctor/physician if you feel unwell.
P337/313, If eye irritation persists: Get medical advice/attention.
P333/313, If skin irritation or rash occurs: Get medical advice/attention.
P363, Wash contaminated clothing before reuse.
P501, Dispose of contents/container to approved disposal site, in accordance with local regulations.

Pictograms:

2.3 Other hazards

Other hazards:

Hydrocarbon Concentration %: 7.2000%
Substance does not meet the criteria for PBT or vPvB according to Regulation (EC) No 17 1207/2006, Annex XIII.

Section 3. Composition / information on ingredients

3.2 Mixtures

Contains:

Name	CAS	%	GHS Classification
Eugenol	97-53-0	50-100%	Acute Tox. 5-Skin Irrit. 3-Eye Irrit. 2A-Skin Sens. 1B-Aquatic Acute 2;H303-H316-H319-H317-H401
Eugenyl acetate	93-28-7	5-<10%	Acute Tox. 4-Skin Sens. 1B-Aquatic Acute 2;H302-H317-H401
beta-Caryophyllene	87-44-5	5-<10%	Skin Sens. 1B-Asp. Tox 1;H304-H317
Eugenyl methyl ether	93-15-2	0.1-<1%	Acute Tox. 4-Muta. 2-Carc. 2-Aquatic Acute 2;H302-H341-H351-H401
Methyl salicylate	119-36-8	0.1-<1%	Acute Tox. 4-Eye Dam. 1-Skin Sens. 1B-Repr. 2-Aquatic Acute 3-Aquatic Chronic 3;H302-H318-H317-H361-H412
Linalool	78-70-6	0.1-<1%	Flam. Liq. 4-Acute Tox. 5-Skin Irrit. 2-Eye Irrit. 2A-Skin Sens. 1B-Aquatic Acute 3;H227-H303-H315-H319-H317-H402

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Substances with workplace exposure limits, not listed above:

Not Applicable

Section 4. First-aid measures

4.1 Description of first aid measures

Inhalation: Remove from exposure site to fresh air, keep at rest, and obtain medical attention.

Eye exposure: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Skin exposure: IF ON SKIN: Wash with plenty of soap and water.

Ingestion: Rinse mouth with water and obtain medical attention.

4.2 Most important symptoms and effects, both acute and delayed

May be harmful if swallowed.

Causes mild skin irritation.

Causes serious eye irritation.

May cause an allergic skin reaction.

4.3 Indication of any immediate medical attention and special treatment needed

None expected, see Section 4.1 for further information.

Section 5: Firefighting measures

5.1 Extinguishing media

Suitable media: Carbon dioxide, Dry chemical, Foam.

5.2 Special hazards arising from the substance or mixture

In case of fire, may be liberated: Carbon monoxide, Unidentified organic compounds.

5.3 Advice for fire fighters:

In case of insufficient ventilation, wear suitable respiratory equipment.

Section 6. Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures:

Avoid inhalation. Avoid contact with skin and eyes. See protective measures under Section 7 and 8.

6.2 Environmental precautions:

Keep away from drains, surface and ground water, and soil.

6.3 Methods and material for containment and cleaning up:

Remove ignition sources. Provide adequate ventilation. Avoid excessive inhalation of vapours. Contain spillage immediately by use of sand or inert powder. Dispose of according to local regulations.

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6.4 Reference to other sections:

Also refer to sections 8 and 13.

Section 7. Handling and storage

7.1 Precautions for safe handling:

Keep away from heat, sparks, open flames and hot surfaces. - No smoking. Use personal protective equipment as required. Use in accordance with good manufacturing and industrial hygiene practices. Use in areas with adequate ventilation Do not eat, drink or smoke when using this product.

7.2 Conditions for safe storage, including any incompatibilities:

Store in a well-ventilated place. Keep container tightly closed. Keep cool. Ground/bond container and receiving equipment. Use explosion-proof electrical, ventilating and lighting equipment. Use only non-sparking tools. Take precautionary measures against static discharge.

7.3 Specific end use(s):

Fragrances: Use in accordance with good manufacturing and industrial hygiene practices.

Section 8. Exposure controls/personal protection

8.1 Control parameters

Workplace exposure limits: Not Applicable

8.2 Exposure Controls

Eye / Skin Protection

Wear protective gloves/eye protection/face protection

Respiratory Protection

Under normal conditions of use and where adequate ventilation is available to prevent build up of excessive vapour, this material should not require special engineering controls. However, in conditions of high or prolonged use, or high temperature or other conditions which increase exposure, the following engineering controls can be used to minimise exposure to personnel: a) Increase ventilation of the area with local exhaust ventilation. b) Personnel can use an approved, appropriately fitted respirator with organic vapour cartridge or canisters and particulate filters. c) Use closed systems for transferring and processing this material.

Also refer to Sections 2 and 7.

Section 9. Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance:	Free flowing liquid without sediment
Odour:	Characteristic
Odour threshold:	Not determined
Melting point / freezing point:	Not determined

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Boiling point or initial boiling point and boiling range:	Not determined
Flammability:	Not determined
Lower and upper explosion limit:	Not determined
Flash point:	> 93 °C
Auto-ignition temperature:	Not determined
Decomposition temperature:	Not relevant
pH:	Not determined
Kinematic viscosity:	Not determined
Solubility:	Not determined
Partition coefficient: n-octanol/water (log value):	Not determined
Vapour pressure:	Not determined
Density and/or relative density:	1.0460 - 1.0760
Relative vapour density:	Not determined
Particle characteristics:	Not determined

9.2 Other information:

Flash Point (Fahrenheit):	> 200 °F
Refractive Index @ 20C:	1.5312 - 1.5412
Calculated VOC:	0.00

Section 10. Stability and reactivity

10.1 Reactivity:

Presents no significant reactivity hazard, by itself or in contact with water.

10.2 Chemical stability:

Good stability under normal storage conditions.

10.3 Possibility of hazardous reactions:

Not expected under normal conditions of use.

10.4 Conditions to avoid:

Avoid extreme heat.

10.5 Incompatible materials:

Avoid contact with strong acids, alkalis or oxidising agents.

10.6 Hazardous decomposition products:

Not expected.

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Section 11. Toxicological information

11.1 Information on toxicological effects

This mixture has not been tested as a whole for health effects. The health effects have been calculated using the methods outlined in UN GHS.

Acute Toxicity:	Acute Toxicity - Oral Category 5
Acute Toxicity Oral	2669
Acute Toxicity Dermal	Not Applicable
Acute Toxicity Inhalation	Not Available
Skin corrosion/irritation:	Skin Corrosion / Irritation Category 3
Serious eye damage/irritation:	Eye Damage / Irritation Category 2
Respiratory or skin sensitisation:	Sensitization - Skin Category 1
Germ cell mutagenicity:	Based on available data the classification criteria are not met.
Carcinogenicity:	Based on available data the classification criteria are not met.
Reproductive toxicity:	Based on available data the classification criteria are not met.
STOT-single exposure:	Based on available data the classification criteria are not met.
STOT-repeated exposure:	Based on available data the classification criteria are not met.
Aspiration hazard:	Based on available data the classification criteria are not met.

Information about hazardous ingredients in the mixture

Ingredient	CAS	LD50/ATE Oral (mg/kg)	LD50/ATE Dermal (mg/kg)	LC50/ATE Inhalation	LC50 Route
Eugenol	97-53-0	2500			
Eugenyl acetate	93-28-7	1670			

Refer to Sections 2 and 3 for additional information.

Section 12. Ecological information

12.1 Toxicity:	Not available
12.2 Persistence and degradability:	Not available
12.3 Bioaccumulative potential:	Not available
12.4 Mobility in soil:	Not available
12.5 Other adverse effects:	Not available

Section 13. Disposal considerations

13.1 Waste treatment methods:

Dispose of in accordance with local regulations. Avoid disposing into drainage systems and into the environment. Empty containers should be taken to an approved waste handling site for recycling or disposal.

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Section 14. Transport information

	14.1 UN number:	14.2 UN Proper Shipping Name:	14.3 Transport hazard class (es):	Sub Risk:	14.4 Packing Group:
UN Model Regulations	Not classified	-	-	-	-
IMDG	Not classified	-	-	-	-
ADR,RID,ADN	Not classified	-	-	-	-
ICAO TI	Not classified	-	-	-	-

14.5 Environmental hazards: Not environmentally hazardous for transport

14.6 Special precautions for user: None additional

14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code:

Not classified

Section 15. Regulatory information

Essential Oil Components:

Name	CAS	%
Clove bud oil	84961-50-2, 8000-34-8	

Naturally-Occuring Materials exempt from Prop65:

Name	CAS	%
Eugenyl methyl ether	93-15-2	

Section 16. Other information

Concentration % Limits: SCI 3=12.05% EDI 2A=12.05% SS 1=1.22% EH A2=27.84% EH A3=2.78%

Total Fractional Values: SCI 3=8.30 EDI 2A=8.30 SS 1=82.00 EH A2=3.59 EH A3=35.92

Key to revisions:

2.1 Classification of the substance or mixture
Hazardous Ingredients disclosed in a GHS Safety Data Sheet with banded concentrations
Information about hazardous ingredients in the mixture
Ingredients with an Occupational Exposure Limit disclosed on a GHS Safety Data Sheet Banded values
SECTION 3: Composition/information on ingredients

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Key to abbreviations:

Abbreviation	Meaning
Acute Tox. 4	Acute Toxicity - Oral Category 4
Acute Tox. 5	Acute Toxicity - Oral Category 5
Aquatic Acute 2	Hazardous to the Aquatic Environment - Acute Hazard Category 2
Aquatic Acute 3	Hazardous to the Aquatic Environment - Acute Hazard Category 3
Aquatic Chronic 3	Hazardous to the Aquatic Environment - Long-term Hazard Category 3
Asp. Tox 1	Aspiration Hazard Category 1
Carc. 2	Carcinogenicity Category 2
Eye Dam. 1	Eye Damage / Irritation Category 1
Eye Irrit. 2A	Eye Damage / Irritation Category 2A
Flam. Liq. 4	Flammable Liquid, Hazard Category 4
H227	Combustible liquid.
H302	Harmful if swallowed.
H303	May be harmful if swallowed.
H304	May be fatal if swallowed and enters airways.
H315	Causes skin irritation.
H316	Causes mild skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H341	Suspected of causing genetic defects (exposure route).
H351	Suspected of causing cancer (exposure route).
H361	Suspected of damaging fertility or the unborn child (exposure route).
H401	Toxic to aquatic life.
H402	Harmful to aquatic life.
H412	Harmful to aquatic life with long lasting effects.
Muta. 2	Germ Cell Mutagenicity Category 2
P202	Do not handle until all safety precautions have been read and understood.
P210	Keep away from heat, sparks, open flames and hot surfaces. - No smoking.
P261	Avoid breathing vapour or dust.
P264	Wash hands and other contacted skin thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P272	Contaminated work clothing should not be allowed out of the workplace.
P273	Avoid release to the environment.
P280	Wear protective gloves/eye protection/face protection.
P281	Use personal protective equipment as required.
P301/310	IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
P301/312	IF SWALLOWED: call a POISON CENTER or doctor/physician if you feel unwell.
P302/352	IF ON SKIN: Wash with plenty of soap and water.

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P305/351/338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308/313	IF exposed or concerned: Get medical advice/attention.
P310	Immediately call a POISON CENTER or doctor/physician.
P312	Call a POISON CENTRE or doctor/physician if you feel unwell.
P330	Rinse mouth.
P331	Do not induce vomiting.
P333/313	If skin irritation or rash occurs: Get medical advice/attention.
P337/313	If eye irritation persists: Get medical advice/attention.
P362	Take off contaminated clothing and wash before reuse.
P363	Wash contaminated clothing before reuse.
P370/378	In case of fire: Use carbon dioxide, dry chemical, foam for extinction.
P403/235	Store in a well-ventilated place. Keep cool.
P405	Store locked up.
P501	Dispose of contents/container to approved disposal site, in accordance with local regulations.
Repr. 2	Toxic to Reproduction Category 2
Skin Irrit. 2	Skin Corrosion / Irritation Category 2
Skin Irrit. 3	Skin Corrosion / Irritation Category 3
Skin Sens. 1B	Sensitization - Skin Category 1B

The information in this safety data sheet is to the best of our knowledge true and accurate but all data, instructions, recommendations and/or suggestions are made without guarantee.