

**Safety Data Sheet**

according to Regulation (EC) No 1907/2006

**VITAVM LC SEPARATOR**

Revision date:

Product code: 152

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**SECTION 1: Identification of the substance/mixture and of the company/undertaking****1.1. Product identifier**

VITAVM LC SEPARATOR

UFI: 1H00-60WF-T007-T15E

**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**

Company name:	VITA Zahnfabrik H.Rauter GmbH & Co.KG	
Street:	Spitalgasse 3	
Place:	D-79713 Bad Säckingen	
Post-office box:	1338	
	D-79704 Bad Säckingen	
Telephone:	+49(0)7761-562-0	Telefax: +49(0)7761-562-299
e-mail:	info@vita-zahnfabrik.com	
Contact person:	regulatory affairs	
e-mail:	info@vita-zahnfabrik.com	
Internet:	www.vita-zahnfabrik.com	
Responsible Department:	Regulatory Affairs	

**1.4. Emergency telephone number:**

+49-(0)761-19240

**SECTION 2: Hazards identification****2.1. Classification of the substance or mixture****Regulation (EC) No. 1272/2008**

Hazard categories:

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

Specific target organ toxicity - repeated exposure: STOT RE 2

Hazardous to the aquatic environment: Aquatic Acute 1

Hazardous to the aquatic environment: Aquatic Chronic 1

Hazard Statements:

Highly flammable liquid and vapour.

May be fatal if swallowed and enters airways.

Causes skin irritation.

Causes serious eye damage.

Suspected of damaging the unborn child.

May cause drowsiness or dizziness.

May cause damage to organs through prolonged or repeated exposure.

Very toxic to aquatic life.

Very toxic to aquatic life with long lasting effects.

**2.2. Label elements****Regulation (EC) No. 1272/2008**

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**Hazard components for labelling**

toluene  
 cyclohexane  
 methylsilanetriyl triacetat

**Signal word:** Danger**Pictograms:****Hazard statements**

H225 Highly flammable liquid and vapour.  
 H304 May be fatal if swallowed and enters airways.  
 H315 Causes skin irritation.  
 H318 Causes serious eye damage.  
 H336 May cause drowsiness or dizziness.  
 H361d Suspected of damaging the unborn child.  
 H373 May cause damage to organs through prolonged or repeated exposure.  
 H410 Very toxic to aquatic life with long lasting effects.

**Precautionary statements**

P273 Avoid release to the environment.  
 P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.  
 P301+P310 IF SWALLOWED: Immediately call a POISON CENTER/doctor.  
 P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
 P331 Do NOT induce vomiting.  
 P391 Collect spillage.

**2.3. Other hazards**

No information available.

**SECTION 3: Composition/information on ingredients****3.2. Mixtures**

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**Hazardous components**

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	GHS Classification			
110-82-7	cyclohexane			50 - < 55 %
	203-806-2	601-017-00-1	01-2119463273-41	
	Flam. Liq. 2, Skin Irrit. 2, STOT SE 3, Asp. Tox. 1, Aquatic Acute 1, Aquatic Chronic 1; H225 H315 H336 H304 H400 H410			
108-88-3	toluene			10 - < 15 %
	203-625-9	601-021-00-3	05-2114615130-69	
	Flam. Liq. 2, Repr. 2, Skin Irrit. 2, STOT SE 3, STOT RE 2, Asp. Tox. 1; H225 H361d H315 H336 H373 H304			
4253-34-3	methylsilanetriyl triacetat			1 - < 5 %
	224-221-9			
	Acute Tox. 4, Skin Corr. 1B; H302 H314 EUH014			
1067-33-0	dibutyltin diacetate			< 1 %
	213-928-8			
	Acute Tox. 2, Skin Irrit. 2, Eye Irrit. 2, STOT SE 3; H300 H315 H319 H335			

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		
110-82-7	203-806-2	cyclohexane	50 - < 55 %
	dermal: LD50 = 12705 mg/kg		
108-88-3	203-625-9	toluene	10 - < 15 %
	inhalation: LC50 = 49 mg/l (vapours); dermal: LD50 = 12200 mg/kg		
4253-34-3	224-221-9	methylsilanetriyl triacetat	1 - < 5 %
	oral: ATE = 500 mg/kg		
1067-33-0	213-928-8	dibutyltin diacetate	< 1 %
	dermal: LD50 = 2320 mg/kg; oral: LD50 = 32 mg/kg		

**SECTION 4: First aid measures****4.1. 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.

**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**

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Treat symptomatically.

#### SECTION 5: Firefighting measures

##### 5.1. Extinguishing media

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

Carbon dioxide (CO<sub>2</sub>), 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

###### **General advice**

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.

##### 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

###### **Other information**

Absorb with liquid-binding material (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**

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.

###### **Advice on general occupational hygiene**

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.

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

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**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****Occupational exposure limits**

CAS No	Substance	ppm	mg/m <sup>3</sup>	fib/cm <sup>3</sup>	Category	Origin
110-82-7	Cyclohexane	200	700		TWA (8 h)	
108-88-3	Toluene	50	192		TWA (8 h)	
		100	384		STEL (15 min)	

**Biological limit values**

CAS No	Substance	Parameter	Value	Test material	Sampling time
108-88-3	Toluene	Toluene	0.02 mg/L	Blood	Prior to last shift of workweek

**8.2. Exposure controls****Appropriate engineering controls**

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

**Individual protection measures, such as personal protective equipment****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: 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.

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**SECTION 9: Physical and chemical properties****9.1. Information on basic physical and chemical properties**

Physical state: Liquid  
 Colour: translucent  
 Odour: characteristic

**Test method****Changes in the physical state**

Melting point/freezing point: not determined  
 Boiling point or initial boiling point and boiling range: 77 °C  
 Flash point: < 5 °C

**Flammability**

Solid/liquid: not applicable  
 Gas: not applicable

**Explosive properties**

The product is not: Explosive.

Lower explosion limits: 1,2 vol. %  
 Upper explosion limits: 8,3 vol. %

Auto-ignition temperature: 260 °C DIN 51794

**Self-ignition temperature**

Solid: not applicable  
 Gas: not applicable

Decomposition temperature: not determined

pH-Value: not determined

Water solubility: No

**Solubility in other solvents**

not determined

Partition coefficient n-octanol/water: not determined

Vapour pressure: <=1100 hPa  
 (at 50 °C)

Density: 0,86700 g/cm<sup>3</sup>

Relative vapour density: not determined

**9.2. Other information**

Oxidizing properties  
 Not oxidising.

Solid content: 0,0 %

Evaporation rate: not determined

**Further Information****SECTION 10: Stability and reactivity****10.1. Reactivity**

Highly flammable.

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**10.2. Chemical stability**

The product is stable under storage at normal ambient temperatures.

**10.3. Possibility of hazardous reactions**

No known hazardous reactions.

**10.4. Conditions to avoid**

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

**10.5. Incompatible materials**

No information available.

**10.6. Hazardous decomposition products**

No known hazardous decomposition products.

**SECTION 11: Toxicological information****11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008****Acute toxicity**

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

CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
110-82-7	cyclohexane				
	dermal	LD50 mg/kg	12705		
108-88-3	toluene				
	dermal	LD50 mg/kg	12200	Rabbit	GESTIS
	inhalation (4 h) vapour	LC50	49 mg/l	Rat	GESTIS
4253-34-3	methylsilanetriyl triacetat				
	oral	ATE mg/kg	500		
1067-33-0	dibutyltin diacetate				
	oral	LD50	32 mg/kg		
	dermal	LD50 mg/kg	2320		

**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**

Suspected of damaging 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)

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**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 arising from the substance or mixture!

**SECTION 12: Ecological information****12.1. Toxicity**

Very toxic to aquatic life with long lasting effects.

CAS No	Chemical name					
	Aquatic toxicity	Dose	[h]   [d]	Species	Source	Method
108-88-3	toluene					
	Acute fish toxicity	LC50 13 mg/l	96 h	Carassius auratus	IUCLID	
	Acute algae toxicity	ErC50 12,5 mg/l	72 h		GESTIS	

**12.2. Persistence and degradability**

The product has not been tested.

**12.3. Bioaccumulative potential**

The product has not been tested.

**Partition coefficient n-octanol/water**

CAS No	Chemical name	Log Pow
108-88-3	toluene	2,73

**12.4. Mobility in soil**

The product has not been tested.

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

The product has not been tested.

**12.7. 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**

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

**SECTION 14: Transport information****Land transport (ADR/RID)**

<b>14.1. UN number or ID number:</b>	UN 1993
<b>14.2. UN proper shipping name:</b>	FLAMMABLE LIQUID, N.O.S. (cyclohexane)
<b>14.3. Transport hazard class(es):</b>	3



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**14.4. Packing group:**

II

Hazard label:

3



Classification code:

F1

Special Provisions:

274 601 640D

Limited quantity:

1 L

Excepted quantity:

E2

Transport category:

2

Hazard No:

33

Tunnel restriction code:

D/E

**Inland waterways transport (ADN)****14.1. UN number or ID number:**

UN 1993

**14.2. UN proper shipping name:**

FLAMMABLE LIQUID, N.O.S. (cyclohexane)

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

3

**14.4. Packing group:**

II

Hazard label:

3



Classification code:

F1

Special Provisions:

274 601 640D

Limited quantity:

1 L

Excepted quantity:

E2

**Marine transport (IMDG)****14.1. UN number or ID number:**

UN 1993

**14.2. UN proper shipping name:**

FLAMMABLE LIQUID, N.O.S. (cyclohexane)

**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 or ID number:**

UN 1993

**14.2. UN proper shipping name:**

FLAMMABLE LIQUID, N.O.S. (cyclohexane)

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

3

**14.4. Packing group:**

II

Hazard label:

3



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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: Yes



Danger releasing substance: cyclohexane

**14.6. Special precautions for user**

Warning: Combustible liquid.

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

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 3, Entry 40, Entry 48, Entry 57

2010/75/EU (VOC): 10 % (86,7 g/l)

2004/42/EC (VOC): 10 % (86,7 g/l)

Information according to 2012/18/EU (SEVESO III): E1 Hazardous to the Aquatic Environment

Additional information: P5c

**National regulatory information**

Employment restrictions: Observe restrictions to employment for juveniles according to the 'juvenile work protection guideline' (94/33/EC). Observe employment restrictions under the Maternity Protection Directive (92/85/EEC) for expectant or nursing mothers.

Water hazard class (D): 2 - obviously hazardous to water

**15.2. Chemical safety assessment**

Chemical safety assessments for substances in this mixture were not carried out.

**SECTION 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%

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LD50: Lethal dose, 50%

CLP: Classification, labelling and Packaging

REACH: Registration, Evaluation and Authorization of Chemicals

GHS: Globally Harmonised 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>**Classification for mixtures and used evaluation method according to Regulation (EC) No. 1272/2008 [CLP]**

Classification	Classification procedure
Flam. Liq. 2; H225	On basis of test data
Asp. Tox. 1; H304	Calculation method
Skin Irrit. 2; H315	Calculation method
Eye Dam. 1; H318	Calculation method
Repr. 2; H361d	Calculation method
STOT SE 3; H336	Calculation method
STOT RE 2; H373	Calculation method
Aquatic Acute 1; H400	Calculation method
Aquatic Chronic 1; H410	Calculation method

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

H225	Highly flammable liquid and vapour.
H300	Fatal if swallowed.
H302	Harmful if swallowed.
H304	May be fatal if swallowed and enters airways.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.

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H336	May cause drowsiness or dizziness.
H361d	Suspected of damaging the unborn child.
H373	May cause damage to organs through prolonged or repeated exposure.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
EUH014	Reacts violently with water.

**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.

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