

Safety Data Sheet

according to Regulation (EC) No 1907/2006

VITAFOL H Hardener

Revision date: 02.02.2017

Product code: 059-CLP

Page 1 of 9

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

1.1. Product identifier

VITAFOL H Hardener

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. 3

Acute toxicity: Acute Tox. 4

Serious eye damage/eye irritation: Eye Irrit. 2

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.

2.2. Label elements

Regulation (EC) No. 1272/2008

Hazard components for labelling

ethyl silicate, tetraethyl silicate

Kieselsäure, Tetraethylester, Reaktionsprodukt mit Bis(acetyloxy)dioctylstannan

Signal word: Warning

Pictograms:



Hazard statements

H226 Flammable liquid and vapour.

H319 Causes serious eye irritation.

H332 Harmful if inhaled.

H335 May cause respiratory irritation.

H373 May cause damage to organs through prolonged or repeated exposure.

Safety Data Sheet

according to Regulation (EC) No 1907/2006

VITAFOL H Hardener

Revision date: 02.02.2017

Product code: 059-CLP

Page 2 of 9

Precautionary statements

- P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
- P233 Keep container tightly closed.
- P260 Do not breathe dust/fume/gas/mist/vapours/spray.
- P280 Wear protective gloves/protective clothing/eye protection/face protection.
- P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
- P337+P313 If eye irritation persists: Get medical advice/attention.

2.3. Other hazards

No information available.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Hazardous components

| CAS No | Chemical name | | | Quantity |
|------------|---|--------------|------------------|-------------|
| | EC No | Index No | REACH No | |
| | Classification according to Regulation (EC) No. 1272/2008 [CLP] | | | |
| 78-10-4 | ethyl silicate, tetraethyl silicate | | | 85 - < 90 % |
| | 201-083-8 | 014-005-00-0 | 01-2119496195-28 | |
| | Flam. Liq. 3, Acute Tox. 4, Eye Irrit. 2, STOT SE 3; H226 H332 H319 H335 | | | |
| 93925-43-0 | Kieselsäure, Tetraethylester, Reaktionsprodukt mit Bis(acetyloxy)dioctylstannan | | | 10 - < 15 % |
| | | | | |
| | STOT RE 2, Aquatic Chronic 4; H373 H413 | | | |
| 68299-15-0 | Bis(neodecanoyloxy)dioctylstannan | | | 1 - < 5 % |
| | 269-595-4 | | | |
| | STOT RE 2, Aquatic Chronic 4; H373 H413 | | | |

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. 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.

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

Safety Data Sheet

according to Regulation (EC) No 1907/2006

VITAFOL H Hardener

Revision date: 02.02.2017

Product code: 059-CLP

Page 3 of 9

Suitable extinguishing media

Carbon dioxide (CO₂), Foam, Extinguishing powder.

Unsuitable extinguishing media

Water.

5.2. Special hazards arising from the substance or mixture

Flammable. Vapours can form explosive mixtures with air.

5.3. Advice for firefighters

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.

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. Danger of explosion

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 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.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Safety Data Sheet

according to Regulation (EC) No 1907/2006

VITAFOL H Hardener

Revision date: 02.02.2017

Product code: 059-CLP

Page 4 of 9

Occupational exposure limits

| CAS No | Substance | ppm | mg/m ³ | fib/cm ³ | Category | Origin |
|---------|--------------------------|-----|-------------------|---------------------|---------------|--------|
| 78-10-4 | Tetraethyl orthosilicate | 10 | 85 | | TWA (8 h) | |
| | | 30 | 255 | | STEL (15 min) | |

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 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 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.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

| | | |
|-----------------|----------------|----------------|
| Physical state: | liquid | |
| Colour: | light red | |
| Odour: | characteristic | |
| pH-Value: | | not determined |

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 explosion limits: | not determined |
| Upper explosion limits: | not determined |

Safety Data Sheet

according to Regulation (EC) No 1907/2006

VITAFOL H Hardener

Revision date: 02.02.2017

Product code: 059-CLP

Page 5 of 9

Auto-ignition temperature

Solid: not applicable
Gas: not applicable

Decomposition temperature: not determined

Oxidizing properties

Not oxidizing.

Vapour pressure: <=1100 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

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

Harmful if inhaled.

ATEmix calculated

ATE (inhalative vapour) 12,69 mg/l; ATE (inhalative aerosol) 1,730 mg/l

Safety Data Sheet

according to Regulation (EC) No 1907/2006

VITAFOL H Hardener

Revision date: 02.02.2017

Product code: 059-CLP

Page 6 of 9

| CAS No | Chemical name | | | | |
|---------|-------------------------------------|---------------|----------|--------|--------|
| | Exposure route | 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.

Sensitising 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)

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].

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.

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

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

Safety Data Sheet

according to Regulation (EC) No 1907/2006

VITAFOL H Hardener

Revision date: 02.02.2017

Product code: 059-CLP

Page 7 of 9

same way as the substance itself.

SECTION 14: Transport information

Land transport (ADR/RID)

14.1. UN number: UN 1292
14.2. UN proper shipping name: TETRAETHYL SILICATE
14.3. Transport hazard class(es): 3
14.4. Packing group: III
 Hazard label: 3



Classification code: F1
 Limited quantity: 5 L
 Excepted quantity: E1
 Transport category: 3
 Hazard No: 30
 Tunnel restriction code: D/E

Inland waterways transport (ADN)

14.1. UN number: UN 1292
14.2. UN proper shipping name: TETRAETHYL SILICATE
14.3. Transport hazard class(es): 3
14.4. Packing group: III
 Hazard label: 3



Classification code: F1
 Limited quantity: 5 L
 Excepted quantity: E1

Marine transport (IMDG)

14.1. UN number: UN 1292
14.2. UN proper shipping name: TETRAETHYL SILICATE
14.3. Transport hazard class(es): 3
14.4. Packing group: III
 Hazard label: 3



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

Air transport (ICAO-TI/IATA-DGR)

14.1. UN number: UN 1292
14.2. UN proper shipping name: TETRAETHYL SILICATE
14.3. Transport hazard class(es): 3

Safety Data Sheet

according to Regulation (EC) No 1907/2006

VITAFOL H Hardener

Revision date: 02.02.2017

Product code: 059-CLP

Page 8 of 9

14.4. Packing group:

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

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

National regulatory information

Employment restrictions:

Observe restrictions to employment for juvenils according to the 'juvenile work protection guideline' (94/33/EC). Observe employment restrictions under the Maternity Protection Directive (92/85/EEC) for expectant or nursing mothers.

Water contaminating class (D):

2 - water contaminating

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%

Relevant H and EUH statements (number and full text)

H226 Flammable liquid and vapour.

H319 Causes serious eye irritation.

H332 Harmful if inhaled.

H335 May cause respiratory irritation.

H373 May cause damage to organs through prolonged or repeated exposure.

H413 May cause long lasting harmful effects to aquatic life.

Safety Data Sheet

according to Regulation (EC) No 1907/2006

VITAFOL H Hardener

Revision date: 02.02.2017

Product code: 059-CLP

Page 9 of 9

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.)