1. Identification

Product identifier
VITACOLL

Recommended use of the chemical and restrictions on use
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
E-mail: info@vita-zahnfabrik.com
Internet: www.vita-zahnfabrik.com

Emergency phone number:
+49-(0)761-19240

Further Information
medical device

2. Hazard(s) identification

Classification of the chemical
29 CFR Part 1910.1200
Flammable liquids: Flam. Liq. 2
Skin corrosion/irritation: Skin Irrit. 2
Serious eye damage/eye irritation: Eye Irrit. 2A
Respiratory or skin sensitization: Skin Sens. 1
Specific target organ toxicity single exposure: STOT SE 3 (narcotic effects)
Specific target organ toxicity single exposure: STOT SE 3 (respiratory tract irritation)

Label elements
29 CFR Part 1910.1200
Signal word: Danger

Pictograms:

Hazard statements
Highly flammable liquid and vapor
Causes skin irritation
May cause an allergic skin reaction
Causes serious eye irritation
May cause respiratory irritation
May cause drowsiness or dizziness

Precautionary statements
Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
Avoid breathing dust/fume/gas/mist/vapors/spray.
Wear protective gloves/protective clothing/eye protection/face protection.
Keep container tightly closed.
Store in a well-ventilated place. Keep cool.
### 3. Composition/information on ingredients

#### Mixtures

**Hazardous components**

<table>
<thead>
<tr>
<th>CAS No</th>
<th>Components</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>78-93-3</td>
<td>butanone; ethyl methyl ketone</td>
<td>49.99 %</td>
</tr>
<tr>
<td>80-62-6</td>
<td>methyl methacrylate</td>
<td>49.95 %</td>
</tr>
</tbody>
</table>

### 4. First-aid measures

#### 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 skin, wash immediately with plenty of water and soap.

- **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.

**Most important symptoms and effects, both acute and delayed**

No information available.

**Indication of any 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 chemical**

- Highly flammable. Vapors may 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/stream to protect personnel and to cool endangered containers. Supress 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/fume/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 (PPE): 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/fume/vapour/spray.

Advice on protection against fire and explosion
Keep away from sources of ignition - No smoking. Take precautionary measures against static discharges. Vapors may 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 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.

8. Exposure controls/personal protection

Control parameters

Exposure limits

<table>
<thead>
<tr>
<th>CAS No.</th>
<th>Substance</th>
<th>ppm</th>
<th>mg/m³</th>
<th>f/cc</th>
<th>Category</th>
<th>Origin</th>
</tr>
</thead>
<tbody>
<tr>
<td>78-93-3</td>
<td>2-Butanone (Methyl ethyl ketone)</td>
<td>200</td>
<td>590</td>
<td></td>
<td>TWA (8 h)</td>
<td>PEL</td>
</tr>
<tr>
<td>78-93-3</td>
<td>2-Butanol</td>
<td>200</td>
<td>590</td>
<td></td>
<td>TWA (8 h)</td>
<td>REL</td>
</tr>
<tr>
<td></td>
<td></td>
<td>300</td>
<td>885</td>
<td></td>
<td>STEL (15 min)</td>
<td>REL</td>
</tr>
<tr>
<td>80-62-6</td>
<td>Methyl methacrylate</td>
<td>100</td>
<td>410</td>
<td></td>
<td>TWA (8 h)</td>
<td>PEL</td>
</tr>
<tr>
<td></td>
<td></td>
<td>100</td>
<td>410</td>
<td></td>
<td>TWA (8 h)</td>
<td>REL</td>
</tr>
</tbody>
</table>

Exposure controls

Appropriate engineering controls
If handled uncovered, arrangements with local exhaust ventilation have to be used. Do not breathe gas/fume/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/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 Butoject Butyl caoutchouc (butyl rubber)

Breakthrough time (maximum wearing time) 60 min

**Skin protection**

Wear suitable protective clothing.

**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

<table>
<thead>
<tr>
<th>Physical state:</th>
<th>Liquid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Color:</td>
<td>colorless</td>
</tr>
<tr>
<td>Odor:</td>
<td>characteristic</td>
</tr>
</tbody>
</table>

| pH-Value:               | not determined |

**Changes in the physical state**

| Melting point/freezing point: | not determined |
| Initial boiling point and boiling range: | 79 °C |
| Flash point: | < 12 °C |

**Flammability**

| Solid: | not applicable |
| Gas: | not applicable |

**Explosive properties**

The product is not: Explosive.

| Lower explosion limits: | 1,8 vol. % |
| Upper explosion limits: | 12,5 vol. % |
| Ignition temperature: | 430 °C |

**Auto-ignition temperature**

| Solid: | not applicable |
| Gas: | not applicable |

**Decomposition temperature:**

not determined

**Oxidizing properties**

Not oxidising.

| Vapor pressure: | <=1100 hPa |
| Density: | 0,87200 g/cm³ |
| Water solubility: | No |

**Solubility in other solvents**

not determined

| Partition coefficient: | not determined |
| Vapor 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. Vapors may 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>Components</th>
<th>Exposure route</th>
<th>Dose</th>
<th>Species</th>
<th>Source</th>
<th>Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>78-93-3</td>
<td>butanone; ethyl methyl ketone</td>
<td>dermal</td>
<td>LD50</td>
<td>5000</td>
<td>mg/kg</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>mg/kg</td>
<td></td>
</tr>
</tbody>
</table>

Irritation and corrosivity
Causes skin irritation
Causes serious eye irritation

Sensitizing effects
May cause an allergic skin reaction (methyl methacrylate)

Carcinogenic/mutagenic/toxic effects for reproduction
Based on available data, the classification criteria are not met.

Specific target organ toxicity (STOT) - single exposure
May cause respiratory irritation (methyl methacrylate)
May cause drowsiness or dizziness (butanone; ethyl methyl ketone)

Specific target organ toxicity (STOT) - repeated exposure
Based on available data, the classification criteria are not met.

Carcinogenicity (OSHA): No ingredient of this mixture is listed.
Carcinogenicity (IARC): Methyl methacrylate (CAS 80-62-6) is listed in group 3.
Carcinogenicity (NTP): No ingredient of this mixture is listed.
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].

12. Ecological information

Ecotoxicity
The product is not: Ecotoxic.

Persistence and degradability
The product has not been tested.

Bioaccumulative potential
The product has not been tested.

Mobility in soil
The product has not been tested.

Other adverse effects
No information available.

Further information
Avoid release to the environment.

13. Disposal considerations

Waste treatment methods

Disposal recommendations
Do not allow to enter into surface water or drains. Dispose of waste according to applicable legislation.

Contaminated packaging
Handle contaminated packages in the same way as the substance itself.

14. Transport information

Marine transport (IMDG)

UN number: UN 1993
UN proper shipping name: FLAMMABLE LIQUID, N.O.S. (methyl methacrylate; butanone; ethyl methyl ketone)
Transport hazard class(es): 3
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)

UN number: UN 1993
UN proper shipping name: FLAMMABLE LIQUID, N.O.S. (methyl methacrylate; butanone; ethyl methyl ketone)
Transport hazard class(es): 3
Packing group: II
VITACOLL

Revision date: 30.07.2019

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: no

Special precautions for user
- Warning: Combustible liquid.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
- not applicable

15. Regulatory information

U.S. Regulations

National regulatory information
- SARA Section 304 CERCLA:
  - Methyl ethyl ketone (78-93-3): Reportable quantity = 5,000 (2270) lbs. (kg)
  - Methyl methacrylate (80-62-6): Reportable quantity = 1,000 (454) lbs. (kg)

SARA Section 311/312 Hazards:
- Methyl ethyl ketone (78-93-3): Fire hazard, Immediate (acute) health hazard
- Methyl methacrylate (80-62-6): Fire hazard, Immediate (acute) health hazard

SARA Section 313 Toxic release inventory:
- Methyl methacrylate (80-62-6): De minimis limit = 1.0 %, Reportable threshold = Standard

Clean Air Act Section 112(b):
- Methyl ethyl ketone (78-93-3), Methyl methacrylate (80-62-6)

State Regulations
- Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65, State of California)
  - This product can not expose you to chemicals known to the State of California to cause cancer, birth defects or other reproductive harm.

16. Other information

Revision date: 30.07.2019

Revision No: 2

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%
<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>LD50</td>
<td>Lethal dose, 50%</td>
</tr>
<tr>
<td>CLP</td>
<td>Classification, labelling and Packaging</td>
</tr>
<tr>
<td>REACH</td>
<td>Registration, Evaluation and Authorization of Chemicals</td>
</tr>
<tr>
<td>GHS</td>
<td>Globally Harmonised System of Classification, Labelling and Packaging of Chemicals</td>
</tr>
<tr>
<td>UN</td>
<td>United Nations</td>
</tr>
<tr>
<td>DNEL</td>
<td>Derived No Effect Level</td>
</tr>
<tr>
<td>DMEL</td>
<td>Derived Minimal Effect Level</td>
</tr>
<tr>
<td>PNEC</td>
<td>Predicted No Effect Concentration</td>
</tr>
<tr>
<td>ATE</td>
<td>Acute toxicity estimate</td>
</tr>
<tr>
<td>LL50</td>
<td>Lethal loading, 50%</td>
</tr>
<tr>
<td>EL50</td>
<td>Effect loading, 50%</td>
</tr>
<tr>
<td>EC50</td>
<td>Effective Concentration 50%</td>
</tr>
<tr>
<td>ErC50</td>
<td>Effective Concentration 50%, growth rate</td>
</tr>
<tr>
<td>NOEC</td>
<td>No Observed Effect Concentration</td>
</tr>
<tr>
<td>BCF</td>
<td>Bio-concentration factor</td>
</tr>
<tr>
<td>PBT</td>
<td>persistent, bioaccumulative, toxic</td>
</tr>
<tr>
<td>vPvB</td>
<td>very persistent, very bioaccumulative</td>
</tr>
<tr>
<td>RID</td>
<td>Regulations concerning the international carriage of dangerous goods by rail</td>
</tr>
<tr>
<td>ADN</td>
<td>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)</td>
</tr>
<tr>
<td>EmS</td>
<td>Emergency Schedules</td>
</tr>
<tr>
<td>MFA:</td>
<td>Medical First Aid Guide</td>
</tr>
<tr>
<td>ICAO</td>
<td>International Civil Aviation Organization</td>
</tr>
<tr>
<td>MARPOL</td>
<td>International Convention for the Prevention of Marine Pollution from Ships</td>
</tr>
<tr>
<td>IBC</td>
<td>Intermediate Bulk Container</td>
</tr>
<tr>
<td>SVHC</td>
<td>Substance of Very High Concern</td>
</tr>
</tbody>
</table>

For abbreviations and acronyms, see table at http://abbrev.esdscom.eu

**Other data**

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.)*