

VITAFOL H Hardener

Revision date: 02.02.2017

Product code: 059-CN

Page 1 of 8

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

GB 30000-2013

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.

2.2. Label elements

GB 30000-2013

Hazard components for labelling

ethyl silicate, tetraethyl silicate

Kieselsäure, Tetraethylester, Reaktionsprodukt mit Bis(acetyloxy)dioctylstannan

Bis(neodecanoyloxy)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

VITAFOL H Hardener

Revision date: 02.02.2017

Product code: 059-CN

Page 2 of 8

Precautionary statements

- P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
- P260 Do not breathe dust/fume/gas/mist/vapours/spray.
- P280 Wear protective gloves/protective clothing/eye protection/face protection.
- P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- 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)diocetylstannan			10 - < 15 %
	STOT RE 2, Aquatic Chronic 4; H373 H413			
68299-15-0	Bis(neodecanoyloxy)diocetylstannan			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

VITAFOL H Hardener

Revision date: 02.02.2017

Product code: 059-CN

Page 3 of 8

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

8.2. Exposure controls

VITAFOL H Hardener

Revision date: 02.02.2017

Product code: 059-CN

Page 4 of 8



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 exhaustion 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

Test method

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

Auto-ignition temperature

Solid: not applicable

Gas: not applicable

Decomposition temperature: not determined

VITAFOL H Hardener

Revision date: 02.02.2017

Product code: 059-CN

Page 5 of 8

Oxidizing properties

Not oxidizing.

Vapour pressure:
(at 50 °C)

<=1100 hPa

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

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		

VITAFOL H Hardener

Revision date: 02.02.2017

Product code: 059-CN

Page 6 of 8

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; 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].

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 same way as the substance itself.

SECTION 14: Transport information

Land transport (ADR/RID)

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

Safety Data Sheet

VITAFOL H Hardener

Revision date: 02.02.2017

Product code: 059-CN

Page 7 of 8

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
14.4. Packing group: III
 Hazard label: 3



Limited quantity Passenger: 10 L
 Passenger LQ: Y344
 Excepted quantity: E1

Safety Data Sheet

VITAFOL H Hardener

Revision date: 02.02.2017

Product code: 059-CN

Page 8 of 8

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.

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.)