ADD: No.267 JiaHua Avenue, Jinggangshan Economic Development Zone, Ji'an City, Jiangxi, P.R.C Zip code:343100 Tel: 0796-8507999 FAX: 0796-8108396 Website: www.jxhairui.com

MATERIAL SAFETY DATA SHEET OF CLOVE OIL

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: Clove oil

Manufacture: Ji'an Hairui Natural Plant Co. Ltd.

Address: No.267 JiaHua Avenue, Jinggangshan Economic Development Zone, Ji'an

County, Ji'an City, Jiangxi, P.R.C

Post code: 343100

Fax: 86-0796-8108396

Tel: 86-0796-8507999

2. COMPOSITION/INGREDIENT INFORMATION

Ingredients: the dry buds of syzygium aromaticum

Hazardous Components: None

CAS #: 8000-34-8

3. HAZARDS IDENTIFICATION

Emergency overview

Routes of Entry

Eye Contact: May cause eye irritation.

Exposure Controls/Personal Protection Back to Contents

Skin Contact: May cause skin irritation

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Inhalation: May cause respiratory tract irritation

Ingestion: May cause irritation of the digestive tract

4. FIRST AID MEASURES

Eyes: Flush eyes with plenty of water for at least 15 minutes, occasionally lifting

the upper and lower eyelids. Get medical aid. Handling and Storage Back to

Contents

Skin: Flush skin with plenty of soap and water for at least 15 minutes while

removing contaminated clothing and shoes. Get medical aid if irritation

develops or persists.

Ingestion: If victim is conscious and alert, give 2-4 cupfuls of milk or water. Never give

anything by mouth to an unconscious person. Get medical aid.

Inhalation: Remove from exposure to fresh air immediately. Get medical aid if cough or

other symptoms appear

5. FIRE FIGHTING MEASURES

Wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. Extinguishing media: For small fires, use water spray, dry chemical, carbon dioxide or chemical foam.

6. ACCIDENTAL RELEASE MEASURES (STEPS FOR SPILLS)

Small Spill: Absorb spill with inert material, (e.g., dry sand or earth), then place into a chemical waste container.

Stability and Reactivity Back to Contents

7. HANDLING AND STORAGE

Handling:

Wash hands before eating. Use with adequate ventilation. Avoid contact with skin and eyes.

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Avoid ingestion and inhalation.

Storage: Stable under normal temperatures and pressures, storeroom temperature, ventilation, drying; fire; stored separatelyoxidizing agent

8. EXPOSURE CONTROL/PERSONAL PROTECTION

Engineering Controls: Use adequate ventilation to keep airborne concentrations low. Eyes: Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166. Skin: Wear appropriate protective gloves to prevent skin exposure. Clothing: Wear appropriate protective clothing to prevent skin exposure.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State: Liquid

Appearance: colorless to light yellow

Odor: none reported

pH: Not available.

Relative Density: 1.038—1.060.

Refractive Index: 1.527—1.535.

Optical Rotation: $-1^{\circ} - +2^{\circ}$

Solubility: Soluble in 70% of the ethanol.

Boiling Point: 250 deg C

Freezing/Melting Point: Not available.

Content: 85% of the eugenol.

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10. STABILITY AND REACTIVITY

Stability: Stable. Probably combustible.

Incompatibilities: Strong oxidizing agents.

Decomposition: Acrid smoke and fumes.

11. Toxicological Information

RTECS#:

CAS# 8000-34-8: GF6890000; GF6900000; GF6910000

LD50/LC50:

CAS# 8000-34-8:

Draize test, rabbit, skin: 500 mg/24H Severe;

Oral, rat: LD50 = 1370 mg/kg;

Oral, rat: L**D50** = 2650 mg/kg;

Oral, rat: L**D50** = 2020 mg/kg;

Skin, rabbit: LD50 = 1200 mg/kg;

Skin, rabbit: LD50 = 5 gm/kg;

Skin, rabbit: LD50 = >5 gm/kg;

12. ECOLOGICAL INFORMATION

Elimination information (persistence and degradability)

no data available

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Ecotoxicity effects

no data available

Further information on ecology

no data available

13. DISPOSAL CONSIDERATIONS

Waste Disposal Methods: Do not put into sewer lines. Dispose of according to local, state and federal regulations.

14. TRANSPORT INFORMATION

Maritime Transport: N/A Air Transport: N/A

Package: 180kg/Galvanized iron drum

15. REGULATORY INFORMATION

OSHA Hazards

Irritant

DSL Status

All components of this product are on the Canadian DSL list.

SARA 302 Components

SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 Components

SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the

threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

SARA 311/312 Hazards

Acute Health Hazard

Massachusetts Right To Know Components

No components are subject to the Massachusetts Right to Know Act.

Pennsylvania Right To Know Components

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Clove leaf oil

New Jersey Right To Know Components

Clove leaf oil CAS-No. 8000-34-8 Revision Date

CAS-No. 8000-34-8 Revision Date California Prop. 65 Components

This product does not contain any chemicals known to State of California to cause cancer, birth, or any other reproductive defects.

16. ADDITIONAL INFORMATION

This information is provided for documentation purposes only.

The complete range of conditions or methods of use are beyond our control therefore we do not assume any responsibility and expressly disclaim any liability for any use of this product. Information contained herein is believed to be true and accurate. However, all statements or suggestions are made without warranty, expressed or implied, regarding accuracy of the information, the hazards connected with the use of the material or the results to be obtained from the use thereof.

This safety sheet cannot cover all possible situations which the user may experience during processing.

Each aspect of your operation should be examined to determine if, or where, additional precautions may be necessary. All health and safety information contained in this bulletin should be provided to your employees or customers.