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

1.1. Product identifier
VITA VM LC OPAQUE LIQUID

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
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

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
Skin corrosion/irritation: Skin Irrit. 2
Respiratory or skin sensitisation: Skin Sens. 1
Specific target organ toxicity - single exposure: STOT SE 3
Hazard Statements:
Highly flammable liquid and vapour.
Causes skin irritation.
May cause an allergic skin reaction.
May cause respiratory irritation.

2.2. Label elements

Regulation (EC) No. 1272/2008

Hazard components for labelling
methyl methacrylate; methyl 2-methylprop-2-enoate; methyl 2-methylpropenoate
2-hydroxyethyl methacrylate
methyl methacrylate
ethylene dimethacrylate
7,7,9-Trimethyl-4,13-dioxo-3,14-dioxa-5,12-diaza-hexadecan-1,16-diol-dimethacrylat (mixture of isomers)
2-dimethylaminoethyl methacrylate

Signal word: Danger

Pictograms:

Hazard statements
H225 Highly flammable liquid and vapour.
H315 Causes skin irritation.
Precautionary statements

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P233 Keep container tightly closed.
P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P233 Keep container tightly closed.

H317 May cause an allergic skin reaction.
H335 May cause respiratory irritation.

2.3. Other hazards
No information available.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

<table>
<thead>
<tr>
<th>Hazardous components</th>
<th>Quantity</th>
<th>CAS No</th>
<th>Chemical name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethylene dimethacrylate</td>
<td>55 - &lt; 60 %</td>
<td>97-90-5</td>
<td>202-617-2 607-114-00-5 01-2119965172-38 Skin Sens. 1, STOT SE 3; H317 H335</td>
</tr>
<tr>
<td>Methyl methacrylate</td>
<td>20 - &lt; 25 %</td>
<td>80-62-6</td>
<td>201-297-1 607-035-00-6 01-2119452498-28 Flam. Liq. 2, Skin Irrit. 2, Skin Sens. 1, STOT SE 3; H225 H315 H317 H335</td>
</tr>
<tr>
<td>7,7,9-Trimethyl-4,13-dioxo-3,14-dioxa-5,12-diaza-hexadecan-1,16-diol-dimethacrylat</td>
<td>10 - &lt; 15 %</td>
<td>72869-86-4</td>
<td>276-957-5 01-2120751202-68 Skin Sens. 1B, Aquatic Chronic 3; H317 H412</td>
</tr>
<tr>
<td>Isomers</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Camphorquinone</td>
<td>1 - &lt; 5 %</td>
<td>10373-78-1</td>
<td></td>
</tr>
<tr>
<td>2-Dimethylaminoethyl methacrylate</td>
<td>1 - &lt; 5 %</td>
<td>2867-47-2</td>
<td>220-688-8 607-132-00-3 Acute Tox. 4, Acute Tox. 4, Skin Irrit. 2, Eye Irrit. 2, Skin Sens. 1; H312 H302 H315 H319 H317</td>
</tr>
<tr>
<td>2-Hydroxyethyl methacrylate</td>
<td>1 - &lt; 5 %</td>
<td>868-77-9</td>
<td>212-782-2 607-124-00-X Skin Irrit. 2, Eye Irrit. 2, Skin Sens. 1; H315 H319 H317</td>
</tr>
<tr>
<td>Methyl methacrylate; methyl 2-methylprop-2-enoate; methyl 2-methylpropenoate</td>
<td>&lt; 1 %</td>
<td>80-62-6</td>
<td>201-297-1 607-035-00-6 Flam. Liq. 2, Skin Irrit. 2, Skin Sens. 1, STOT SE 3; H225 H315 H317 H335</td>
</tr>
</tbody>
</table>

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

SECTION 4: First aid measures

4.1. Description of first aid measures

After inhalation
Provide fresh air. When in doubt or if symptoms are observed, get medical advice.
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.

After ingestion
   Rinse mouth immediately and drink plenty of water.

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. 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
   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
      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.

**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 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.

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

**8.1. Control parameters**

**Occupational exposure limits**

<table>
<thead>
<tr>
<th>CAS No</th>
<th>Substance</th>
<th>ppm</th>
<th>mg/m³</th>
<th>fib/cm³</th>
<th>Category</th>
<th>Origin</th>
</tr>
</thead>
<tbody>
<tr>
<td>80-62-6</td>
<td>Methyl methacrylate</td>
<td>50</td>
<td>-</td>
<td>-</td>
<td>TWA (8 h)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>100</td>
<td>-</td>
<td>-</td>
<td>STEL (15 min)</td>
<td></td>
</tr>
</tbody>
</table>

**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.

**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**
- Wear eye protection/face protection.

**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 Vitoject Breakthrough time (maximum wearing time) 30 min FKM (fluoro rubber)

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

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

**SECTION 9: Physical and chemical properties**

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

- **Physical state:** Liquid
- **Colour:** light yellow
- **Odour:** characteristic
pH-Value: not determined

**Changes in the physical state**

Melting point: not determined

Initial boiling point and boiling range: 101 °C

Flash point: 10 °C

**Flammability**

- Solid: not applicable
- Gas: not applicable

**Explosive properties**

The product is not: Explosive.

Lower explosion limits: 2,1 vol. %

Upper explosion limits: 12,5 vol. %

**Auto-ignition temperature**

- Solid: not applicable
- Gas: not applicable

Decomposition temperature: not determined

**Oxidizing properties**

Not oxidising.

Vapour pressure: \(\leq 1100 \text{ hPa}\)

(at 50 °C)

Density: not determined

Water solubility: No

**Solubility in other solvents**

- not determined

Partition coefficient: not determined

Vapour density: not determined

Evaporation rate: not determined

**9.2. Other information**

- Solid content: 0,0 %

**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**

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 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>Exposure route</th>
<th>Dose</th>
<th>Species</th>
<th>Source</th>
<th>Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>97-90-5</td>
<td>ethylene dimethacrylate</td>
<td>dermal</td>
<td>LD50</td>
<td>3300</td>
<td></td>
<td></td>
</tr>
<tr>
<td>80-62-6</td>
<td>methyl methacrylate</td>
<td>dermal</td>
<td>LD50</td>
<td>&gt; 5000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2867-47-2</td>
<td>2-dimethylaminoethyl methacrylate</td>
<td>oral</td>
<td>ATE</td>
<td>500</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>dermal</td>
<td>ATE</td>
<td>1100</td>
<td></td>
<td></td>
</tr>
<tr>
<td>868-77-9</td>
<td>2-hydroxyethyl methacrylate</td>
<td>oral</td>
<td>LD50</td>
<td>5050</td>
<td>Rat</td>
<td></td>
</tr>
<tr>
<td>80-62-6</td>
<td>methyl methacrylate; methyl 2-methylprop-2-enoate; methyl 2-methylpropenoate</td>
<td>dermal</td>
<td>LD50</td>
<td>&gt;5000</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Irritation and corrosivity

Causes skin irritation.

Serious eye damage/eye irritation: Based on available data, the classification criteria are not met.

Sensitising effects

May cause an allergic skin reaction. (ethylene dimethacrylate; methyl methacrylate; 7,7,9-Trimethyl-4,13-dioxo-3,14-dioxo-5,12-diaza-hexadecan-1,16-diol-dimethacrylat (mixture of isomers); 2-dimethylaminoethyl methacrylate; 2-hydroxyethyl methacrylate; methyl methacrylate; methyl 2-methylprop-2-enoate; methyl 2-methylpropenoate)

Carcinogenic/mutagenic/toxic effects for reproduction

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

STOT-single exposure

May cause respiratory irritation. (methyl methacrylate; ethylene dimethacrylate)

STOT-repeated exposure

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

Aspiration hazard

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

Additional information on tests

The mixture is classified as hazardous according to regulation (EC) No 1272/2008 [CLP].

SECTION 12: Ecological information

12.1. Toxicity

The product is not: Ecotoxic.
### 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

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>Log Pow</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-hydroxyethyl methacrylate</td>
<td>0.47</td>
</tr>
</tbody>
</table>

### 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.

### 12.6. 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**

Non-contaminated packages may be recycled. Handle contaminated packages in the same way as the substance itself.

### SECTION 14: Transport information

#### Land transport (ADR/RID)

14.1. **UN number:** UN 1247  
14.2. **UN proper shipping name:** METHYL METHACRYLATE MONOMER, STABILIZED  
14.3. **Transport hazard class(es):** 3  
14.4. **Packing group:** II  
Hazard label: 3

Classification code: F1  
Special Provisions: 386  
Limited quantity: 1 L  
Excepted quantity: E2  
Transport category: 2  
Hazard No: 339  
Tunnel restriction code: D/E
Inland waterways transport (ADN)

14.1. UN number: UN 1247
14.2. UN proper shipping name: METHYL METHACRYLATE MONOMER, STABILIZED
14.3. Transport hazard class(es): 3
14.4. Packing group: II
Hazard label: 3

Classification code: F1
Special Provisions: 386
Limited quantity: 1 L
Excepted quantity: E2

Marine transport (IMDG)

14.1. UN number: UN 1247
14.2. UN proper shipping name: METHYL METHACRYLATE MONOMER, STABILIZED
14.3. Transport hazard class(es): 3
14.4. Packing group: II
Hazard label: 3

Special Provisions: 386
Limited quantity: 1 L
Excepted quantity: E2
EmS: F-E, S-D

Air transport (ICAO-TI/IATA-DGR)

14.1. UN number: UN 1247
14.2. UN proper shipping name: METHYL METHACRYLATE MONOMER, STABILIZED
14.3. Transport hazard class(es): 3
14.4. Packing group: II
Hazard label: 3

Special Provisions: A209
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 3: 2-hydroxyethyl methacrylate
2010/75/EU (VOC): 1,216 %
2004/42/EC (VOC): 1,216 %
Information according to 2012/18/EU (SEVESO III):
P5c FLAMMABLE LIQUIDS

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): 3 - strongly hazardous to water
Skin resorption/Sensitization: Causes allergic hypersensitivity reactions.

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%
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)
Classification for mixtures and used evaluation method according to Regulation (EC) No. 1272/2008 [CLP]

<table>
<thead>
<tr>
<th>Classification</th>
<th>Classification procedure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flam. Liq. 2; H225</td>
<td>On basis of test data</td>
</tr>
<tr>
<td>Skin Irrit. 2; H315</td>
<td>Calculation method</td>
</tr>
<tr>
<td>Skin Sens. 1; H317</td>
<td>Calculation method</td>
</tr>
<tr>
<td>STOT SE 3; H335</td>
<td>Calculation method</td>
</tr>
</tbody>
</table>

Relevant H and EUH statements (number and full text)

- H225: Highly flammable liquid and vapour.
- H302: Harmful if swallowed.
- H312: Harmful in contact with skin.
- H315: Causes skin irritation.
- H317: May cause an allergic skin reaction.
- H319: Causes serious eye irritation.
- H335: May cause respiratory irritation.
- H412: Harmful to aquatic life with long lasting effects.

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.)