



## 1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

### 1.1. Product identifier

**Number** 1425  
**EC-No** 284-638-7  
**CAS-No** 8000-34-8  
**FEMA Numbers** 2325

**Manufacturer** Apex Flavors, Inc.  
 1371 Brass Mill Rd.  
 Suite A  
 Belcamp, MD 21017  
 (410) 565-6600

**Product name** CLOVE LEAF OIL - PURE, UNDILUTED, THERAPEUTIC & FOOD GRADE  
**Pure substance/mixture** Natural Complex Substance

### 1.2. Relevant identified uses of the substance or mixture and uses advised against

**Recommended Use** No information available

### 1.3. Details of the supplier of the safety data sheet

For further information, please contact:

**E-mail Address** cpisano@apexflavors.com

### 1.4. Emergency telephone number

**Emergency telephone** Chemtrec: 1-800-424-9300 for US/ 703-527-3887 outside US

## 2. HAZARDS IDENTIFICATION

### 2.1. Classification of the substance or mixture

Acute oral toxicity	Category 5
Serious eye damage/eye irritation	Category 2A
Acute aquatic toxicity	Category 2
Flammable liquids	Category 4

**Classification according to EU Directives 67/548/EEC or 1999/45/EC**  
 For the full text of the R-phrases mentioned in this Section, see Section 16

**Symbol(s)**  
 Xi - Irritant

**R-code(s)**  
 Xi;R36 - R43

**2.2. Label elements****Signal Word**

Warning

**Hazard Statements**

H303 - May be harmful if swallowed

H319 - Causes serious eye irritation

H401 - Toxic to aquatic life

H227 - Combustible liquid

**Precautionary Statements**

P403 + P235 - Store in a well-ventilated place. Keep cool

P370 + P378 - In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction

P210 - Keep away from heat/sparks/open flames/hot surfaces. - No smoking

P280 - Wear protective gloves/ eye protection/ face protection

**2.3. Other information****3. COMPOSITION/INFORMATION ON INGREDIENTS****3.1 Substances**

Chemical Name	EC-No	CAS-No	Alternate CAS #	Weight %	Classification according to Directive 67/548/EEC or 1999/45/EC	Classification according to Regulation (EC) No. 1272/2008 [CLP]	REACH Registration Number
EUGENOL	202-589-1	97-53-0		50-90%	XI; R36, XI; R43;	Aquatic Acute 2 (H401) Skin Sens. 1 (H317) Eye Irrit. 1 (H319) Skin Irrit. 3 (H316) Acute Tox. 5 (H303)	No data available

For the full text of the R-phrases mentioned in this Section, see Section 16

**4. FIRST AID MEASURES****4.1. Description of first aid measures****General advice**

If symptoms persist, call a physician

**Eye contact**

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. If symptoms persist, call a physician. Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician. Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Keep eye wide open while rinsing.

**Skin contact**

Wash off immediately with plenty of water for at least 15 minutes. If skin irritation persists, call a physician. Wash off immediately with soap and plenty of water. Immediate medical attention is not required. Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes.

---

<b>Ingestion</b>	Do NOT induce vomiting. Drink plenty of water. Immediate medical attention is not required. Rinse mouth. Clean mouth with water and drink afterwards plenty of water. Never give anything by mouth to an unconscious person. Call a physician.
<b>Inhalation</b>	Move to fresh air. If symptoms persist, call a physician. Immediate medical attention is not required. Move to fresh air in case of accidental inhalation of vapors.
<b>Self-protection of the first aider</b>	Use personal protective equipment

**4.2. Most important symptoms and effects, both acute and delayed****4.3. Indication of any immediate medical attention and special treatment needed**

**Note to physicians** May cause sensitization in susceptible persons Treat symptomatically

## 5. FIRE-FIGHTING MEASURES

**5.1. Extinguishing media****Suitable Extinguishing Media**

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment

**Extinguishing media which shall not be used for safety reasons**

No information available

**5.2. Special hazards arising from the substance or mixture****Special Hazard**

None

**5.3. Advice for firefighters****Special protective equipment for fire-fighters**

As in any fire, wear self-contained breathing apparatus and full protective gear

## 6. ACCIDENTAL RELEASE MEASURES

**6.1. Personal precautions, protective equipment and emergency procedures**

Use personal protective equipment. Avoid contact with eyes and skin. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.

See Section 12 for additional Ecological Information

**6.2. Environmental precautions**

Prevent entry into waterways, sewers, basements or confined areas. Do not flush into surface water or sanitary sewer system. Prevent further leakage or spillage if safe to do so. Prevent product from entering drains.

**6.3. Methods and material for containment and cleaning up**

Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust)

## 7. HANDLING AND STORAGE

**7.1. Precautions for safe handling**

Ensure adequate ventilation. Use personal protective equipment as required. Use only in area provided with appropriate exhaust ventilation. Do not breathe dust/fume/gas/mist/vapors/spray.

**7.2. Conditions for safe storage, including any incompatibilities**

Keep out of the reach of children. Keep container tightly closed. Keep containers tightly closed in a cool, well-ventilated place. Keep in properly labeled containers.

**7.3 Specific end use(s)**

Exposure scenario N/A

Other Guidelines N/A

**8. EXPOSURE CONTROLS/PERSONAL PROTECTION****8.1. Control parameters**

**Exposure limits** This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies

**Derived No Effect Level (DNEL)** No information available

**Predicted No Effect Concentration (PNEC)** No information available

**8.2. Exposure controls**

**Engineering Controls** Ensure adequate ventilation, especially in confined areas

**Personal protective equipment**

**Eye Protection** Tightly fitting safety goggles

**Hand Protection** Protective gloves

**Skin and body protection** Long sleeved clothing Apron Impervious gloves

**Respiratory protection** When workers are facing concentrations above the exposure limit they must use appropriate certified respirators

**General Hygiene Considerations** When using, do not eat, drink or smoke Wash contaminated clothing before reuse Provide regular cleaning of equipment, work area and clothing

**Environmental Exposure Controls** Do not allow material to contaminate ground water system

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### 9.1. Information on basic physical and chemical properties

<b>Physical state</b>	liquid	<b>Appearance</b>	clear
<b>Odor</b>	clove	<b>Color</b>	Colorless to pale yellow.

<u>Property</u>	<u>Values</u>	<u>Method</u>
pH		No information available
Melting/freezing point		No information available
Boiling point/boiling range		FCC Method
Flash Point	93 °C / 200 °F	Closed cup
Evaporation rate		FCC Method
Flammability (solid, gas)		No information available
Flammability Limits in Air		No information available
Upper flammability limit		
lower flammability limit		
Vapor pressure mm Hg 20°C		No information available
Vapor density		No information available
Relative density		No information available
Specific Gravity @ 25C	1.0360 - 1.0460	FCC Method
Specific Gravity @ 20C	1.039 - 1.049	FCC Method
Refractive Index	1.5310 - 1.5350	FCC Method
Water solubility		No information available
Partition coefficient: n-octanol/water		No information available
Autoignition temperature		No information available
Decomposition temperature		No information available
Viscosity, dynamic		No information available
<b>Explosive properties</b>	No information available	
<b>Oxidizing Properties</b>	No information available	

### 9.2. Other information

<b>Molecular Weight</b>	No information available
-------------------------	--------------------------

## 10. STABILITY AND REACTIVITY

### 10.1. Reactivity

### 10.2. Chemical stability

Stable under normal conditions

### 10.3. Possibility of hazardous reactions

### 10.4. Conditions to avoid

Heat, flames and sparks

### 10.5. Incompatible materials

No materials to be especially mentioned

### 10.6. Hazardous decomposition products

None under normal use conditions

## 11. TOXICOLOGICAL INFORMATION

### 11.1. Information on toxicological effects

**Acute toxicity****Inhalation** There is no data available for this product**Eye contact** There is no data available for this product**Skin contact** There is no data available for this product**Ingestion** There is no data available for this product**Acute toxicity** 15% of the mixture consists of ingredient(s) of unknown toxicity**The following values are calculated based on chapter 3.1 of the GHS document (Rev. 1, 2005):****Oral** 2,500.00 mg/kg

Chemical Name	Oral LD50	Dermal LD50	LC50 Inhalation
EUGENOL	1930 mg/kg ( Rat )		

**Skin corrosion/irritation** No information available  
**Eye damage/irritation** No information available  
**Sensitization** No information available  
**Germ Cell Mutagenicity** No information available  
**Carcinogenicity** No information available

**Specific target organ systemic toxicity (single exposure)** No information available**Specific target organ systemic toxicity (repeated exposure)** No information available**Target Organ Effects** No information available**Aspiration hazard** No information available

## 12. ECOLOGICAL INFORMATION

**12.1. Toxicity****Ecotoxicity effects** Contains no substances known to be hazardous to the environment or not degradable in waste water treatment plants**12.2. Persistence and degradability**

No information available

**12.3. Bioaccumulative potential**

No information available

**12.4. Mobility in soil**

No information available

**12.5. Results of PBT and vPvB assessment**

12.6. Other adverse effects**13. DISPOSAL CONSIDERATIONS**13.1. Waste treatment methods

<b>Waste from residues / unused products</b>	Dispose of in accordance with local regulations
<b>Contaminated packaging</b>	Empty containers should be taken to an approved waste handling site for recycling or disposal
<b>Other Information</b>	According to the European Waste Catalogue, Waste Codes are not product specific, but application specific Waste codes should be assigned by the user based on the application for which the product was used

**14. TRANSPORT INFORMATION**

<u>DOT</u>	Not regulated (If shipped in NON BULK packaging by ground transport)
<u>IMDG / IMO</u>	Not regulated
<u>ICAO/IATA</u>	Not regulated

**15. REGULATORY INFORMATION**15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture**WGK Classification****International Inventories**

**All of the components in the product are on the following Inventory lists:** No information available, United States of America (TSCA), Canada (DSL/NDSL), Europe (EINECS/ELINCS/NLP), Australia (AICS), Korea (ECL), China (IECSC), Japan (ENCS), Philippines (PICCS).

<b>TSCA</b>	Complies
<b>EINECS/ELINCS</b>	Complies
<b>DSL/NDSL</b>	Complies
<b>PICCS</b>	Complies
<b>ENCS</b>	Complies
<b>IECSC</b>	Complies
<b>AICS</b>	Complies
<b>KECL</b>	Complies

**Legend**

**TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory

**EINECS/ELINCS** - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances

**DSL/NDSL** - Canadian Domestic Substances List/Non-Domestic Substances List

**PICCS** - Philippines Inventory of Chemicals and Chemical Substances

**ENCS** - Japan Existing and New Chemical Substances

**IECSC** - China Inventory of Existing Chemical Substances

**AICS** - Australian Inventory of Chemical Substances

**KECL** - Korean Existing and Evaluated Chemical Substances

---

**15.2. Chemical safety assessment****16. OTHER INFORMATION****Full text of H-Statements referred to under sections 2 and 3**

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

**Revision Date** 01-Aug-2014  
**Revision Note** Not applicable.  
**Revision#** 1.03

**This material safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006.**

**WARNING/DISCLAIMER:**

Apex Flavors, Inc.'s products are sold exclusively for use in food and drink for human consumption. These products have not been tested, nor have they been deemed safe, for inhalation or use in electronic smoking devices, electronic nicotine delivery systems, and electronic cigarettes or similar devices (collectively "E-Cigarettes"). In supplying this product(s), Apex Flavors, Inc. instructs, and purchasing recipient confirms, that this product(s) will not be used in connection with the manufacture and distribution of E-Cigarettes or any component thereof. Recipients of our products that use them outside of their intended use of food or drink do so at their own risk and without warranty, either expressed or implied, from Apex Flavors, Inc. or its suppliers. The user assumes all liability for loss, injury, damage, or expense resulting from such uses.

**Disclaimer**

**The information provided on this SDS is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.**