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

1.1. Product identifier

**Fennel CO2-se extract_065.001**

Further trade names

- Fenchel CO2-se Extrakt, Typ Nr. 065.001
- Fennel CO2-se extract, typ no. 065.001
- Fenouil extrait CO2-se, référence 065.001

CAS No: 79-92-5  
EC No: 201-234-8

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

**Use of the substance/mixture**

- In food industry
- In pharmaceutical and cosmetic products

1.3. Details of the supplier of the safety data sheet

- Company name: Flavex Natureextrakte GmbH
- Street: Nordstr. 7
- Place: D-66780 Rehlingen-Siersburg
- Telephone: +49 (0)6835/9195-0  
  Telefax: +49 (0)6835/919595  
  e-mail: info@flavex.com
- Contact person: Mr. N. Gref
- Internet: www.flavex.com
- Responsible Department: Poison information center Freiburg

1.4. Emergency telephone number:

- +49 (0)761/19240

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

classification according to Directive 67/548/EEC or 1999/45/EC

- Indications of danger: Xn - Harmful, N - Dangerous for the environment
- R phrases:
  - R36/37/38: May cause skin irritation through contact.
  - R40: May cause sensitisation by skin contact.
  - R51: Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
  - R41: May cause lung damage if swallowed.
  - R43: Possible risks of irreversible effects.

Classification according to Regulation (EC) No. 1272/2008 [CLP]

- Hazard categories:
  - Respiratory/skin sensitization: Skin Sens. 1
  - Germ cell mutagenicity: Muta. 2
  - Carcinogenicity: Carc. 2
  - Hazardous to the aquatic environment: Aquatic Chronic 2
- Hazard Statements:
  - May cause an allergic skin reaction.
  - Suspected of causing genetic defects.
  - Suspected of causing cancer.
  - Toxic to aquatic life with long lasting effects.
2.2. Label elements

Hazardous components which must be listed on the label
Fennel, ext.

Signal word: Warning
Pictograms: GHS07-GHS08-GHS09

Hazard statements

H317 May cause an allergic skin reaction.
H341 Suspected of causing genetic defects.
H351 Suspected of causing cancer.
H411 Toxic to aquatic life with long lasting effects.

Precautionary statements

P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
P273 Avoid release to the environment.
P302+P352 IF ON SKIN: Wash with plenty of water.
P362+P364 Take off contaminated clothing and wash it before reuse.
P308+P313 IF exposed or concerned: Get medical advice/attention.

2.3. Other hazards

Special skid risk by leaking/spilling product.

SECTION 3: Composition/information on ingredients

3.1. Substances

Chemical characterization
INCI-Name (CTFA): Foeniculum Vulgare (Fennel) Fruit Extract, CAS-Nr. 84625-39-8, EINECS-Nr. 283-414-6

essential oil content: 85 - 95 % with a.o. fenchone, trans anethole, alpha pinene, Limonene.

Hazardous components

<table>
<thead>
<tr>
<th>EC No</th>
<th>Chemical name</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAS No</td>
<td>Classification according to Directive 67/548/EEC</td>
<td></td>
</tr>
<tr>
<td>Index No</td>
<td>Classification according to Regulation (EC) No. 1272/2008 [CLP]</td>
<td></td>
</tr>
<tr>
<td>283-414-6</td>
<td>Fennel, ext.</td>
<td>100 %</td>
</tr>
<tr>
<td>84625-39-8</td>
<td>Carc. Cat. 3, Muta. Cat. 3, Xn - Harmful, N - Dangerous for the environment R40-43-51-53-65-68</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Carc. 2, Muta. 2, Skin Sens. 1, Aquatic Chronic 2; H351 H341 H317 H411</td>
<td></td>
</tr>
</tbody>
</table>

Full text of R-, H- and EUH-phrases: see section 16.

Further Information

no solvent residues

SECTION 4: First aid measures

4.1. Description of first aid measures

General information
Seek medical attention if problems persist.
After inhalation
Provide fresh air.

After contact with skin
After contact with skin, wash immediately with: Water and soap.

After contact with eyes
In case of contact with eyes, rinse immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart.

After ingestion
Rinse mouth immediately and drink large quantities of water. Consult physician.

4.2. Most important symptoms and effects, both acute and delayed
no data available

4.3. Indication of any immediate medical attention and special treatment needed
no data available

SECTION 5: Firefighting measures

5.1. Extinguishing media
Suitable extinguishing media
- foam, CO2, powder
Unsuitable extinguishing media
- water stream

5.2. Special hazards arising from the substance or mixture
formation of dangerous fumes possible

5.3. Advice for firefighters
In case of fire: Wear self-contained breathing apparatus.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures
Avoid contact with skin and eyes, concentrated extracts should not be swallowed.
Wear personal protection equipment.
Provide adequate ventilation.
Wear respiratory protection when in the presence of vapour, dust, and aerosols.

6.2. Environmental precautions
keep away from canalisation, waterway, groundwater

6.3. Methods and material for containment and cleaning up
suck up with oil binding media. Remove mechanically, placing in appropriate containers for disposal.

SECTION 7: Handling and storage

7.1. Precautions for safe handling
Advice on safe handling
Avoid contact with skin and eyes, concentrated extracts should not be swallowed.
wear splash goggles and oilresistant gloves
Do not breathe gas/fumes/vapour/spray.

Advice on protection against fire and explosion
Keep away from sources of ignition - No smoking.

7.2. Conditions for safe storage, including any incompatibilities
Requirements for storage rooms and vessels
no special measures necessary
Further information on storage conditions
keep dark and dry, avoid heat
store in tightly closed container

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.2. Exposure controls

Protective and hygiene measures
remove contaminated clothes

Eye/face protection
wear splash goggles

Hand protection
When handling chemical substances, chemical protective clothing with CE label (including a four digit code) must be worn. German Industry Norms (DIN) / European Norms (EN): EN 374

Skin protection
wear clothing as usual in chemical industry, remove contaminated clothes. After contact with skin, wash immediately with: Water and soap.

Respiratory protection
do not breathe vapour / aerosol
Respiratory protection required in case of: aerosol or mist generation.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state: liquid oil
Colour: yellow
Odour: characteristic

pH-Value: no data available

Changes in the physical state
Melting point: no data available
Initial boiling point and boiling range: no data available
Sublimation point: no data available
Softening point: no data available
Pour point: no data available
Flash point: > 61 °C closed cup

Flammability
Solid: no data available
Gas: no data available

Explosive properties
no data available

Lower explosion limits: no data available
Upper explosion limits: no data available
Ignition temperature: no data available

Auto-ignition temperature
Solid: no data available
Gas: no data available
### Decomposition temperature
- **no data available**

### Oxidizing properties
- **no data available**

### Vapour pressure
- **no data available**

### Density (at 20 °C):
- 0.950 - 0.970 g/cm³ pycnometer

### Bulk density
- **no data available**

### Water solubility
- unsoluble

### Solubility in other solvents
- good soluble in fat phases

### Partition coefficient:
- **no data available**

### Viscosity / dynamic:
- **no data available**

### Viscosity / kinematic:
- **no data available**

### Flow time:
- **no data available**

### Vapour density:
- **no data available**

### Evaporation rate:
- **no data available**

### Solvent separation test:
- no solvent residues

### Solvent content:
- **no data available**

### Solid content:
- **no data available**

## SECTION 10: Stability and reactivity

### 10.1. Reactivity
- **no data available**

### 10.2. Chemical stability
- **no data available**

### 10.3. Possibility of hazardous reactions
- **no data available**

### 10.4. Conditions to avoid
- heat, open flame, sun light

### 10.5. Incompatible materials
- Oxidizing agents.

### 10.6. Hazardous decomposition products
- none - when carefully used

### Further information
- no decomposition in the application field

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

#### Toxicokinetics, metabolism and distribution
According to our knowledge, the chemical, physical and toxicological properties have not been examined extensively.

#### Acute toxicity
- **no data available**
Irritation and corrosivity
no data available

Sensitising effects
no data available

STOT-single exposure
no data available

Severe effects after repeated or prolonged exposure
no data available

Carcinogenic/mutagenic/toxic effects for reproduction
Evidence exists for human carcinogenicity.
Evidence exists for human germ cell mutagenicity.

Aspiration hazard
Harmful: may cause lung damage if swallowed.

Practical experience
Observations relevant to classification
Irritating to eyes, respiratory system and skin
may cause sensitization by skin contact
May cause allergic reactions of the skin

Further information
Frequently or prolonged contact with skin may cause dermal irritation.
Acute toxicity, irritation of the skin and mucous membrane, and mutagenic potential of the preparation assessed by the manufacturer on the basis of the data sheets available on the main components.
Information gaps exist on some of the main individual components. However, according to the experience of the manufacturer, no dangers above and beyond those on the product label are to be expected.

SECTION 12: Ecological information

12.1. Toxicity
No data for ecological evaluation on hand
Under appropriate use there are no ecological problems to expect

12.2. Persistence and degradability
no data available

12.3. Bioaccumulative potential
no data available

12.4. Mobility in soil
no data available

12.5. Results of PBT and vPvB assessment
no data available

12.6. Other adverse effects
no data available

Further information
no heavy metals and inorganic components

SECTION 13: Disposal considerations

13.1. Waste treatment methods
Advice on disposal
in accordance with valid regulations
Waste disposal number of waste from residues/unused products

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

Classified as hazardous waste.

Contaminated packaging

in accordance with valid regulations

SECTION 14: Transport information

Land transport (ADR/RID)

14.1. UN number: UN 3082

14.2. UN proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (contains Limonene and alpha pinene)

14.3. Transport hazard class(es): 9

14.4. Packing group: III

Hazard label: 9

Classification code: M6

Special Provisions: 274 335 601

Limited quantity: 5 L

Transport category: 3

Hazard No: 90

Tunnel restriction code: E

Other applicable information (land transport)

E1

Inland waterways transport (ADN)

14.1. UN number: UN 3082

14.2. UN proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (contains Limonene and alpha pinene)

14.3. Transport hazard class(es): 9

14.4. Packing group: III

Hazard label: 9

Classification code: M6

Special Provisions: 274 335 601

Limited quantity: 5 L

Other applicable information (inland waterways transport)

E1

Marine transport (IMDG)

14.1. UN number: UN 3082

14.2. UN proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (contains Limonene and alpha pinene)

14.3. Transport hazard class(es): 9
14.4. Packing group: III
Hazard label: 9

Special Provisions: 274, 335
Limited quantity: 5 L
EmS: F-A, S-F

Other applicable information (marine transport)
EmS: E1

Air transport (ICAO)

14.1. UN number: UN 3082
14.2. UN proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (contains limonene and alpha pinene)
14.3. Transport hazard class(es): III
14.4. Packing group: III
Hazard label: 9

Special Provisions: A97 A158
Limited quantity Passenger: 30 kg G
IATA-packing instructions - Passenger: 964
IATA-max. quantity - Passenger: 450 L
IATA-packing instructions - Cargo: 964
IATA-max. quantity - Cargo: 450 L

Other applicable information (air transport)
IATA-packing instructions - Passenger: Y964
EmS: E1
14.5. Environmental hazards
ENVIRONMENTALLY HAZARDOUS: yes
Danger releasing substance: Limonene and alpha pinene
14.6. Special precautions for user
no data available
14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code
no data available
Other applicable information
no dangerous good in the sense of the transport regulations

SECTION 15: Regulatory information

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

EU regulatory information
2004/42/EC (VOC): 5,08 % (48,26 g/l)
National regulatory information
Employment restrictions: Observe employment restrictions for young people. Observe employment restrictions for child bearing mothers and nursing.

Water contaminating class (D): 2 - water contaminating

**SECTION 16: Other information**

**Changes**

Reason for revision: general revision of whole document

**Relevant R-phrases (Number and full text)**

40 Limited evidence of a carcinogenic effect.
43 May cause sensitisation by skin contact.
51 Toxic to aquatic organisms.
53 May cause long-term adverse effects in the aquatic environment.
65 Harmful: may cause lung damage if swallowed.
68 Possible risks of irreversible effects.

**Relevant H- and EUH-phrases (Number and full text)**

H317 May cause an allergic skin reaction.
H341 Suspected of causing genetic defects.
H351 Suspected of causing cancer.
H411 Toxic to aquatic life with long lasting effects.

**Further Information**

The information is based on present level of our knowledge. It does not, however, give assurances of product properties and establishes no contract legal rights.

The receiver of our product is singulary responsible for adhering to existing laws and regulations.