

## Safety Data Sheet

according to WHMIS

### VITAFOL H Hardener

Revision date: 02.02.2017

Product code: 059-CA

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## 1. Identification

### Product identifier

VITAFOL H Hardener

### Relevant identified uses of the substance or mixture and uses advised against

#### 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 &amp; Co. KG

Post-office box: 1338

79704 Bad Säckingen

Telephone: +49(0)7761-562-0

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e-mail: info@vita-zahnfabrik.com

Internet: www.vita-zahnfabrik.com

**Emergency telephone number:** +49-(0)761-19240

## 2. Hazard identification

### Classification of the substance or mixture

#### WHMIS 2015

Hazard categories:

Flammable liquid: Flam. Liq. 3

Acute toxicity: Acute Tox. 4

Serious eye damage/eye irritation: Eye Irrit. 2A

Specific target organ toxicity - single exposure: STOT SE 3

Specific target organ toxicity - repeated exposure: STOT RE 2

Hazard Statements:

Flammable liquid and vapour.

Harmful if inhaled.

Causes serious eye irritation.

May cause respiratory irritation.

May cause damage to organs through prolonged or repeated exposure.

### Label elements

#### WHMIS 2015

**Signal word:** Warning**Pictograms:**

#### Hazard statements

Flammable liquid and vapour.

Causes serious eye irritation.

Harmful if inhaled.

May cause respiratory irritation.

May cause damage to organs through prolonged or repeated exposure.

#### Precautionary statements

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

Keep container tightly closed.

Do not breathe dust/fume/gas/mist/vapours/spray.

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

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IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].  
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

#### Other hazards

No information available.

### 3. Composition/information on ingredients

#### Mixtures

##### **Hazardous components**

CAS No	Chemical name	Quantity
78-10-4	ethyl silicate, tetraethyl silicate	85 - < 90 %
93925-43-0	Kieselsäure, Tetraethylester, Reaktionsprodukt mit Bis(acetyloxy)dioctylstannan	10 - < 15 %
68299-15-0	Bis(neodecanoyloxy)dioctylstannan	1 - < 5 %

### 4. First-aid measures

#### Description of first aid measures

##### **After inhalation**

Provide fresh air. 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. Induce vomiting when the affected person is not unconscious. Medical treatment necessary.

#### Indication of immediate medical attention and special treatment needed

Treat symptomatically.

### 5. Fire-fighting measures

#### Extinguishing media

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

Carbon dioxide (CO<sub>2</sub>), Foam, Extinguishing powder.

##### **Unsuitable extinguishing media**

Water.

#### Specific hazards arising from the hazardous product

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.

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#### 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**

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.

#### 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.

##### **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 (ACGIH)**

CAS No	Chemical name	ppm	mg/m <sup>3</sup>	F/ml	Category	Origin
78-10-4	Ethyl silicate	10			TWA (8 h)	ACGIH-2016

#### 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 or drink.

#### **Eye/face protection**

Suitable eye protection: goggles.

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#### 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 KCK Dermatril P NBR (Nitrile rubber)  
Breakthrough time (maximum wearing time) 30 min

#### Skin protection

Wear suitable protective clothing.

#### Respiratory protection

Technical ventilation of workplace Provide adequate ventilation as well as local exhaust at critical locations.

## 9. Physical and chemical properties

### Information on basic physical and chemical properties

Physical state:	liquid
Colour:	light red
Odour:	characteristic

#### Test method

pH-Value:	not determined
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#### Changes in the physical state

Melting point:	not determined
Initial boiling point and boiling range:	166 °C
Flash point:	37 °C

#### Flammability

Solid:	not applicable
Gas:	not applicable

Lower explosive limits:	not determined
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Upper explosive limits:	not determined
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#### Auto-ignition temperature

Solid:	not applicable
Gas:	not applicable

Decomposition temperature:	not determined
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#### Oxidizing properties

Not oxidizing.

Vapour pressure: (at 50 °C)	<=1100 hPa
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Density:	not determined
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Water solubility:	No
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#### Solubility in other solvents

not determined

Partition coefficient:	not determined
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Vapour density:	not determined
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Evaporation rate:	not determined
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### Other information

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Solid content:

0,0 %

## 10. Stability and reactivity

### 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

Harmful if inhaled.

CAS No	Chemical name				
	Route of exposure	Dose	Species	Source	Method
78-10-4	ethyl silicate, tetraethyl silicate				
	dermal	LD50 mg/kg	5860		
	inhalative vapour	ATE	11 mg/l		
	inhalative aerosol	ATE	1,5 mg/l		

#### 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.

#### STOT-single exposure

May cause respiratory irritation. (ethyl silicate, tetraethyl silicate)

#### STOT-repeated exposure

May cause damage to organs through prolonged or repeated exposure. (Kieselsäure, Tetraethylester, Reaktionsprodukt mit Bis(acetyloxy)dioctylstannan; Bis(neodecanoyloxy)dioctylstannan)

#### 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.

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#### Mobility in soil

The product has not been tested.

#### 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.

### 13. Disposal considerations

#### Waste treatment methods

##### **Advice on disposal**

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**

This material and its container must be disposed of as hazardous waste. Handle contaminated packages in the same way as the substance itself.

### 14. Transport information

#### **Marine transport (IMDG)**

<b><u>UN number:</u></b>	UN 1292
<b><u>United Nations proper shipping name:</u></b>	TETRAETHYL SILICATE
<b><u>Transport hazard class(es):</u></b>	3
<b><u>Packing group:</u></b>	III
Hazard label:	3



Limited quantity:	5 L
Excepted quantity:	E1
EmS:	F-E, S-D

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

<b><u>UN number:</u></b>	UN 1292
<b><u>United Nations proper shipping name:</u></b>	TETRAETHYL SILICATE
<b><u>Transport hazard class(es):</u></b>	3
<b><u>Packing group:</u></b>	III
Hazard label:	3



Limited quantity Passenger:	10 L
Passenger LQ:	Y344
Excepted quantity:	E1
IATA-packing instructions - Passenger:	355
IATA-max. quantity - Passenger:	60 L
IATA-packing instructions - Cargo:	366
IATA-max. quantity - Cargo:	220 L

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#### Environmental hazards

ENVIRONMENTALLY HAZARDOUS: no

#### 15. Regulatory information

##### Canadian regulations

#### 16. Other information

##### **Further Information**

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.)*