

**Safety Data Sheet**

according to Regulation (EC) No 1907/2006

**Clove essential oil**

Revision date: 03.05.2021

Product code: 141060

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**SECTION 1: Identification of the substance/mixture and of the company/undertaking**

**1.1. Product identifier**

Clove essential oil

Substance name: Clove oil  
 CAS No: 8000-34-8  
 EC No: 284-638-7

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

**Use of the substance/mixture**

Manufacture of cosmetics

**Uses advised against**

Any non-intended use.

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

Company name: Satcotek GmbH  
 Street: Gotenstrasse 13  
 Place: D-20097 Hamburg  
 Telephone: +49(0)40-5303669711      Telefax: +49(0)40-5303669766  
 Internet: www.satcotek.com  
 Responsible Department: info@satcotek.com

**1.4. Emergency telephone number:**

Poison Information Center Mainz, Germany, Tel: +49(0)6131/19240

**SECTION 2: Hazards identification**

**2.1. Classification of the substance or mixture**

**Regulation (EC) No. 1272/2008**

Hazard categories:  
 Flammable liquid: Flam. Liq. 3  
 Aspiration hazard: Asp. Tox. 1  
 Serious eye damage/eye irritation: Eye Irrit. 2  
 Respiratory or skin sensitisation: Skin Sens. 1  
 Hazard Statements:  
 Flammable liquid and vapour.  
 May be fatal if swallowed and enters airways.  
 Causes serious eye irritation.  
 May cause an allergic skin reaction.

**2.2. Label elements**

**Regulation (EC) No. 1272/2008**

**Hazard components for labelling**

Clove oil

Signal word: Danger

**Pictograms:**



**Hazard statements**

H226 Flammable liquid and vapour.  
 H304 May be fatal if swallowed and enters airways.  
 H317 May cause an allergic skin reaction.

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H319 Causes serious eye irritation.

#### Precautionary statements

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

P280 Wear protective gloves.

P301+P310 IF SWALLOWED: Immediately call a POISON CENTER/doctor.

P331 Do NOT induce vomiting.

P370+P378 In case of fire: Use Carbon dioxide (CO<sub>2</sub>). Dry extinguishing powder. alcohol resistant foam. Water spray to extinguish.

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

#### 2.3. Other hazards

This substance does not meet the PBT/vPvB criteria of REACH, Annex XIII.

### SECTION 3: Composition/information on ingredients

#### 3.1. Substances

##### Hazardous components

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	GHS Classification			
8000-34-8	Clove oil			99 - <= 100 %
	284-638-7			
	Flam. Liq. 3, Eye Irrit. 2, Skin Sens. 1, Asp. Tox. 1; H226 H319 H317 H304			

Full text of H and EUH statements: see section 16.

##### Specific Conc. Limits, M-factors and ATE

CAS No	EC No	Chemical name	Quantity
	Specific Conc. Limits, M-factors and ATE		
8000-34-8	284-638-7	Clove oil	99 - <= 100 %
	oral: LD50 = >2000 mg/kg		

##### Further Information

Product does not contain listed SVHC substances > 0,1 % according to Regulation (EC) No. 1907/2006 Article 59 (REACH)

### SECTION 4: First aid measures

#### 4.1. Description of first aid measures

##### General information

In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible). Take off immediately all contaminated clothing.

##### After inhalation

Remove person to fresh air and keep comfortable for breathing. In case of respiratory tract irritation, consult a physician.

##### After contact with skin

Take off immediately all contaminated clothing. Wash with plenty of water. In case of skin irritation, seek medical treatment.

##### After contact with eyes

Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

##### After ingestion

Do NOT induce vomiting. Rinse mouth thoroughly with water. Let water be drunken in little sips (dilution

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effect). Observe risk of aspiration if vomiting occurs. Never give anything by mouth to an unconscious person or a person with cramps. When in doubt or if symptoms are observed, get medical advice.

Always assume that aspiration has occurred. Seek professional medical attention or send the casualty to a hospital. Do not wait for symptoms to develop.

#### **4.2. Most important symptoms and effects, both acute and delayed**

Inhalation can cause damage to the respiratory tract or lungs.

#### **4.3. Indication of any immediate medical attention and special treatment needed**

Treat symptomatically.

### SECTION 5: Firefighting measures

#### **5.1. Extinguishing media**

##### **Suitable extinguishing media**

Carbon dioxide (CO<sub>2</sub>). Dry extinguishing powder. alcohol resistant foam.  
In case of major fire and large quantities: Atomized water.

##### **Unsuitable extinguishing media**

High power water jet.

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

Can be released in case of fire: Gas/vapours, irritant. Carbon monoxide Carbon dioxide (CO<sub>2</sub>).

#### **5.3. Advice for firefighters**

In case of fire: Wear self-contained breathing apparatus. In case of fire and/or explosion do not breathe fumes.

#### **Additional information**

Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water. Use water spray jet to protect personnel and to cool endangered containers.

In case of major fire and large quantities: Evacuate area. Fight fire remotely due to the risk of explosion.

### SECTION 6: Accidental release measures

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

##### **General measures**

Remove all sources of ignition. Ventilate affected area.  
Do not breathe gas/vapour/aerosol. Avoid contact with skin, eyes and clothes.

##### **For non-emergency personnel**

Personal protection equipment: see section 8

##### **For emergency responders**

No special measures are necessary.

#### **6.2. Environmental precautions**

Do not allow to enter into surface water or drains. Cover drains. Prevent spread over a wide area (e.g. by containment or oil barriers). In case of gas escape or of entry into waterways, soil or drains, inform the responsible authorities.

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

##### **For containment**

Absorb with liquid-binding material (e.g. sand, diatomaceous earth, acid- or universal binding agents).  
Treat the recovered material as prescribed in the section on waste disposal.

##### **For cleaning up**

Clean contaminated objects and areas thoroughly observing environmental regulations.

##### **Other information**

Ventilate affected area.

#### **6.4. Reference to other sections**

Safe handling: see section 7

Disposal: see section 13

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**SECTION 7: Handling and storage**

**7.1. Precautions for safe handling**

**Advice on safe handling**

Provide adequate ventilation as well as local exhaustion at critical locations.  
Wear suitable protective clothing. (See section 8.)

**Advice on protection against fire and explosion**

Keep away from sources of ignition. - No smoking. Take precautionary measures against static discharges.  
Flammable vapours can accumulate in head space of closed systems. In use, may form flammable/explosive vapour-air mixture. Heating causes rise in pressure with risk of bursting.

**Further information on handling**

General protection and hygiene measures: See section 8.

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

**Requirements for storage rooms and vessels**

Keep container tightly closed in a cool, well-ventilated place. Protect against direct sunlight.  
Ensure adequate ventilation of the storage area.  
Make sure spills can be contained (e.g. sump pallets or kerbed areas).

**Hints on joint storage**

Do not store together with: Gas. Explosives. Flammable solids. Pyrophoric liquids and solids. Self-heating substances and mixtures. Substances and mixtures which, in contact with water, emit flammable gases. Oxidizing liquids. Oxidizing solids. ammonium nitrate. Self-reactive substances and mixtures. Organic peroxides. Non-combustible toxic substances. Radioactive substances. Infectious substances.

**Further information on storage conditions**

Keep the packing dry and well sealed to prevent contamination and absorption of humidity.  
Protect against: UV-radiation/sunlight. heat. Humidity frost.  
storage temperature: 15-25°C

**7.3. Specific end use(s)**

See section 1.

**SECTION 8: Exposure controls/personal protection**

**8.1. Control parameters**

**Additional advice on limit values**

To date, no national critical limit values exist.

**8.2. Exposure controls**



**Appropriate engineering controls**

Technical measures and the application of suitable work processes have priority over personal protection equipment.  
Provide adequate ventilation as well as local exhaustion at critical locations.

**Protective and hygiene measures**

The usual precautions for handling chemicals should be considered.  
Keep away from food, drink and animal feedingstuffs.  
Always close containers tightly after the removal of product. When using do not eat, drink, smoke, sniff. Wash hands before breaks and after work. Protect skin by using skin protective cream. Take off contaminated clothing.

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#### Eye/face protection

Wear safety glasses; chemical goggles (if splashing is possible). BS/EN 166

#### Hand protection

In case of prolonged or frequently repeated skin contact: Wear suitable gloves. (BS EN 374)

Suitable material: Butyl rubber.

Thickness of glove material: 0,5 mm

Breakthrough time  $\geq$  480 min. penetration time (maximum wearing period): ~ 120 min. (estimated)

In the case of wanting to use the gloves again, clean them before taking off and air them well. Before using check leak tightness / impermeability.

For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

#### Skin protection

Wear suitable protective clothing.

Minimum standard for preventive measures while handling with working materials are specified in the TRGS 500 (D).

#### Respiratory protection

With correct and proper use, and under normal conditions, breathing protection is not required.

Respiratory protection necessary at:

Generation/formation of aerosols

Exceeding exposure limit values

Insufficient ventilation

Suitable respiratory protective equipment: Combination filtering device (EN 14387) Type: A/P1-3

The filter class must be suitable for the maximum contaminant concentration

(gas/vapour/aerosol/particulates) that may arise when handling the product. If the concentration is exceeded, self-contained breathing apparatus must be used.

#### Environmental exposure controls

Do not allow uncontrolled discharge of product into the environment.

## SECTION 9: Physical and chemical properties

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

Physical state:	liquid.	
Colour:	not determined	
Odour:	characteristic	
pH-Value:		not determined

#### Changes in the physical state

Melting point:		not applicable
Boiling point or initial boiling point and boiling range:		not determined
Flash point:		>35-60 °C

#### Explosive properties

In use, may form flammable/explosive vapour-air mixture.

Lower explosion limits:		not determined
Upper explosion limits:		not determined
Auto-ignition temperature:		not determined
Decomposition temperature:		not determined

#### Oxidizing properties

none.

Vapour pressure: (at 20 °C)		not determined
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Density:	not determined
Water solubility:	not determined
<b>Solubility in other solvents</b>	
not determined	
Viscosity / dynamic: (at 40 °C)	not determined
Viscosity / kinematic: (at 20 °C)	not determined
Relative vapour density:	not determined
Evaporation rate:	not determined
Solvent separation test:	not determined
Solvent content:	not determined

#### 9.2. Other information

Solid content:	not determined
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### SECTION 10: Stability and reactivity

#### 10.1. Reactivity

No information available.

#### 10.2. Chemical stability

The mixture is chemically stable under recommended conditions of storage, use and temperature.

#### 10.3. Possibility of hazardous reactions

No hazardous reaction when handled and stored according to provisions.  
Refer to chapter 10.5.

#### 10.4. Conditions to avoid

Protect against: UV-radiation/sunlight. heat. moisture.  
In use may form flammable/explosive vapour-air mixture.  
Heating causes rise in pressure with risk of bursting.

#### 10.5. Incompatible materials

Materials to avoid: Oxidizing agents, strong. Reducing agents, strong. Strong acid. strong alkalis.

#### 10.6. Hazardous decomposition products

Does not decompose when used for intended uses.  
Can be released in case of fire: Gas/vapours, irritant. Carbon monoxide Carbon dioxide (CO<sub>2</sub>).

### SECTION 11: Toxicological information

#### 11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

##### **Toxicokinetics, metabolism and distribution**

No data available.

##### **Acute toxicity**

Based on available data, the classification criteria are not met.  
The product has not been tested.

CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
8000-34-8	Clove oil				
	oral	LD50 >2000 mg/kg	Rat		READ ACROSS (Eugenol)

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#### Irritation and corrosivity

Causes serious eye irritation.

Skin corrosion/irritation: Based on available data, the classification criteria are not met.

#### Sensitising effects

May cause an allergic skin reaction. (Clove oil)

#### Carcinogenic/mutagenic/toxic effects for reproduction

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

May be fatal if swallowed and enters airways.

#### Specific effects in experiment on an animal

No data available.

#### 11.2. Information on other hazards

##### Endocrine disrupting properties

No data available.

#### Further information

Solvent:

Symptoms: Depression of the central nervous system. Liver and kidney damage. drowsiness. vomiting.

Nausea. Dizziness. unconsciousness. Impaired consciousness. Intoxication. erythema (redness)

### SECTION 12: Ecological information

#### 12.1. Toxicity

The product has not been tested.

#### 12.2. Persistence and degradability

The product has not been tested.

#### 12.3. Bioaccumulative potential

The product has not been tested.

#### 12.4. Mobility in soil

No data available.

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

This substance does not meet the PBT/vPvB criteria of REACH, Annex XIII.

#### 12.6. Endocrine disrupting properties

No data available.

#### 12.7. Other adverse effects

No data available.

#### Further information

Do not allow to enter into surface water or drains.

### SECTION 13: Disposal considerations

#### 13.1. Waste treatment methods

##### Disposal recommendations

Dispose of waste according to applicable legislation. Consult the local waste disposal expert about waste disposal. Non-contaminated packages may be recycled. According to (EWC) European Waste Catalogue, allocation of waste identity numbers/waste descriptions must be carried out in a specific way for every industry and process.

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Control report for waste code/ waste marking according to (EWC) European Waste Catalogue:

**List of Wastes Code - residues/unused products**

160305 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; off-specification batches and unused products; organic wastes containing hazardous substances; hazardous waste

**List of Wastes Code - used product**

160305 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; off-specification batches and unused products; organic wastes containing hazardous substances; hazardous waste

**List of Wastes Code - contaminated packaging**

150110 WASTE PACKAGING; ABSORBENTS, WIPING CLOTHS, FILTER MATERIALS AND PROTECTIVE CLOTHING NOT OTHERWISE SPECIFIED; packaging (including separately collected municipal packaging waste); packaging containing residues of or contaminated by hazardous substances; hazardous waste

**Contaminated packaging**

Handle contaminated packages in the same way as the substance itself.

**SECTION 14: Transport information**

**Land transport (ADR/RID)**

**14.1. UN number:** UN 1169  
**14.2. UN proper shipping name:** EXTRACTS, AROMATIC, LIQUID  
**14.3. Transport hazard class(es):** 3  
**14.4. Packing group:** III  
 Hazard label: 3



Classification code: F1  
 Special Provisions: 601  
 Limited quantity: 5 L  
 Excepted quantity: E1  
 Transport category: 3  
 Hazard No: 30  
 Tunnel restriction code: D/E

**Inland waterways transport (ADN)**

**14.1. UN number:** UN 1169  
**14.2. UN proper shipping name:** EXTRACTS, AROMATIC, LIQUID  
**14.3. Transport hazard class(es):** 3  
**14.4. Packing group:** III  
 Hazard label: 3



Classification code: F1  
 Special Provisions: 601  
 Limited quantity: 5 L  
 Excepted quantity: E1

**Marine transport (IMDG)**

**14.1. UN number:** UN 1169  
**14.2. UN proper shipping name:** EXTRACTS, AROMATIC, LIQUID



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**14.3. Transport hazard class(es):** 3

**14.4. Packing group:** III

Hazard label: 3



Marine pollutant: NO  
 Special Provisions: 223, 955  
 Limited quantity: 5 L  
 Excepted quantity: E1  
 EmS: F-E, S-D

**Air transport (ICAO-TI/IATA-DGR)**

**14.1. UN number:** UN 1169

**14.2. UN proper shipping name:** EXTRACTS, AROMATIC, LIQUID

**14.3. Transport hazard class(es):** 3

**14.4. Packing group:** III

Hazard label: 3



Special Provisions: A3  
 Limited quantity Passenger: 10 L  
 Passenger LQ: Y344  
 Excepted quantity: E1  
 IATA-packing instructions - Passenger: 355  
 IATA-max. quantity - Passenger: 60 L  
 IATA-packing instructions - Cargo: 366  
 IATA-max. quantity - Cargo: 220 L

**14.5. Environmental hazards**

ENVIRONMENTALLY HAZARDOUS: No

**14.6. Special precautions for user**

See section 8.

**14.7. Maritime transport in bulk according to IMO instruments**

not relevant.

**SECTION 15: Regulatory information**

**15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture**

**EU regulatory information**

Restrictions on use (REACH, annex XVII):

Entry 3

2010/75/EU (VOC): not determined

2004/42/EC (VOC): not determined

Information according to 2012/18/EU (SEVESO III): P5c FLAMMABLE LIQUIDS

**Additional information**

Safety Data Sheet according to Regulation (EC) No. 1907/2006 (amended by Regulation (EU) No 2020/878)

This substance is hazardous in the sense of regulation (EC) No 1272/2008 (CLP).

REACH 1907/2006 Appendix XVII, No.: 3

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#### National regulatory information

Employment restrictions: Observe restrictions to employment for juveniles according to the 'juvenile work protection guideline' (94/33/EC).  
 Water hazard class (D): 2 - obviously hazardous to water

#### 15.2. Chemical safety assessment

For the following substances of this mixture a chemical safety assessment has been carried out:

### SECTION 16: Other information

#### Changes

Rev. 1.0; Initial release: 03.05.2021

#### Abbreviations and acronyms

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)  
 CAS: Chemical Abstracts Service  
 CLP: Classification, Labelling and Packaging of substances and mixtures  
 DNEL: Derived No Effect Level  
 d: day(s)  
 EINECS: European INventory of Existing Commercial chemical Substances  
 ELINCS: European List of Notified Chemical Substances  
 ECHA: European Chemicals Agency  
 EWC: European Waste Catalogue  
 IARC: INTERNATIONAL AGENCY FOR RESEARCH ON CANCER  
 IMDG: International Maritime Code for Dangerous Goods  
 IATA: International Air Transport Association  
 IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)  
 ICAO: International Civil Aviation Organization  
 ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO)  
 GHS: Globally Harmonized System of Classification and Labelling of Chemicals  
 GefStoffV: Gefahrstoffverordnung (Ordinance on Hazardous Substances, Germany)  
 h: hour  
 LOAEL: Lowest observed adverse effect level  
 LOAEC: Lowest observed adverse effect concentration  
 LC50: Lethal concentration, 50 percent  
 LD50: Lethal dose, 50 percent  
 NOAEL: No observed adverse effect level  
 NOAEC: No observed adverse effect concentration  
 NLP: No-Longer Polymers  
 N/A: not applicable  
 OECD: Organisation for Economic Co-operation and Development  
 PNEC: predicted no effect concentration  
 PBT: Persistent bioaccumulative toxic  
 RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail )  
 REACH: Registration, Evaluation, Authorisation of Chemicals  
 SVHC: substance of very high concern  
 TRGS: Technische Regeln für Gefahrstoffe  
 UN: United Nations  
 VOC: Volatile Organic Compounds

#### Relevant H and EUH statements (number and full text)

H226 Flammable liquid and vapour.  
 H304 May be fatal if swallowed and enters airways.  
 H317 May cause an allergic skin reaction.

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H319 Causes serious eye irritation.

**Further Information**

Classification according to Regulation (EC) No 1272/2008 [CLP] - Classification procedure:

Health hazards: Calculation method.

Environmental hazards: Calculation method.

Physical hazards: On basis of test data and / or calculated and / or estimated.

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material.