

MATERIAL SAFETY DATA SHEET
ACCORDING TO EC LEGISLATION 91/155/E EC

Date created: August 2002

Date revised: June 2005

1. Identification:

Commercial name: *Clove Bud essential oil.*

Botanical Nomenclature: *Eugenia caryophyllus.*

INCI name: *Eugenia caryophyllus.*

CAS number: 8000-34-8.

EINECS CAS number: 84961-50-2

EEC Number: 284-638-7

2. Composition:

Main components: *Eugenol, Eugenyl acetate.*

Additives (e.g. carriers, preservatives, antioxidants): *Nil.*

3. Potential Health Hazards:

Inhalation: *None identified.*

Skin: *Concentrated liquid and vapours irritating to skin by prolonged exposure.*

Eyes: *Irritating to eyes with possible damage.*

Ingestion: *Harmful if swallowed.*

4. First aid:

Inhalation: *If discomfort is felt, remove person to a well-ventilated area with plenty of fresh air.*

Skin: *Remove contaminated clothing. Wash affected area with plenty of soap and water.*

Eyes: *Flush immediately with plenty of cool water for 10 to 20 minutes. Seek medical advice from a Medical Doctor.*

Ingestion: *Seek immediate medical care.*

5. In case of fire:

Extinguishing Media: *Foam, Carbon dioxide.*

Do not use: *Water.*

Special precautions: *Wear breathing apparatus as toxic vapours may be released during fire.*

6. Spill and Leak Procedure:

Individual precautions: *Eliminate sources of ignition. Keep area well ventilated and isolate the spill.*

Environmental protection: *Prevent the liquid from entering the drains and sewers.*

Cleaning methods: *Soak up the spill using inert absorbents. For large spills use pumps.*

7. Handling and storage:

Store in a cool, dry and dark place in suitable containers (aluminium cans or lacquer lined steel drums).

Handle in a well-ventilated area.

Keep away from sources of heat and ignition.

8. Personal Protection / Exposure control:

Respiratory protection: *Wear breathing apparatus when working in an area of high vapour concentration.*

Skin protection: *Use protective gloves. Wear protective clothing when possibility exists of contact.*

Eye protection: *Goggles should be worn.*

General precautions: *Use good industrial hygiene practise.*

9. Physiochemical properties:

Appearance:	<i>Brownish yellow liquid</i>
Odour:	<i>Typical, warm, sweet and spicy</i>
pH:	<i>Neutral</i>
Boiling point:	<i>Not available</i>
Flash point:	<i>>100°</i>
Autoignition Temperature:	<i>Not available</i>
Explosion Limits:	<i>Not available</i>
Vapour pressure (25°C):	<i>Not available</i>
Vapour Density:	<i>>1 (air=1)</i>
Specific Gravity (20°C):	<i>1.041 to 1.054</i>
Optical Rotation (20°C):	<i>0 to -15°</i>
Refractive Index (20°C):	<i>1.528 to 1.537</i>
Solubility in water (20°):	<i>Negligible</i>
Partition Coefficient log P o/w:	<i>Not available</i>
Evaporation rate:	<i><1 (Butyl Acetate=1)</i>

10. Stability and Reactivity:

Chemical Stability: *Stable.*

Conditions to avoid: *Normally stable. Not reactive with water.*

Hazardous Decomposition Products: *Not available.*

11. Sensitisers:

Eugenol 92%, Isoeugenol 0.5%, total 92.5%

12. Toxicological Information:

According to RIFM- Monograph:

Acute Toxicity: *Oral LD₅₀: 2.6 g/kg in rats.*

Dermal LD₅₀: 5 g/kg in rabbits.

Irritation: *Tested without irritation at 2%.*

Sensitisation: *Tested without sensitisation at 5%.*

Phototoxicity: *No phototoxic reaction reported.*

13. Ecotoxicological information:

Fish Toxicity: LCO/EC₅₀: *Not available.*

Bacteriotocity: ECO/EC₅₀: *Not available.*

14. Disposal Method:

Check Federal, State and Local Regulations.

15. Transport Information:

Non-hazardous material transport in suitable containers.

16. Regulatory Information

The British Essential Oil Association Chip Regulations – 2002

<u>Hazard Symbols:</u>	Xn
<u>Risk Phrases:</u>	R65
<u>H/C %:</u>	15
<u>Safety Phrases:</u>	S62

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FOR AND ON BEHALF OF PHOENIX NATURAL PRODUCTS:

J.S. CHANA..... (MANAGING DIRECTOR)

DATE:.....