

# EG-MATERIAL SAFETY DATA SHEET



according to 1907/2006/EC, Article 31  
Revision: 21.02.2023

Version number 3

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Date of issue: 10.05.2023

**Silaform® hardener**

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

### 1.1 Product identifier

Commercial product name: Silaform® hardener

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

Application of the substance / the mixture: Technical activator for C-silicones

### 1.3 Details of the supplier of the safety data sheet

Manufacturer/Supplier:	SILADENT Dr. Böhme & Schöps GmbH	
Street / mailbox:	Im Klei 26	Ultimate Dental Supply
Country code. / postal code / city:	DE - 38644 Goslar	660A South Rd
Phone:	Tel.: +49 (0) 53 21 / 37 79 – 0	MOORABBIN VIC 3189
Fax:	Fax: +49 (0) 53 21 / 38 96 32	Tel: 03 9532 1799
E-mail / Website:	<a href="mailto:info@siladent.de">info@siladent.de</a> - <a href="http://www.siladent.de">www.siladent.de</a>	<a href="mailto:info@ultimatedental.com.au">info@ultimatedental.com.au</a>
Further information obtainable from:	SILADENT Dr. Böhme & Schöps GmbH	

### 1.4 Emergency telephone number

SILADENT Dr. Böhme & Schöps GmbH	Tel: +49 (0) 53 21 / 37 79 – 0 Mon - Fri 8am to 4pm
AUSTRALIAN EMERGENCY NO.	Tel: 13 11 26 Poisons Hotline 24 hours/ 7 days

## SECTION 2: Hazards identification \*

### 2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008



GHS08 health hazard

Repr. 1B	H360D	May damage the unborn child.
STOT RE 2	H373	May cause damage to the blood through prolonged or repeated exposure. Route of exposure: Oral.



GHS07

Skin Irrit. 2	H315	Causes skin irritation.
Skin Sens. 1	H317	May cause an allergic skin reaction.
Aquatic Chronic 3	H412	Harmful to aquatic life with long lasting effects.

### 2.2 Label elements

**Labelling according to Regulation (EC) No 1272/2008:** The product is classified and labelled according to the CLP regulation.

**Hazard pictograms:**



GHS07 GHS08

**Signal word:**

Danger

**Hazard-determining components of labelling:**

dioctyltin dilaurate  
Dioctylzinnbisacetylacetonat (CAS 54068-28-9)  
Tetrakis(2-butoxyethoxy)silane (CAS 18765-38-3)  
Aroma mixture

### Hazard statements

H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H360D	May damage the unborn child.
H373	May cause damage to the blood through prolonged or repeated exposure. Route of exposure: Oral.

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H412 Harmful to aquatic life with long lasting effects.

## Precautionary statements

P101 If medical advice is needed, have product container or label at hand.  
P102 Keep out of reach of children.  
P103 Read label before use.  
P260 Do not breathe dust/fume/gas/mist/vapours/spray.  
P273 Avoid release to the environment.  
P280 Wear protective gloves.  
P308+P313 IF exposed or concerned: Get medical advice/attention.  
P405 Store locked up.  
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

## Additional information:

Restricted to professional users.

## 2.3 Other hazards

**Results of PBT and vPvB assessment:** This substance/mixture does not contain components classified as either persistent, bioaccumulative and toxic (PBT) or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.  
**PBT:** Not applicable.  
**vPvB:** Not applicable.

## Determination of endocrine-disrupting properties

Endocrine disrupting properties - human health: The substance/mixture does not contain any components that exhibit endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated Regulation (EU) 2017/2100 or Commission Delegated Regulation (EU) 2018/605 in quantities of 0.1% or more.

Endocrine disrupting properties - Environment: The substance/mixture does not contain any components that exhibit endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated Regulation (EU) 2017/2100 or Commission Delegated Regulation (EU) 2018/605 in quantities of 0.1% or more.

## SECTION 3: Composition/information on ingredients

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### 3.2 Mixtures

#### Description:

Mixture of substances listed below with non-hazardous additions.

#### Dangerous components:

	Tetrakis(2-butoxyethoxy)silane (CAS 18765-38-3)	10-25%
	STOT RE 2, H373;  Skin Irrit. 2, H315	
CAS: 3648-18-8 EINECS: 222-883-3 Index number: 050-031-00-9	dioctyltin dilaurate	≥2.5-<10%
	Repr. 1B, H360D; STOT RE 1, H372	
	Diocetylzinnacetylacetonat (CAS 54068-28-9)	≥2.5-<10%
	STOT SE 2, H371;  Skin Sens. 1, H317	
	Kieselsäure Nanoform: Spheroidal, set including amorphous nanoforms, amorphous forms, non-surfacetreated nanoforms	2.5-10%
CAS: 111-76-2 EINECS: 203-905-0 Index number: 603-014-00-0	2-butoxyethanol	0.1-1%
	Acute Tox. 3, H311;  Acute Tox. 4, H302; Acute Tox. 4, H332; Skin Irrit. 2, H315; Eye Irrit. 2, H319 ATE: LD50 oral: 1,200 mg/kg	

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Aroma mixture		≥0.25-<1%
 Flam. Liq. 3, H226;  Asp. Tox. 1, H304;  Aquatic Acute 1, H400; Aquatic Chronic 1, H410;  Skin Irrit. 2, H315; Eye Irrit. 2, H319; Skin Sens. 1, H317		
<b>SVHC</b>		
3648-18-8	dioctyltin dilaurate	

## Additional information:

For the wording of the listed risk phrases refer to section 16.

## SECTION 4: First aid measures

### 4.1 Description of first aid measures

#### General information:

Immediately remove any clothing soiled by the product. Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

#### After inhalation:

Supply fresh air and to be sure call for a doctor. In case of unconsciousness place patient stably in side position for transportation.

#### After skin contact:

Immediately wash with water and soap and rinse thoroughly.

#### After eye contact:

Rinse opened eye for several minutes under running water.

#### After swallowing:

If symptoms persist consult doctor.

### 4.2 Most important symptoms and effects, both acute and delayed:

No further relevant information available.

### 4.3 Indication of any immediate medical attention and special treatment needed:

No further relevant information available.

## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

#### Suitable extinguishing agents:

CO<sub>2</sub>, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

### 5.2 Special hazards arising from the substance or mixture

During heating or in case of fire poisonous gases are produced.

### 5.3 Advice for firefighters Protective equipment:

Mouth respiratory protective device.

## SECTION 6: Accidental release measures

### 6.1 Personal precautions, protective equipment and emergency procedures

Mount respiratory protective device.

### 6.2 Environmental precautions:

Do not allow product to reach sewage system or any water course. Inform respective authorities in case of seepage into water course or sewage system.  
Do not allow to enter sewers/ surface or ground water.

### 6.3 Methods and material for containment and cleaning up:

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

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Dispose contaminated material as waste according to item 13.  
Ensure adequate ventilation.

## 6.4 Reference to other sections

See Section 7 for information on safe handling.  
See Section 8 for information on personal protection equipment.  
See Section 13 for disposal information.

## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

Ensure good ventilation/exhaustion at the workplace.  
Open and handle receptacle with care.  
Prevent formation of aerosols.

**Information about fire - and explosion protection:**

Keep respiratory protective device available.

### 7.2 Conditions for safe storage, including any incompatibilities

**Storage:**

**Requirements to be met by storerooms and receptacles:**

No special requirements.

**Information about storage in one common storage facility:**

Not required.

**Further information about storage conditions:**

Keep container tightly sealed.

### 7.3 Specific end use(s):

No further relevant information available.

## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

**Ingredients with limit values that require monitoring at the workplace**

**111-76-2 2-butoxyethanol**

**IOELV**

Short-term value: 246 mg/m<sup>3</sup>, 50 ppm  
Long-term value: 98 mg/m<sup>3</sup>, 20 ppm  
Skin

**Additional information:**

The lists valid during the making were used as basis.

### 8.2 Exposure controls

**Appropriate engineering controls:**

**Individual protection measures, such as personal protective equipment**

**General protective and hygienic measures:**

Keep away from foodstuffs, beverages and feed.  
Immediately remove all soiled and contaminated clothing  
Wash hands before breaks and at the end of work.  
Store protective clothing separately.  
Avoid contact with the skin.  
Avoid contact with the eyes and skin.

**Respiratory protection:**

In case of intensive or longer exposure use self-contained respiratory protective device.

**Protection of hands:**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture. Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

**Material of gloves:**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material cannot be calculated in advance and has therefore to be checked prior to the application.

**Penetration time of glove material:**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

**Eye protection:**

Tightly sealed goggles

**SECTION 9: Physical and chemical properties**

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**9.1 Information on basic physical and chemical properties****General Information**

<b>Physical state:</b>	Fluid
<b>Colour:</b>	According to product specification
<b>Odour:</b>	Characteristic
<b>Odour threshold:</b>	Not determined.
<b>Melting point/freezing point:</b>	Undetermined.
<b>Boiling point or initial boiling point and boiling range:</b>	Undetermined.
<b>Flammability:</b>	Not applicable.
<b>Lower and upper explosion limit</b>	
<b>Lower:</b>	Not determined.
<b>Upper:</b>	Not determined.
<b>Flash point:</b>	>70 °C
<b>Ignition temperature:</b>	Not determined.
<b>Decomposition temperature:</b>	Not determined.
<b>pH:</b>	Not determined.
<b>Viscosity</b>	
<b>Kinematic viscosity:</b>	Not determined.
<b>Dynamic:</b>	Not determined.
<b>Solubility</b>	
<b>water:</b>	Not miscible or difficult to mix.
<b>Partition coefficient n-octanol/water (log value)</b>	Not determined.
<b>Vapour pressure at 20 °C:</b>	0.1 hPa
<b>Density and/or relative density</b>	
<b>Density:</b>	Not determined.
<b>Relative density:</b>	Not determined.
<b>Vapour density:</b>	Not determined.
<b>Particle characteristics:</b>	Kieselsäure: Spheroidal, set including amorphous nanoforms, amorphous forms, non-surfacetreated nanoforms

**9.2 Other information****Appearance:**

**Form:** Pasty

**Important information on protection of health and environment, and on safety**

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<b>Auto-ignition temperature:</b>	Product is not selfigniting.
<b>Explosive properties:</b>	Product does not present an explosion hazard.
<b>Solvent content:</b>	
<b>Organic solvents:</b>	<0.7 %
<b>VOC (EC):</b>	<0.75 %
<b>Solids content:</b>	91.6 %
<b>Change in condition</b>	
<b>Evaporation rate:</b>	Not determined.
<b>Explosives:</b>	Void
<b>Flammable gases:</b>	Void
<b>Aerosols:</b>	Void
<b>Oxidising gases:</b>	Void
<b>Gases under pressure:</b>	Void
<b>Flammable liquids:</b>	Void
<b>Flammable solids:</b>	Void
<b>Self-reactive substances and mixtures:</b>	Void
<b>Pyrophoric liquids:</b>	Void
<b>Pyrophoric solids:</b>	Void
<b>Self-heating substances and mixtures:</b>	Void
<b>Substances and mixtures, which emit flammable gases in contact with water:</b>	Void
<b>Oxidising liquids:</b>	Void
<b>Oxidising solids:</b>	Void
<b>Organic peroxides:</b>	Void
<b>Corrosive to metals:</b>	Void
<b>Desensitised explosives:</b>	Void

## SECTION 10: Stability and reactivity

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<b>10.1 Reactivity</b>	No further relevant information available.
<b>10.2 Chemical stability</b>	
<b>Thermal decomposition / conditions to be avoided:</b>	No decomposition if used according to specifications.
<b>10.3 Possibility of hazardous reactions</b>	No dangerous reactions known.
<b>10.4 Conditions to avoid</b>	No further relevant information available.
<b>10.5 Incompatible materials:</b>	No further relevant information available.
<b>10.6 Hazardous decomposition products:</b>	No dangerous decomposition products known.

## SECTION 11: Toxicological information

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### 11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008

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

#### LD/LC50 values relevant for classification:

##### Vaseline

Oral	LD50	>5,000 mg/kg (rat)
Dermal	LD50	>2,000 mg/kg (rabbit)

<b>Skin corrosion/irritation:</b>	Causes skin irritation.
<b>Serious eye damage/irritation:</b>	Based on available data, the classification criteria are not met.
<b>Respiratory or skin sensitisation:</b>	May cause an allergic skin reaction.
<b>Germ cell mutagenicity:</b>	Based on available data, the classification criteria are not met.

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<b>Carcinogenicity:</b>	Based on available data, the classification criteria are not met.
<b>Reproductive toxicity:</b>	May damage the unborn child.
<b>STOT-single exposure:</b>	Based on available data, the classification criteria are not met.
<b>STOT-repeated exposure:</b>	May cause damage to the blood through prolonged or repeated exposure. Route of exposure: Oral.
<b>Aspiration hazard:</b>	Based on available data, the classification criteria are not met.

## 11.2 Information on other hazards

### Endocrine disrupting properties:

Endocrine disrupting properties - human health: The substance/mixture does not contain any components that exhibit endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated Regulation (EU) 2017/2100 or Commission Delegated Regulation (EU) 2018/605 in quantities of 0.1% or more.

None of the ingredients is listed.

## SECTION 12: Ecological information

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<b>12.1 Toxicity</b>	
<b>Aquatic toxicity:</b>	No further relevant information available.
<b>12.2 Persistence and degradability:</b>	No further relevant information available.
<b>12.3 Bioaccumulative potential:</b>	No further relevant information available.
<b>12.4 Mobility in soil:</b>	No further relevant information available.
<b>12.5 Results of PBT and vPvB assessment:</b>	This substance/mixture does not contain components classified as either persistent, bioaccumulative and toxic (PBT) or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.
<b>PBT:</b>	Not applicable.
<b>vPvB:</b>	Not applicable.
<b>12.6 Endocrine disrupting properties:</b>	Endocrine disrupting properties - Environment: The substance/mixture does not contain any components that exhibit endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated Regulation (EU) 2017/2100 or Commission Delegated Regulation (EU) 2018/605 in quantities of 0.1% or more.
<b>Other adverse effects:</b>	
<b>Remark:</b>	Harmful to fish
<b>Additional ecological information:</b>	
<b>General notes:</b>	Harmful to aquatic organisms Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water Do not allow product to reach ground water, water course or sewage system. Danger to drinking water if even small quantities leak into the ground.



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## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

**Recommendation:** Must not be disposed together with household garbage. Do not allow product to reach sewage system.

**Uncleaned packaging:**

**Recommendation:** Disposal must be made according to official regulations.

## SECTION 14: Transport information

### 14.1 UN-Number

ADR, ADN, IMDG, IATA: Void

### 14.2 UN proper shipping name

ADR, ADN, IMDG, IATA: Void

### 14.3 Transport hazard class(es)

ADR, ADN, IMDG, IATA  
Class: Void

### 14.4 Packing group

ADR, IMDG, IATA: Void

### 14.5 Environmental hazards:

Not applicable.

### 14.6 Special precautions for user:

Not applicable.

### 14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code:

Not applicable.

UN "Model Regulation": Void

## SECTION 15: Regulatory information

### 15.1 Safety, health and environmental regulations/ legislation specific for the substance or mixture

Directive 2012/18/EU

Named dangerous substances - ANNEX I: None of the ingredients is listed.

REGULATION (EC) No 1907/2006  
ANNEX XVII:

Conditions of restriction: 3

Regulation (EU) No 649/2012		
3648-18-8	dioctyltin dilaurate	Annex I Part 1

DIRECTIVE 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment – Annex II:

None of the ingredients is listed.

REGULATION (EU) 2019/1148  
Annex I - RESTRICTED EXPLOSIVES  
PRECURSORS (Upper limit value for the purpose of licensing under Article 5(3)):

None of the ingredients is listed.

Annex II - REPORTABLE EXPLOSIVES  
PRECURSORS:

None of the ingredients is listed.



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**Regulation (EC) No 273/2004 on drug precursors:** None of the ingredients is listed.

**Regulation (EC) No 111/2005 laying down rules for the monitoring of trade between the Community and third countries in drug precursors:** None of the ingredients is listed.

**National regulations:  
Other regulations, limitations and prohibitive regulations**

## Substances of very high concern (SVHC) according to REACH, Article 57

3648-18-8	dioctyltin dilaurate
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**15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

## SECTION 16: Other information

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This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

### Relevant phrases

H226 Flammable liquid and vapour.  
H302 Harmful if swallowed.  
H304 May be fatal if swallowed and enters airways.  
H311 Toxic in contact with skin.  
H315 Causes skin irritation.  
H317 May cause an allergic skin reaction.  
H319 Causes serious eye irritation.  
H332 Harmful if inhaled.  
H360D May damage the unborn child.  
H371 May cause damage to organs.  
H372 Causes damage to organs through prolonged or repeated exposure.  
H373 May cause damage to organs through prolonged or repeated exposure.  
H400 Very toxic to aquatic life.  
H410 Very toxic to aquatic life with long lasting effects.

**Date of previous version:** 03.11.2021

### 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 Harmonised 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 (division of the American Chemical Society)  
VOC: Volatile Organic Compounds (USA, EU)  
LC50: Lethal concentration, 50 percent  
LD50: Lethal dose, 50 percent  
PBT: Persistent, Bioaccumulative and Toxic  
SVHC: Substances of Very High Concern  
vPvB: very Persistent and very Bioaccumulative  
Flam. Liq. 3: Flammable liquids, Hazard Category 3  
Acute Tox. 4: Acute toxicity – Category 4

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Acute Tox. 3:	Acute toxicity – Category 3
Skin Irrit. 2:	Skin corrosion/irritation, Hazard Category 2
Eye Irrit. 2:	Serious eye damage/eye irritation – Category 2
Skin Sens. 1:	Sensitisation - Skin, Hazard Category 1
Repr. 1B:	Reproductive toxicity – Category 1B
STOT SE 2:	Specific target organ toxicity - Single exposure, Hazard Category 2
STOT RE 1:	Specific target organ toxicity (repeated exposure) – Category 1
STOT RE 2:	Specific target organ toxicity (repeated exposure) – Category 2
Asp. Tox. 1:	Aspiration hazard, Hazard Category 1
Aquatic Acute 1:	Hazardous to the aquatic environment - Acute Hazard, Category 1
Aquatic Chronic 1:	Hazardous to the aquatic environment - Chronic Hazard, Category 1
Aquatic Chronic 3:	Hazardous to the aquatic environment - Chronic Hazard, Category 3

## Sources:

The data for the hazardous ingredients were taken respectively from the last version of Safety Data Sheets of suppliers.

**\* Data compared to the previous version altered.**