1. Identification

Product identifier

VITAVM LC SEPARATOR

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

Use of the substance/mixture

Use as laboratory reagent

Details of the supplier of the safety data sheet

Company name: VITA Zahnfabrik H.Rauter GmbH & Co.KG
Post-office box: 1338
79704 Bad Säckingen
Telephone: +49(0)7761-562-0
Telefax: +49(0)7761-562-299
E-mail: info@vita-zahnfabrik.com
Internet: www.vita-zahnfabrik.com
Emergency telephone number: +49-(0)761-19240

2. Hazard identification

Classification of the substance or mixture

WHMIS 2015

- Flammable liquid: Flam. Liq. 2
- Aspiration hazard: Asp. Tox. 1
- Skin corrosion/irritation: Skin Irrit. 2
- Serious eye damage/eye irritation: Eye Dam. 1
- Reproductive toxicity: Repr. 2
- Specific target organ toxicity - single exposure: STOT SE 3 (narcotic effects)
- Specific target organ toxicity - repeated exposure: STOT RE 2

Label elements

WHMIS 2015

Signal word: Danger

Pictograms:

Hazard statements

- Highly flammable liquid and vapour.
- May be fatal if swallowed and enters airways.
- Causes skin irritation.
- Causes serious eye damage.
- May cause drowsiness or dizziness.
- Suspected of damaging fertility or the unborn child.
- May cause damage to organs through prolonged or repeated exposure.

Precautionary statements

- Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
- IF INHALED: Remove person to fresh air and keep comfortable for breathing.
- IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- Keep container tightly closed.

Other hazards

No information available.
3. Composition/information on ingredients

Mixtures

Hazardous components

<table>
<thead>
<tr>
<th>CAS No</th>
<th>Chemical name</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>110-82-7</td>
<td>cyclohexane</td>
<td>30 - &lt; 60% (*)</td>
</tr>
<tr>
<td>108-88-3</td>
<td>toluene</td>
<td>7 - &lt; 13% (*)</td>
</tr>
<tr>
<td>4253-34-3</td>
<td>methylsilanetry triacetat</td>
<td>1 - &lt; 5% (*)</td>
</tr>
</tbody>
</table>

(*) The actual concentration is withheld as a trade secret.

4. First-aid measures

Description of first aid measures

After inhalation
Provide fresh air. Medical treatment necessary.

After contact with skin
After contact with skin, wash immediately with plenty of water and soap. Take off immediately all contaminated clothing and wash it before reuse. Medical treatment necessary.

After contact with eyes
In case of contact with eyes flush immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart and consult an ophthalmologist.

After ingestion
Observe risk of aspiration if vomiting occurs.

Most important symptoms and effects, whether acute or delayed
No information available.

Indication of immediate medical attention and special treatment needed
Treat symptomatically.

5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media
Carbon dioxide (CO2), Foam, Extinguishing powder.

Unsuitable extinguishing media
Water.

Specific hazards arising from the hazardous product
Highly flammable. Vapours can form explosive mixtures with air.

Special protective equipment and precautions for fire-fighters
Wear a self-contained breathing apparatus and chemical protective clothing. Full protection suit.

Additional information
Use water spray jet to protect personnel and to cool endangered containers. Suppress gases/vapours/mists with water spray jet. Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures
Remove all sources of ignition. Provide adequate ventilation. Do not breathe gas/fumes/vapour/spray. Avoid contact with skin, eyes and clothes. Use personal protection equipment.
Environmental precautions
   Do not allow uncontrolled discharge of product into the environment. Explosion risk.

Methods and material for containment and cleaning up
   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.

Reference to other sections
   Safe handling: see section 7
   Personal protection equipment: see section 8
   Disposal: see section 13

7. Handling and storage

Precautions for safe handling
   Advice on safe handling
      If handled uncovered, arrangements with local exhaust ventilation have to be used. Do not breathe gas/fumes/vapour/spray.
   Advice on protection against fire and explosion
      Keep away from sources of ignition - No smoking. Take precautionary measures against static discharges. Vapours can form explosive mixtures with air.

Conditions for safe storage, including any incompatibilities
   Requirements for storage rooms and vessels
      Keep container tightly closed. Keep locked up. Store in a place accessible by authorized persons only. Provide adequate ventilation as well as local exhaust at critical locations. Keep in a cool, well-ventilated place. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
   Hints on joint storage
      Do not store together with: Oxidizing agent. Pyrophoric or self-heating substances.

8. Exposure controls/Personal protection

Control parameters

Exposure controls

Appropriate engineering controls
   If handled uncovered, arrangements with local exhaust ventilation have to be used. Do not breathe gas/fumes/vapour/spray.

Protective and hygiene measures
   Remove contaminated, saturated clothing immediately. Draw up and observe skin protection programme. Wash hands and face before breaks and after work and take a shower if necessary. When using do not eat, drink, smoke, sniff.

Eye/face protection
   Suitable eye protection: goggles.

Hand protection
   When handling with chemical substances, protective gloves must be worn with the CE-label including the four control digits. The quality of the protective gloves resistant to chemicals must be chosen as a function of the specific working place concentration and quantity of hazardous substances. 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. Recommended glove articles KCL Dermatril P Breakthrough time (maximum wearing time) 60 min NBR (Nitrile rubber)
Skin protection
Flame-retardant protective clothing. Wear anti-static footwear and clothing. Wear suitable protective clothing.

Respiratory protection
In case of inadequate ventilation wear respiratory protection. Technical ventilation of workplace. Provide adequate ventilation as well as local exhaustion at critical locations.

9. Physical and chemical properties

Information on basic physical and chemical properties
- Physical state: Liquid
- Colour: translucent
- Odour: characteristic

Test method
- pH-Value: not determined

Changes in the physical state
- Melting point: not determined
- Initial boiling point and boiling range: 77 °C
- Flash point: < 5 °C

Flammability
- Solid: not applicable
- Gas: not applicable

Explosive properties
- The product is not: Explosive.
- Lower explosive limits: 1,2 vol. %
- Upper explosive limits: 8,3 vol. %
- Ignition temperature: 260 °C DIN 51794

Auto-ignition temperature
- Solid: not applicable
- Gas: not applicable

Decomposition temperature: not determined

Oxidizing properties
- Not oxidising.
- Vapour pressure: <=1100 hPa (at 50 °C)
- Density: 0,86700 g/cm³
- Water solubility: No

Solubility in other solvents
- not determined
- Partition coefficient: not determined
- Vapour density: not determined
- Evaporation rate: not determined

Other information
- Solid content: 0,0 %

10. Stability and reactivity
Reactivity
Highly flammable.

Chemical stability
The product is stable under storage at normal ambient temperatures.

Possibility of hazardous reactions
No known hazardous reactions.

Conditions to avoid
Keep away from sources of heat (e.g. hot surfaces), sparks and open flames. Vapours can form explosive mixtures with air.

Incompatible materials
No information available.

Hazardous decomposition products
No known hazardous decomposition products.

11. Toxicological information

Information on toxicological effects

Acute toxicity
Based on available data, the classification criteria are not met.

<table>
<thead>
<tr>
<th>CAS No</th>
<th>Chemical name</th>
<th>Route of exposure</th>
<th>Dose</th>
<th>Species</th>
<th>Source</th>
<th>Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>110-82-7</td>
<td>cyclohexane</td>
<td>dermal</td>
<td>LD50</td>
<td>12705</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>mg/kg</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>108-88-3</td>
<td>toluene</td>
<td>dermal</td>
<td>LD50</td>
<td>12200</td>
<td>Rabbit</td>
<td>GESTIS</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>mg/kg</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>inhalation (4 h)</td>
<td>LC50</td>
<td>49 mg/l</td>
<td>Rat</td>
<td>GESTIS</td>
</tr>
<tr>
<td></td>
<td></td>
<td>vapour</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4253-34-3</td>
<td>methysilanetriyl triacetat</td>
<td>oral</td>
<td>ATE</td>
<td>500</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>mg/kg</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Irritation and corrosivity
Causes skin irritation.
Causes serious eye damage.

Sensitizing effects
Based on available data, the classification criteria are not met.

Carcinogenic/mutagenic/toxic effects for reproduction
Suspected of damaging fertility or the unborn child. (toluene)
Germ cell mutagenicity: Based on available data, the classification criteria are not met.
Carcinogenicity: Based on available data, the classification criteria are not met.

STOT-single exposure
May cause drowsiness or dizziness. (cyclohexane)

STOT-repeated exposure
May cause damage to organs through prolonged or repeated exposure. (toluene)

Aspiration hazard
May be fatal if swallowed and enters airways.

Additional information on tests
The mixture is classified as hazardous according to regulation (EC) No 1272/2008 [CLP]. Special hazards
12. Ecological information

Ecotoxicity

Very toxic to aquatic life with long lasting effects.

<table>
<thead>
<tr>
<th>CAS No</th>
<th>Chemical name</th>
<th>Aquatic toxicity</th>
<th>Dose [h]</th>
<th>Species</th>
<th>Source</th>
<th>Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>108-88-3</td>
<td>toluene</td>
<td>Acute fish toxicity</td>
<td>LC50</td>
<td>13 mg/l</td>
<td>Carassius auratus</td>
<td>IUCLID</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Acute algae toxicity</td>
<td>ErC50</td>
<td>12.5 mg/l</td>
<td>GESTIS</td>
<td></td>
</tr>
</tbody>
</table>

Persistence and degradability

The product has not been tested.

Bioaccumulative potential

The product has not been tested.

Partition coefficient n-octanol/water

<table>
<thead>
<tr>
<th>CAS No</th>
<th>Chemical name</th>
<th>Log Pow</th>
</tr>
</thead>
<tbody>
<tr>
<td>108-88-3</td>
<td>toluene</td>
<td>2.73</td>
</tr>
</tbody>
</table>

Mobility in soil

The product has not been tested.

Other adverse effects

No information available.

Further information

Do not allow to enter into surface water or drains. Do not allow to enter into soil/subsoil.

13. Disposal considerations

Waste treatment methods

Disposal recommendations

Do not allow to enter into surface water or drains. Do not allow to enter into soil/subsoil. Dispose of waste according to applicable legislation.

Contaminated packaging

Hazardous waste according to Directive 2008/98/EC (waste framework directive). Handle contaminated packages in the same way as the substance itself.

14. Transport information

Marine transport (IMDG)

<table>
<thead>
<tr>
<th>UN number:</th>
<th>FLAMMABLE LIQUID, N.O.S. (cyclohexane)</th>
</tr>
</thead>
<tbody>
<tr>
<td>UN number</td>
<td>UN 1993</td>
</tr>
<tr>
<td>United Nations proper shipping name:</td>
<td></td>
</tr>
<tr>
<td>Transport hazard class(es):</td>
<td>3</td>
</tr>
<tr>
<td>Packing group:</td>
<td>II</td>
</tr>
<tr>
<td>Hazard label:</td>
<td>3</td>
</tr>
<tr>
<td>Special Provisions:</td>
<td>274</td>
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</tbody>
</table>
**Safety Data Sheet**

VITA Zahnfabrik H. Rauter GmbH & Co. KG

VITAVM LC SEPARATOR

**Revision date:** 02.08.2019  **Product code:** 152  **Page:** 7 of 8

**Limited quantity:** 1 L  
**Excepted quantity:** E2  
**EmS:** F-E, S-E

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

**UN number:** UN 1993  
**United Nations proper shipping name:** FLAMMABLE LIQUID, N.O.S. (cyclohexane)  
**Transport hazard class(es):** 3  
**Packing group:** II  
**Hazard label:** 3

**Special Provisions:** A3

**Limited quantity Passenger:** 1 L  
**Passenger LQ:** Y341  
**Excepted quantity:** E2

**IATA-packing instructions - Passenger:** 353  
**IATA-max. quantity - Passenger:** 5 L  
**IATA-packing instructions - Cargo:** 364  
**IATA-max. quantity - Cargo:** 60 L

**Environmental hazards**

**ENVIRONMENTALLY HAZARDOUS:** yes

**Danger releasing substance:** cyclohexane

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**15. Regulatory information**

**Canadian regulations**

**16. Other information**

**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)  
IMDG: International Maritime Code for Dangerous Goods  
IATA: International Air Transport Association  
GHS: Globally Harmonized System of Classification and Labelling of Chemicals  
EINECS: European Inventory of Existing Commercial Chemical Substances  
ELINCS: European List of Notified Chemical Substances  
CAS: Chemical Abstracts Service  
LC50: Lethal concentration, 50%  
LD50: Lethal dose, 50%  
CLP: Classification, labelling and Packaging  
REACH: Registration, Evaluation and Authorization of Chemicals  
GHS: Globally Harmonized System of Classification, Labelling and Packaging of Chemicals  
UN: United Nations  
DNEL: Derived No Effect Level  
DMEL: Derived Minimal Effect Level  
PNEC: Predicted No Effect Concentration  
ATE: Acute toxicity estimate
LL50: Lethal loading, 50%
EL50: Effect loading, 50%
EC50: Effective Concentration 50%
ErC50: Effective Concentration 50%, growth rate
NOEC: No Observed Effect Concentration
BCF: Bio-concentration factor
PBT: persistent, bioaccumulative, toxic
vPvB: very persistent, very bioaccumulative
RID: Regulations concerning the international carriage of dangerous goods by rail
ADN: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
( Accord européen relatif au transport international des marchandises dangereuses par voies de navigation intérieures)
EmS: Emergency Schedules
MFAG: Medical First Aid Guide
ICAO: International Civil Aviation Organization
MARPOL: International Convention for the Prevention of Marine Pollution from Ships
IBC: Intermediate Bulk Container
VOC: Volatile Organic Compounds
SVHC: Substance of Very High Concern
For abbreviations and acronyms, see table at http://abbrev.esdscom.eu

Further Information
The information is based on the present level of our knowledge. It does not, however, give assurance of product properties and establishes no contract legal rights. The receiver of our product is singularly responsible for adhering to existing laws and regulations.

(The data for the hazardous ingredients were taken respectively from the last version of the sub-contractor’s safety data sheet.)