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

1.1. Product identifier

VITAVM LC SEPARATOR

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

Use of the substance/mixture

Use as laboratory reagent

1.3. Details of the supplier of the safety data sheet

Manufacturer

Company name: VITA Zahnfabrik H.Rauter GmbH & Co.KG
Post-office box: 1338
79704 Bad Säckingen

Telephone: +49(0)7761-562-0

Fax: +49(0)7761-562-299

Internet: info@vita-zahnfabrik.com

Supplier

Company name: Company Name
Street: Street
Place: 79704 Town

Telephone: Phone

Fax: Telefax

1.4. Emergency telephone number:

+49-(0)761-19240

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

UN-GHS (Rev.3)

Hazard categories:

Flammable liquid: Flam. Liq. 2
Acute toxicity: Acute Tox. 4
Aspiration hazard: Asp. Tox. 1
Skin corrosion/irritation: Skin Irrit. 2
Serious eye damage/eye irritation: Eye Dam. 1
Reproductive toxicity: Repr. 1
Specific target organ toxicity - single exposure: STOT SE 3
Specific target organ toxicity - repeated exposure: STOT RE 2

Hazard Statements:

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

2.2. Label elements

UN-GHS (Rev.3)
Hazard components for labelling

cyclohexane
 dibutyltin diacetate
 methylsilanetriyl triacetat
toluene

Signal word: Danger

Pictograms:

Hazard statements

H225 Highly flammable liquid and vapour.
H302 Harmful if swallowed.
H304 May be fatal if swallowed and enters airways.
H315 Causes skin irritation.
H318 Causes serious eye damage.
H336 May cause drowsiness or dizziness.
H360 May damage fertility or the unborn child.
H373 May cause damage to organs through prolonged or repeated exposure.

Precautionary statements

P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P233 Keep container tightly closed.
P240 Ground and bond container and receiving equipment.
P241 Use explosion-proof electrical/ventilating/lighting equipment.
P242 Use non-sparking tools.
P243 Take action to prevent static discharges.
P260 Do not breathe dust/fume/gas/mist/vapours/spray.
P264 Wash hands thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P271 Use only outdoors or in a well-ventilated area.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P301+P312 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.
P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.
P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P233 Keep container tightly closed.
P403+P235 Store in a well-ventilated place. Keep cool.
P405 Store locked up.
P501 Dispose of waste according to applicable legislation.

2.3. Other hazards

No information available.

SECTION 3: Composition/information on ingredients

3.2. 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>50 - &lt; 55 %</td>
</tr>
<tr>
<td>108-88-3</td>
<td>toluene</td>
<td>10 - &lt; 15 %</td>
</tr>
<tr>
<td>4253-34-3</td>
<td>methylsilanetriyl triacetat</td>
<td>1 - &lt; 5 %</td>
</tr>
<tr>
<td>1067-33-0</td>
<td>dibutyltin diacetate</td>
<td>&lt; 1 %</td>
</tr>
</tbody>
</table>

### SECTION 4: First aid measures

#### 4.1. Description of first aid measures

**General information**
When in doubt or if symptoms are observed, get medical advice.

**After inhalation**
Provide fresh air. If breathing is irregular or stopped, administer artificial respiration. 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**
After contact with the eyes, rinse with water with the eyelids open for a sufficient length of time, then consult an ophthalmologist immediately. Remove contact lenses, if present and easy to do. Continue rinsing.

**After ingestion**
Do NOT induce vomiting. Rinse mouth immediately and drink plenty of water. Observe risk of aspiration if vomiting occurs. Never give anything by mouth to an unconscious person or a person with cramps. Call a doctor.

#### 4.2. Most important symptoms and effects, both acute and delayed
No information available.

#### 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 (CO2), Foam, Extinguishing powder.

**Unsuitable extinguishing media**
Water.

#### 5.2. Special hazards arising from the substance or mixture
Highly flammable. Vapours can form explosive mixtures with air.

#### 5.3. Advice for firefighters
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.

### SECTION 6: Accidental release measures

#### 6.1. Personal precautions, protective equipment and emergency procedures
Remove all sources of ignition. Provide adequate ventilation. Do not breathe gas/mares/vapour/spray. Avoid
6.2. Environmental precautions

Do not allow uncontrolled discharge of product into the environment. Explosion risk.

6.3. 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.

6.4. Reference to other sections

Safe handling: see section 7
Personal protection equipment: see section 8
Disposal: see section 13

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling
Provide adequate ventilation. Do not breathe gas/fumes/vapour/spray. Avoid contact with skin, eyes and clothes. Use personal protection equipment.

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.

7.2. 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 exhaustion 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.

7.3. Specific end use(s)

Use as laboratory reagent

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Additional advice on limit values
Value:
cyclohexane
100 ppm (350 mg/m³) TWA
300 ppm (1050 mg/m³) STEL
toluene
50 ppm (191 mg/m³) TWA
150 ppm (574 mg/m³) STEL
Tin, organic compounds (as Sn):
0,1 mg/m³ TWA
0,2 mg/m³ STEL

Source: Workplace exposure standards for airborne contaminants, Publication date: 16 December 2019

8.2. Exposure controls
Appropriate engineering controls
Provide adequate ventilation as well as local exhaustion at critical locations.

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. Do not breathe gas/fumes/vapour/spray. Avoid contact with skin, eyes and clothes.

Eye/face protection
Suitable eye protection: goggles.

Hand protection
Suitable gloves.
Suitable material: NBR (Nitrile rubber)
Breakthrough time (maximum wearing time): 60 min

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.

Skin protection
Flame-retardant protective clothing. Wear anti-static footwear and 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.

Environmental exposure controls
Avoid release to the environment.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Physical state:</th>
<th>Liquid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Colour:</td>
<td>translucent</td>
</tr>
<tr>
<td>Odour:</td>
<td>characteristic</td>
</tr>
</tbody>
</table>

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.
Vapours can form explosive mixtures with air.

Lower explosion limits: 1.2 vol. %
### Upper explosion 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

### Density:
0.86700 g/cm³

### Water solubility:
No

### Solubility in other solvents:
not determined

### Partition coefficient:
not determined

### Viscosity / dynamic:
not determined

### Viscosity / kinematic:
not determined

### Vapour density:
not determined

### Evaporation rate:
not determined

---

### 9.2. Other information
Odour threshold: not determined

### SECTION 10: Stability and reactivity

#### 10.1. Reactivity
Highly flammable.

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

#### 10.3. Possibility of hazardous reactions
Vapours can form explosive mixtures with air.

#### 10.4. Conditions to avoid
Keep away from sources of heat (e.g. hot surfaces), sparks and open flames.

#### 10.5. Incompatible materials
Do not store together with: Oxidizing agent. Pyrophoric or self-heating substances.

#### 10.6. Hazardous decomposition products
No known hazardous decomposition products.

### SECTION 11: Toxicological information

#### 11.1. Information on toxicological effects
- **Acute toxicity**
  Harmful if swallowed.

- **ATEmix calculated**
  ATE (oral) 943.4 mg/kg
Irritation and corrosivity
Causes skin irritation.
Causes serious eye damage.

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

Carcinogenic/mutagenic/toxic effects for reproduction
May damage 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.

SECTION 12: Ecological information

12.1. Toxicity
No information available.

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
The product has not been tested.
12.5. 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.

SECTION 13: Disposal considerations

13.1. 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
Handle contaminated packages in the same way as the substance itself.

SECTION 14: Transport information

Land transport (ADG)

14.1. UN number: UN 1993
14.2. UN proper shipping name: FLAMMABLE LIQUID, N.O.S. (cyclohexane, toluene)
14.3. Transport hazard class(es): 3
14.4. Packing group: II
Special Provisions: 274 601 640D
Limited quantity: 1 L
Excepted quantity: E2

Other applicable information (land transport)
HAZCHEM: 3YE

Marine transport (IMDG)

14.1. UN number: UN 1993
14.2. UN proper shipping name: FLAMMABLE LIQUID, N.O.S. (cyclohexane, toluene)
14.3. Transport hazard class(es): 3
14.4. Packing group: II
Hazard label: 3

Special Provisions: 274
Limited quantity: 1 L
Excepted quantity: E2
EmS: F-E, S-E

Air transport (ICAO-TI/IATA-DGR)

14.1. UN number: UN 1993
14.2. UN proper shipping name: FLAMMABLE LIQUID, N.O.S. (cyclohexane, toluene)
14.3. Transport hazard class(es): 3
14.4. 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

14.5. Environmental hazards
ENVIRONMENTALLY HAZARDOUS: no

14.6. Special precautions for user
Warning: Combustible liquid.

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code
not applicable

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 48: toluene
Entry 57: cyclohexane

National regulatory information
Additional information
AICS
toluene: Yes.
dibutyltin diacetate: Yes.
cyclohexane: Yes.
methyisilanetriyl triacetat: Yes.
Tin, organic compounds (as Sn): No

SUSMP
toluene: Yes.
dibutyltin diacetate: No
cyclohexane: Yes.
methyisilanetriyl triacetat: No
Tin, organic compounds (as Sn): No

SECTION 16: Other information

Abbreviations and acronyms
ACGIH: American Conference of Governmental Industrial Hygienists
ADG: Australian Dangerous Goods
AICS: Australian Inventory of Chemical Substances
ICAO: International Civil Aviation Organization
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
GHS: Globally Harmonized System of Classification and Labelling of Chemicals
CAS: Chemical Abstracts Service
STEL: Short-term exposure limit
TWA: time-weighted average
TI: Technical Instructions
DGR: Dangerous Goods Regulations
VITA Zahnfabrik H.Rauter GmbH & Co.KG

Safety Data Sheet
according to the Preparation of Safety data Sheets for Hazardous Chemicals Code of Practice

VITAVM LC SEPARATOR

Revision date: 27.01.2020

UN: United Nations
ATE: Acute toxicity estimate
LC50: Lethal concentration, 50%
LD50: Lethal dose, 50%
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
MARPOL: International Convention for the Prevention of Marine Pollution from Ships
IBC: Intermediate Bulk Container
VOC: Volatile Organic Compounds
SUSMP: Standard for the Uniform Scheduling of Medicines and Poisons

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.)