1. Identification

**Product identifier**

VITAFOL H Paste

**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

2. Hazard(s) identification

**Classification of the chemical**

29 CFR Part 1910.1200

Hazard categories:

- Flammable liquids: Flam. Liq. 2
- Serious eye damage/eye irritation: Eye Irrit. 2A

**Hazard Statements:**

Highly flammable liquid and vapor

Causes serious eye irritation

**Label elements**

29 CFR Part 1910.1200

**Signal word:** Danger

**Pictograms:**

- Flammable liquid
- Serious eye irritation

**Hazard statements**

Highly flammable liquid and vapor

Causes serious eye irritation

**Precautionary statements**

Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

Keep container tightly closed.

Wear protective gloves/protective clothing/eye protection/face protection.

If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

**Hazards not otherwise classified**

No information available.

3. Composition/information on ingredients

**Mixtures**
VITA Zahnfabrik H. Rauter GmbH & Co. KG

Safety Data Sheet

according to 29 CFR 1910.1200(g)

VITAFOL H Paste

Revision date: 02.02.2017

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Product code: 058-US

Hazardous components

<table>
<thead>
<tr>
<th>CAS No</th>
<th>Components</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>108-10-1</td>
<td>4-methylpentan-2-one, isobutyl methyl ketone</td>
<td>13 %</td>
</tr>
</tbody>
</table>

4. First-aid measures

Description of first aid measures

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. Vapours can form explosive mixtures with air.

Special protective equipment and precautions for fire-fighters
In case of fire: Wear self-contained breathing apparatus.

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.

6. Accidental release measures

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.

Environmental precautions
Do not allow uncontrolled discharge of product into the environment. Danger of explosion

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: 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
Keep away from sources of ignition. - No smoking. Take precautionary measures against static discharges.
Vapours can form explosive mixtures with air.

Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels
Keep container tightly closed. Keep in a cool, well-ventilated place. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

Advice on storage compatibility
Do not store together with: Oxidising 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>108-10-1</td>
<td>Hexone (Methyl isobutyl ketone)</td>
<td>100</td>
<td>410</td>
<td>TWA (8 h)</td>
<td>PEL</td>
<td></td>
</tr>
<tr>
<td>108-10-1</td>
<td>Hexone</td>
<td>50</td>
<td>205</td>
<td>TWA (8 h)</td>
<td>REL</td>
<td></td>
</tr>
<tr>
<td>108-10-1</td>
<td>Methyl isobutyl ketone</td>
<td>75</td>
<td>300</td>
<td>STEL (15 min)</td>
<td>REL</td>
<td></td>
</tr>
</tbody>
</table>

Biological Exposure Indices (BEI-ACGIH)

<table>
<thead>
<tr>
<th>CAS No.</th>
<th>Substance</th>
<th>Determinant</th>
<th>Value</th>
<th>Test material</th>
<th>Sampling time</th>
</tr>
</thead>
<tbody>
<tr>
<td>108-10-1</td>
<td>METHYL ISOBUTYL KETONE</td>
<td>Methyl isobutyl ketone</td>
<td>1 mg/L</td>
<td>urine</td>
<td>End of shift</td>
</tr>
</tbody>
</table>

Exposure controls

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 or drink.

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 Butoject Butyl caoutchouc (butyl rubber)
Breakthrough time (maximum wearing time) 60 min
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>liquid</td>
</tr>
<tr>
<td>Color</td>
<td>white</td>
</tr>
<tr>
<td>Odor</td>
<td>characteristic</td>
</tr>
<tr>
<td>pH-Value</td>
<td>not determined</td>
</tr>
<tr>
<td>Changes in the physical state</td>
<td></td>
</tr>
<tr>
<td>Melting point/freezing point</td>
<td>not determined</td>
</tr>
<tr>
<td>Initial boiling point and boiling range</td>
<td>102 °C</td>
</tr>
<tr>
<td>Flash point</td>
<td>18 °C</td>
</tr>
<tr>
<td>Flammability</td>
<td></td>
</tr>
<tr>
<td>Solid</td>
<td>not applicable</td>
</tr>
<tr>
<td>Gas</td>
<td>not applicable</td>
</tr>
<tr>
<td>Lower explosion limits</td>
<td>1.7 vol. %</td>
</tr>
<tr>
<td>Upper explosion limits</td>
<td>9 vol. %</td>
</tr>
<tr>
<td>Ignition temperature</td>
<td>460 °C</td>
</tr>
<tr>
<td>Auto-ignition temperature</td>
<td></td>
</tr>
<tr>
<td>Solid</td>
<td>not applicable</td>
</tr>
<tr>
<td>Gas</td>
<td>not applicable</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>not determined</td>
</tr>
<tr>
<td>Oxidizing properties</td>
<td></td>
</tr>
<tr>
<td>Not oxidizing</td>
<td></td>
</tr>
<tr>
<td>Vapor pressure</td>
<td>&lt;=1100 hPa</td>
</tr>
<tr>
<td>(at 50 °C)</td>
<td></td>
</tr>
<tr>
<td>Density</td>
<td>not determined</td>
</tr>
<tr>
<td>Water solubility</td>
<td>No</td>
</tr>
<tr>
<td>Solubility in other solvents</td>
<td>not determined</td>
</tr>
<tr>
<td>Partition coefficient</td>
<td>not determined</td>
</tr>
<tr>
<td>Vapor density</td>
<td>not determined</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>not determined</td>
</tr>
<tr>
<td>Other information</td>
<td></td>
</tr>
<tr>
<td>Solid content</td>
<td>87,0 %</td>
</tr>
</tbody>
</table>

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. Vapours can 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>108-10-1</td>
<td>4-methylpentan-2-one, isobutyl methyl ketone</td>
<td>dermal</td>
<td>LD50</td>
<td>16000 mg/kg</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>inhalative vapour</td>
<td>ATE</td>
<td>11 mg/l</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>inhalative aerosol</td>
<td>ATE</td>
<td>1,5 mg/l</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Irritation and corrosivity
Causes serious eye irritation
Skin corrosion/irritation: Based on available data, the classification criteria are not met.

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

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

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

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 isobutyl ketone (CAS 108-10-1) is listed in group 2B.
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
This 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**

**Advice on disposal**
- 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 1245
- **UN proper shipping name:** METHYL ISOBUTYL KETONE
- **Transport hazard class(es):** 3
- **Packing group:** II
- **Hazard label:** 3

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

**Air transport (ICAO-TI/IATA-DGR)**

- **UN number:** UN 1245
- **UN proper shipping name:** METHYL ISOBUTYL KETONE
- **Transport hazard class(es):** 3
- **Packing group:** II
- **Hazard label:** 3

- 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**
ENVIROMENTALLY 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 isobutyl ketone (108-10-1): Reportable quantity = 5,000 (2270) lbs. (kg)
SARA Section 311/312 Hazards:
  Methyl isobutyl ketone (108-10-1): Fire hazard, Immediate (acute) health hazard
SARA Section 313 Toxic release inventory:
  Methyl isobutyl ketone (108-10-1): De minimis limit = 1.0 %, Reportable threshold = Standard
Clean Air Act Section 112(b):
  Methyl isobutyl ketone (108-10-1)

State Regulations
Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65, State of California)
WARNING: This product contains the following chemical(s) known to the State of California to cause cancer,
birth defects or other reproductive harm: Methyl isobutyl ketone (MIBK) (cancer, developmental).

16. Other information

Revision date: 02.02.2017
Revision No: 1

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.)