1. Identification

Product identifier
VITA ZETA HLC BOND

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
Telefax: +49(0)7761-562-299
E-mail: info@vita-zahnfabrik.com
Internet: www.vita-zahnfabrik.com

Further Information
medical device

2. Hazard(s) identification

Classification of the chemical
29 CFR Part 1910.1200
This mixture is not classified as hazardous in accordance with Regulation 29 CFR 1910.1200(d).

Label elements

Hazards not otherwise classified
No information available.

3. Composition/information on ingredients

Mixtures

4. First-aid measures

Description of first aid measures

After contact with eyes
Rinse immediately carefully and thoroughly with eye-bath or water.

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
Co-ordinate fire-fighting measures to the fire surroundings.

Specific hazards arising from the chemical
Non-flammable.
Special protective equipment and precautions for fire-fighters

In case of fire: Wear self-contained breathing apparatus.

Additional information
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
Avoid dust formation. Do not breathe dust.

Environmental precautions
Do not allow to enter into surface water or drains.

Methods and material for containment and cleaning up
Take up mechanically. 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
No special measures are necessary.

Advice on protection against fire and explosion
No special fire protection measures are necessary.

Conditions for safe storage, including any incompatibilities
Requirements for storage rooms and vessels
Keep container tightly closed.

Hints on joint storage
No special measures are necessary.

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>13463-67-7</td>
<td>Titanium dioxide Total dust</td>
<td>-</td>
<td>15</td>
<td></td>
<td>TWA (8 h)</td>
<td>PEL</td>
</tr>
</tbody>
</table>

Exposure controls

Protective and hygiene measures
Take off contaminated clothing. Wash hands before breaks and after work. When using do not eat or drink.

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 NBR (Nitrile rubber) KCL Dermatril P

**Skin protection**
- Wear suitable protective clothing.

**Respiratory protection**
- Provide adequate ventilation as well as local exhaustion at critical locations. Technical ventilation of workplace

### 9. Physical and chemical properties

#### Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical state</td>
<td>solid</td>
</tr>
<tr>
<td>Color</td>
<td>characteristic</td>
</tr>
<tr>
<td>pH-Value</td>
<td>not determined</td>
</tr>
</tbody>
</table>

**Changes in the physical state**

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Melting point/freezing point</td>
<td>not determined</td>
</tr>
<tr>
<td>Initial boiling point and boiling range:</td>
<td>not applicable</td>
</tr>
<tr>
<td>Flash point</td>
<td>not applicable</td>
</tr>
</tbody>
</table>

**Flammability**

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Solid</td>
<td>not determined</td>
</tr>
<tr>
<td>Gas</td>
<td>not applicable</td>
</tr>
</tbody>
</table>

**Lower explosion limits**

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>not determined</td>
<td></td>
</tr>
</tbody>
</table>

**Upper explosion limits**

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>not determined</td>
<td></td>
</tr>
</tbody>
</table>

**Auto-ignition temperature**

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Solid</td>
<td>not determined</td>
</tr>
<tr>
<td>Gas</td>
<td>not applicable</td>
</tr>
</tbody>
</table>

**Decomposition temperature**

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>not determined</td>
<td></td>
</tr>
</tbody>
</table>

**Oxidizing properties**

- Not oxidising.

**Vapor pressure**

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>not determined</td>
<td></td>
</tr>
</tbody>
</table>

**Density**

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>not determined</td>
<td></td>
</tr>
</tbody>
</table>

**Water solubility**

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>No</td>
<td></td>
</tr>
</tbody>
</table>

**Solubility in other solvents**

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>not determined</td>
<td></td>
</tr>
</tbody>
</table>

**Partition coefficient**

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>not determined</td>
<td></td>
</tr>
</tbody>
</table>

**Vapor density**

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>not determined</td>
<td></td>
</tr>
</tbody>
</table>

**Evaporation rate**

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>not determined</td>
<td></td>
</tr>
</tbody>
</table>

**Other information**

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Solid content:</td>
<td>100,0 %</td>
</tr>
</tbody>
</table>

### 10. Stability and reactivity

**Reactivity**

- No hazardous reaction when handled and stored according to provisions.

**Chemical stability**

- The product is stable under storage at normal ambient temperatures.
10. Possibility of hazardous reactions
No known hazardous reactions.

10.3 Conditions to avoid
none/none

10.4 Incompatible materials
No information available.

10.5 Hazardous decomposition products
No known hazardous decomposition products.

11. Toxicological information

11.1 Information on toxicological effects

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

11.1.2 Irritation and corrosivity
Based on available data, the classification criteria are not met.

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

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

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

11.1.6 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): Titanium dioxide (CAS 13463-67-7) is listed in group 2B.
Carcinogenicity (NTP): No ingredient of this mixture is listed.

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

12. Ecological information

12.1 Ecotoxicity
Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

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.

13. Disposal considerations

13.1 Waste treatment methods

13.1.1 Disposal recommendations
Do not allow to enter into surface water or drains. Do not allow to enter into soil/subsoil. Dispose of waste
Contaminated packaging
Non-contaminated packages may be recycled. 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>UN 3077</th>
</tr>
</thead>
<tbody>
<tr>
<td>UN proper shipping name:</td>
<td>ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (zinc oxide)</td>
</tr>
<tr>
<td>Transport hazard class(es):</td>
<td>9</td>
</tr>
<tr>
<td>Packing group:</td>
<td>III</td>
</tr>
<tr>
<td>Hazard label:</td>
<td>9</td>
</tr>
</tbody>
</table>

Special Provisions: 274, 335, 966, 967, 969
Limited quantity: 5 kg
Excepted quantity: E1
EmS: F-A, S-F

Air transport (ICAO-TI/IATA-DGR)

<table>
<thead>
<tr>
<th>UN number:</th>
<th>UN 3077</th>
</tr>
</thead>
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<tr>
<td>Hazard label:</td>
<td>9</td>
</tr>
</tbody>
</table>

Special Provisions: A97 A158 A179 A197
Limited quantity Passenger: 30 kg G
Passenger LQ: Y956
Excepted quantity: E1
IATA-packing instructions - Passenger: 956
IATA-max. quantity - Passenger: 400 kg
IATA-packing instructions - Cargo: 956
IATA-max. quantity - Cargo: 400 kg

Environmental hazards

| ENVIRONMENTALLY HAZARDOUS: | yes |

Danger releasing substance: zinc oxide

Special precautions for user
No information available.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code not applicable
15. Regulatory information

U.S. Regulations

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: 16.08.2019
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%
LD50: Lethal dose, 50%

Other data
The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material.

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