

# Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH)  
(This safety data sheet is for information only and does not  
comply with the official language requirements of article 31 (5)  
of REACH.)



## SILCACON Grundierung HFS

Version number: 3.0  
Replaces version of: 20.01.2022 (2)

Revision: 11.09.2024  
First version: 03.11.2021

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

#### 1.1 Product identifier

Trade name **SILCACON Grundierung HFS**

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

Relevant identified uses Primer

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

SILCA Service- und Vertriebsgesellschaft für Dämmstoffe mbH  
Elberfelder Straße 200a  
D-40822 Mettmann  
Germany

Telephone: +49 (0) 2104 9727-0  
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Please do not use this e-mail address to ask for the latest safety data sheet. For this purpose contact SILCA Service- und Vertriebsgesellschaft für Dämmstoffe mbH.

#### 1.4 Emergency telephone number

Poison centre		
Country	Name	Telephone
Germany	Giftinformationszentrum - Nord Göttingen	+49 551 19240

As above or nearest toxicological information centre.

### SECTION 2: Hazards identification

#### 2.1 Classification of the substance or mixture

##### Classification according to Regulation (EC) No 1272/2008 (CLP)

This mixture does not meet the criteria for classification in accordance with Regulation No 1272/2008/EC.

## 2.2 Label elements

### Labelling according to Regulation (EC) No 1272/2008 (CLP)

**Signal word** Not required.

**Pictograms** Not required.

Supplemental hazard information

**EUH208** Contains 1,2-benzisothiazolin-3-one, 2-methylisothiazol-3(2H)-one, reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1). May produce an allergic reaction.

**EUH210** Safety data sheet available on request.

## 2.3 Other hazards

### Results of PBT and vPvB assessment

Does not contain a PBT-/vPvB-substance at a concentration of  $\geq 0,1\%$ .

### Endocrine disrupting properties

Does not contain an endocrine disruptor (ED) at a concentration of  $\geq 0,1\%$ .




## SECTION 3: Composition/information on ingredients

### 3.1 Substances

Not relevant (mixture).

### 3.2 Mixtures


#### Description of the mixture

Hazardous ingredients					
Name of substance	Identifier	Wt%	Classification acc. to GHS	Pictograms	Notes
silicic acid, potassium salt (MR >2,6)	CAS No 1312-76-1  EC No 215-199-1	< 2,5	Skin Irrit. 2 / H315 Eye Irrit. 2 / H319		-
1,2-benzisothiazolin-3-one	CAS No 2634-33-5  EC No 220-120-9  Index No 613-088-00-6	0,005 - < 0,025	Acute Tox. 4 / H302 Skin Irrit. 2 / H315 Eye Dam. 1 / H318 Skin Sens. 1 / H317 Aquatic Acute 1 / H400		GHS-HC
2-methylisothiazol-3(2H)-one	CAS No 2682-20-4  EC No	< 0,0015	Acute Tox. 3 / H301 Acute Tox. 3 / H311 Acute Tox. 2 / H330 Skin Corr. 1B / H314		GHS-HC

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Hazardous ingredients					
Name of substance	Identifier	Wt%	Classification acc. to GHS	Pictograms	Notes
	220-239-6  Index No 613-326-00-9		Eye Dam. 1 / H318 Skin Sens. 1A / H317 Aquatic Acute 1 / H400 Aquatic Chronic 1 / H410 EUH071		
reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1)	CAS No 55965-84-9  Index No 613-167-00-5	< 0,0015	Acute Tox. 3 / H301 Acute Tox. 2 / H310 Acute Tox. 2 / H330 Skin Corr. 1C / H314 Eye Dam. 1 / H318 Skin Sens. 1A / H317 Aquatic Acute 1 / H400 Aquatic Chronic 1 / H410 EUH071		B GHS-HC

## Notes

B: Some substances (acids, bases, etc.) are placed on the market in aqueous solutions at various concentrations and, therefore, these solutions require different classification and labelling since the hazards vary at different concentrations. In Part 3 entries with Note B have a general designation of the following type: 'nitric acid ... %'. In this case the supplier must state the percentage concentration of the solution on the label. Unless otherwise stated, it is assumed that the percentage concentration is calculated on a weight/weight basis.

GHS- Harmonised classification (the classification of the substance corresponds to the entry in the list according to  
HC: 1272/2008/EC, Annex VI)

Name of substance	Specific Conc. Limits	M-Factors	ATE	Exposure route
1,2-benzisothiazolin-3-one	Skin Sens. 1; H317: C ≥ 0,05 %	M-factor (acute) = 1	490 mg/kg	oral
2-methylisothiazol-3(2H)-one	Skin Sens. 1A; H317: C ≥ 0,0015 %	M-factor (acute) = 10 M-factor (chronic) = 1	148 mg/kg 242 mg/kg 0,11 mg/l/4h	oral dermal inhalation: dust/mist
reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1)	Skin Corr. 1C; H314: C ≥ 0,6 % Skin Irrit. 2; H315: 0,06 % ≤ C < 0,6 % Eye Dam. 1; H318: C ≥ 0,6 % Eye Irrit. 2; H319: 0,06 % ≤ C < 0,6 % Skin Sens. 1A; H317: C ≥ 0,0015 %	M-factor (acute) = 100 M-factor (chronic) = 100	66 mg/kg 87,12 mg/kg 0,171 mg/l/4h	oral dermal inhalation: dust/mist

## Remarks

For full text of H-phrases: see SECTION 16

## SECTION 4: First aid measures

### 4.1 Description of first aid measures

#### General notes

Self-protection of the first aider.

Remove affected person from the danger area and lay down.

Do not leave affected person unattended.

In all cases of doubt, or when symptoms persist, seek medical advice.

#### Following inhalation

Provide fresh air.

#### Following skin contact

Wash with plenty of soap and water.

If skin irritation occurs: Get medical advice/attention.

#### Following eye contact

In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

Remove contact lenses, if present and easy to do. Continue rinsing.

#### Following ingestion

Rinse mouth. Do not induce vomiting.

Get medical advice/attention if you feel unwell.

#### Notes for the doctor

None.

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

This information is not available.

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

None.

## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

#### Suitable extinguishing media

water spray, alcohol resistant foam, carbon dioxide (CO<sub>2</sub>)

#### Unsuitable extinguishing media

water jet

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

Hazardous decomposition products: Section 10.

## 5.3 Advice for firefighters

Non-combustible.

Keep containers cool with water spray.

In case of fire and/or explosion do not breathe fumes.

Co-ordinate firefighting measures to the fire surroundings.

Collect contaminated firefighting water separately.

Fight fire with normal precautions from a reasonable distance.

### Special protective equipment for firefighters

Wear self-contained breathing apparatus

## SECTION 6: Accidental release measures

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

#### For non-emergency personnel

Ventilate affected area.

Wearing of suitable protective equipment (including personal protective equipment referred to under Section 8 of the safety data sheet) to prevent any contamination of skin, eyes and personal clothing.

#### For emergency responders

Wear breathing apparatus if exposed to vapours/dust/spray/gases.

### 6.2 Environmental precautions

Keep away from drains, surface and ground water.

Retain contaminated washing water and dispose of it.

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

#### Advice on how to clean up a spill

Collect spillage.

Absorbent material (e.g. sand, diatomaceous earth, acid binder, universal binder, sawdust, etc.).

#### Appropriate containment techniques

Use of adsorbent materials.

#### Other information relating to spills and releases

Place in appropriate containers for disposal.

Ventilate affected area.

### 6.4 Reference to other sections

Personal protective equipment: see section 8.

Incompatible materials: see section 10.

Disposal considerations: see section 13.

## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

Avoid contact with skin and eyes.

Do not breathe vapour/spray.

## **Measures to prevent fire as well as aerosol and dust generation**

Use local and general ventilation.

## **Specific notes/details**

None.

## **Handling of incompatible substances or mixtures**

Do not mix with acids.

## **Measures to protect the environment**

Avoid release to the environment.

## **Advice on general occupational hygiene**

Do not eat, drink and smoke in work areas.

Wash hands after use.

Preventive skin protection (barrier creams/ointments) is recommended.

Remove contaminated clothing and protective equipment before entering eating areas.

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

### **Flammability hazards**

None.

### **Incompatible substances or mixtures**

Incompatible materials: see section 10.

### **Protect against external exposure, such as**

frost

### **Consideration of other advice**

Keep away from food, drink and animal feedingstuffs.

### **General rule**

Keep out of reach of children.

### **Ventilation requirements**

Provision of sufficient ventilation.

### **Specific designs for storage rooms or vessels**

Keep container tightly closed and in a well-ventilated place.

Keep cool.

### **Storage temperature**

recommended storage temperature: <60 °C

### **Packaging compatibilities**

Keep only in original container.

## **7.3 Specific end use(s)**

No information available.

## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

Occupational exposure limit values (Workplace Exposure Limits)									
Country	Name of agent	CAS No	Identifier	TWA [ppm]	TWA [mg/m <sup>3</sup> ]	STEL [ppm]	STEL [mg/m <sup>3</sup> ]	Notation	Source
DE	reaction mass of: 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1)	55965-84-9	MAK	-	0,2	-	0,4	i	DFG

#### Notation

i inhalable fraction

STEL short-term exposure limit: a limit value above which exposure should not occur and which is related to a 15-minute period (unless otherwise specified)

TWA time-weighted average (long-term exposure limit): measured or calculated in relation to a reference period of 8 hours time-weighted average (unless otherwise specified)

#### Human health values

Relevant DNELs of components						
Name of substance	CAS No	Endpoint	Threshold level	Protection goal, route of exposure	Used in	Exposure time
silicic acid, potassium salt (MR >2,6)	1312-76-1	DNEL	5,61 mg/m <sup>3</sup>	human, inhalatory	worker (industry)	chronic - systemic effects
silicic acid, potassium salt (MR >2,6)	1312-76-1	DNEL	1,49 mg/kg bw/day	human, dermal	worker (industry)	chronic - systemic effects
1,2-benzisothiazolin-3-one	2634-33-5	DNEL	6,81 mg/m <sup>3</sup>	human, inhalatory	worker (industry)	chronic - systemic effects
1,2-benzisothiazolin-3-one	2634-33-5	DNEL	0,966 mg/kg bw/day	human, dermal	worker (industry)	chronic - systemic effects
2-methylisothiazol-3(2H)-one	2682-20-4	DNEL	0,021 mg/m <sup>3</sup>	human, inhalatory	worker (industry)	chronic - local effects
reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1)	55965-84-9	DNEL	0,02 mg/m <sup>3</sup>	human, inhalatory	worker (industry)	chronic - local effects

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## Environmental values

Relevant PNECs of components				
Name of substance	CAS No	Endpoint	Threshold level	Environmental compartment
silicic acid, potassium salt (MR >2,6)	1312-76-1	PNEC	7,5 mg/l	freshwater
silicic acid, potassium salt (MR >2,6)	1312-76-1	PNEC	1 mg/l	marine water
silicic acid, potassium salt (MR >2,6)	1312-76-1	PNEC	348 mg/l	sewage treatment plant (STP)
1,2-benzisothiazolin-3-one	2634-33-5	PNEC	4,03 µg/l	freshwater
1,2-benzisothiazolin-3-one	2634-33-5	PNEC	0,403 µg/l	marine water
1,2-benzisothiazolin-3-one	2634-33-5	PNEC	1,03 mg/l	sewage treatment plant (STP)
1,2-benzisothiazolin-3-one	2634-33-5	PNEC	49,9 µg/kg	freshwater sediment
1,2-benzisothiazolin-3-one	2634-33-5	PNEC	4,99 µg/kg	marine sediment
1,2-benzisothiazolin-3-one	2634-33-5	PNEC	3 mg/kg	soil
2-methylisothiazol-3(2H)-one	2682-20-4	PNEC	3,39 µg/l	freshwater
2-methylisothiazol-3(2H)-one	2682-20-4	PNEC	3,39 µg/l	marine water
2-methylisothiazol-3(2H)-one	2682-20-4	PNEC	0,23 mg/l	sewage treatment plant (STP)
2-methylisothiazol-3(2H)-one	2682-20-4	PNEC	0,047 mg/kg	soil
reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1)	55965-84-9	PNEC	3,39 µg/l	freshwater
reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1)	55965-84-9	PNEC	3,39 µg/l	marine water
reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1)	55965-84-9	PNEC	0,23 mg/l	sewage treatment plant (STP)
reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1)	55965-84-9	PNEC	0,027 mg/kg	freshwater sediment
reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1)	55965-84-9	PNEC	0,027 mg/kg	marine sediment
reaction mass of 5-chloro-2-	55965-84-9	PNEC	0,01 mg/kg	soil



Relevant PNECs of components				
Name of substance	CAS No	Endpoint	Threshold level	Environmental compartment
methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1)				

## 8.2 Exposure controls

### Appropriate engineering controls

Use local and general ventilation.

### Individual protection measures (personal protective equipment)

#### Eye/face protection

Wear eye/face protection. (EN 166)

#### Hand protection

Protective gloves		
Material	Material thickness	Breakthrough times of the glove material
IIR: isobutene-isoprene (butyl) rubber	≥ 0,45 mm	>480 minutes (permeation: level 6)

Wear suitable gloves.

Chemical protection gloves are suitable, which are tested according to EN 374.

Check leak-tightness/impermeability prior to use.

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.

#### Body protection

Protective clothing against liquid chemicals.  
(EN 13832, EN 340, EN 14605).

#### Respiratory protection

In case of inadequate ventilation wear respiratory protection.  
Particle filter device (DIN EN 143).

#### Environmental exposure controls

Use appropriate container to avoid environmental contamination.  
Keep away from drains, surface and ground water.

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

Physical state	liquid
Colour	whitish
Odour	characteristic

<b>Melting point/freezing point</b>	not determined
<b>Boiling point or initial boiling point and boiling range</b>	not determined
<b>Flammability</b>	non-combustible
<b>Lower and upper explosion limit</b>	not determined
<b>Flash point</b>	not determined
<b>Auto-ignition temperature</b>	not determined
<b>Decomposition temperature</b>	not relevant
<b>pH (value)</b>	10,7 (20 °C)
<b>Kinematic viscosity</b>	not determined
<b>Dynamic viscosity</b>	not determined
<b>Solubility(ies)</b>	
Water solubility	miscible in any proportion
<b>Partition coefficient n-octanol/water (log value)</b>	not relevant (inorganic)
<b>Vapour pressure</b>	not determined
<b>Density and/or relative density</b>	
Density	1 g/cm <sup>3</sup> at 20 °C
Relative vapour density	information on this property is not available
<b>Particle characteristics</b>	not relevant (liquid)
<b>9.2 Other information</b>	
<b>Information with regard to physical hazard classes</b>	hazard classes acc. to GHS (physical hazards): not relevant
<b>Other safety characteristics</b>	there is no additional information

## SECTION 10: Stability and reactivity

### 10.1 Reactivity

May be corrosive to metals.

### 10.2 Chemical stability

The material is stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.  
See below "Conditions to avoid".

## 10.3 Possibility of hazardous reactions

Do not mix with acids.

## 10.4 Conditions to avoid

There are no specific conditions known which have to be avoided.

## 10.5 Incompatible materials

acids, light metals (e.g. aluminium and magnesium), carbon dioxide (CO<sub>2</sub>)

Release of flammable materials with:

light metals (due to the release of hydrogen in an acid/alkaline medium)

## 10.6 Hazardous decomposition products

Reasonably anticipated hazardous decomposition products produced as a result of use, storage, spill and heating are not known.

## SECTION 11: Toxicological information

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

#### Classification procedure

If not otherwise specified the classification is based on:

Ingredients of the mixture (additivity formula).

#### Classification according to GHS (1272/2008/EC, CLP)

This mixture does not meet the criteria for classification in accordance with Regulation No 1272/2008/EC.

#### Acute toxicity

Test data are not available for the complete mixture.

#### Acute toxicity of components

Acute toxicity estimate (ATE) of components			
Name of substance	CAS No	Exposure route	ATE
1,2-benzisothiazolin-3-one	2634-33-5	oral	490 mg/kg
2-methylisothiazol-3(2H)-one	2682-20-4	oral	148 mg/kg
2-methylisothiazol-3(2H)-one	2682-20-4	dermal	242 mg/kg
2-methylisothiazol-3(2H)-one	2682-20-4	inhalation: dust/mist	0,11 mg/l/4h
reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1)	55965-84-9	oral	66 mg/kg
reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1)	55965-84-9	dermal	87,12 mg/kg
reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1)	55965-84-9	inhalation: dust/mist	0,171 mg/l/4h

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Acute toxicity of components							
Name of substance	CAS No	Exposure route	End-point	Value	Species	Method	Source
silicic acid, potassium salt (MR >2,6)	1312-76-1	oral	LD0	>5.000 mg/kg	rat, female	EPA OPPTS 870.1100	ECHA
silicic acid, potassium salt (MR >2,6)	1312-76-1	dermal	LD0	>5.000 mg/kg	rat	EPA OPPTS 870.1200	ECHA
1,2-benzisothiazolin-3-one	2634-33-5	oral	LD50	490 mg/kg	rat	OECD Guideline 401	ECHA
1,2-benzisothiazolin-3-one	2634-33-5	dermal	LD50	>2.000 mg/kg	rat	OECD Guideline 402	ECHA
2-methylisothiazol-3(2H)-one	2682-20-4	oral	LD50	148 mg/kg	rat	-	ECHA
2-methylisothiazol-3(2H)-one	2682-20-4	inhalation: dust/mist	LC50	0,11 mg/l /4h	rat	OECD Guideline 403	ECHA
2-methylisothiazol-3(2H)-one	2682-20-4	dermal	LD50	242 mg/kg	rat	OECD Guideline 402	ECHA
reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1)	55965-84-9	oral	LD50	66 mg/kg	rat	EPA OPP 81-1	ECHA
reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1)	55965-84-9	dermal	LD50	87,12 mg/kg	rabbit, male	-	ECHA
reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1)	55965-84-9	inhalation: dust/mist	LC50	0,171 mg/l/4h	rat	OECD Guideline 403	ECHA

## Skin corrosion/irritation

Shall not be classified as corrosive/irritant to skin.

## Serious eye damage/eye irritation

Shall not be classified as seriously damaging to the eye or eye irritant.

## Respiratory or skin sensitisation

Contains 1,2-benzisothiazolin-3-one, 2-methylisothiazol-3(2H)-one, reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1). May produce an allergic reaction.

## Germ cell mutagenicity

Classification could not be established because:

Data are lacking, inconclusive, or conclusive but not sufficient for classification.

## Carcinogenicity

Classification could not be established because:

Data are lacking, inconclusive, or conclusive but not sufficient for classification.

## Reproductive toxicity

Classification could not be established because:

Data are lacking, inconclusive, or conclusive but not sufficient for classification.

## Specific target organ toxicity - single exposure

Classification could not be established because:

Data are lacking, inconclusive, or conclusive but not sufficient for classification.

## Specific target organ toxicity - repeated exposure

Classification could not be established because:

Data are lacking, inconclusive, or conclusive but not sufficient for classification.

## Aspiration hazard

Shall not be classified as presenting an aspiration hazard.

## 11.2 Information on other hazards

### Endocrine disrupting properties

Does not contain an endocrine disruptor (ED) at a concentration of  $\geq 0,1\%$ .

## SECTION 12: Ecological information

### 12.1 Toxicity

#### Aquatic toxicity (acute)

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

#### Aquatic toxicity (acute) of components

Name of substance	CAS No	Endpoint	Exposure time	Value	Species	Method	Source
silicic acid, potassium salt (MR >2,6)	1312-76-1	LC50	48 h	>146 mg/l	orfe (Leuciscus idus)	DIN 38412 T.15	ECHA
silicic acid, potassium salt (MR >2,6)	1312-76-1	EC50	72 h	207 mg/l	algae (Desmod-esmus sub-spicatus)	DIN 38412 T.9	ECHA
silicic acid, potassium salt (MR >2,6)	1312-76-1	EC50	24 h	>146 mg/l	daphnia magna	OECD Guideline 202	ECHA
1,2-benzisothiazolin-3-one	2634-33-5	EC50	48 h	2,9 mg/l	daphnia magna	OECD Guideline 202	ECHA

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Name of substance	CAS No	Endpoint	Exposure time	Value	Species	Method	Source
1,2-benzisothiazolin-3-one	2634-33-5	LC50	96 h	2,15 mg/l	rainbow trout (Oncorhynchus mykiss)	OECD Guideline 203	ECHA
1,2-benzisothiazolin-3-one	2634-33-5	ErC50	72 h	110 µg/l	algae (pseudokirchneriella subcapitata)	OECD Guideline 202	ECHA
2-methylisothiazol-3(2H)-one	2682-20-4	LC50	48 h	0,934 mg/l	daphnia magna	OECD Guideline 202	ECHA
2-methylisothiazol-3(2H)-one	2682-20-4	LC50	96 h	4,77 mg/l	rainbow trout (Oncorhynchus mykiss)	OECD Guideline 203	ECHA
2-methylisothiazol-3(2H)-one	2682-20-4	EC50	48 h	1,6 mg/l	daphnia magna	EPA OPP 72-2	ECHA
reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1)	55965-84-9	LC50	96 h	0,19 mg/l	rainbow trout (Oncorhynchus mykiss)	EPA OPP 72-1	ECHA
reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1)	55965-84-9	EC50	48 h	0,007 mg/l	crustacea: Acartia tonsa	-	ECHA
reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1)	55965-84-9	ErC50	72 h	6,3 µg/l	algae (Skelettonema costatum)	OECD Guideline 201	ECHA

## Aquatic toxicity (chronic)

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

## Aquatic toxicity (chronic) of components

Name of substance	CAS No	Endpoint	Exposure time	Value	Species	Method	Source
1,2-benziso-	2634-33-5	EC50	3 h	12,8 mg/l	activated	OECD	ECHA

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Name of substance	CAS No	Endpoint	Exposure time	Value	Species	Method	Source
thiazolin-3-one					sludge of a predominantly domestic sewage	Guideline 209	
2-methylisothiazol-3(2H)-one	2682-20-4	EC50	21 d	1,4 mg/l	daphnia magna	OECD Guideline 211	ECHA
2-methylisothiazol-3(2H)-one	2682-20-4	EC50	16 h	2,3 mg/l	activated sludge (Pseudomonas putida)	-	ECHA
2-methylisothiazol-3(2H)-one	2682-20-4	EC50	120 h	0,138 mg/l	algae (raphidocelis subcapitata)	OECD Guideline 201	ECHA Chem
2-methylisothiazol-3(2H)-one	2682-20-4	ErC50	120 h	0,22 mg/l	algae (raphidocelis subcapitata)	OECD Guideline 201	ECHA Chem
2-methylisothiazol-3(2H)-one	2682-20-4	LOEC	21 d	0,089 mg/l	daphnia magna	OECD Guideline 211	ECHA
2-methylisothiazol-3(2H)-one	2682-20-4	LOEC	33 d	4,2 mg/l	fathead minnow (Pimephales promelas)	OECD Guideline 210	ECHA
2-methylisothiazol-3(2H)-one	2682-20-4	NOEC	24 h	0,02 mg/l	algae (pseudokirchneriella subcapitata)	OECD Guideline 201	ECHA
2-methylisothiazol-3(2H)-one	2682-20-4	NOEC	21 d	0,044 mg/l	daphnia magna	OECD Guideline 211	ECHA
2-methylisothiazol-3(2H)-one	2682-20-4	NOEC	33 d	2,1 mg/l	fathead minnow (Pimephales promelas)	OECD Guideline 210	ECHA
2-methylisothiazol-3(2H)-one	2682-20-4	NOEC	120 h	0,05 mg/l	algae (raphidocelis subcapitata)	OECD Guideline 201	ECHA Chem
2-methylisothiazol-3(2H)-one	2682-20-4	growth (Eb-Cx) 10%	16 h	1 mg/l	activated sludge (Pseudomonas putida)	-	ECHA
reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one	55965-84-9	LC50	14 d	0,07 mg/l	rainbow trout (Oncorhynchus mykiss)	OECD Guideline 204	ECHA

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Name of substance	CAS No	Endpoint	Exposure time	Value	Species	Method	Source
and 2-methyl-2H-isothiazol-3-one (3:1)							
reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1)	55965-84-9	EC50	21 d	>0,18 mg/l	daphnia magna	EPA OPP 72-4	ECHA
reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1)	55965-84-9	ErC50	120 h	45,6 µg/l	algae (pseudokirchneriella subcapitata)	OECD Guideline 201	ECHA
reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1)	55965-84-9	NOEC	72 h	1,4 µg/l	algae (pseudokirchneriella subcapitata)	OECD Guideline 201	ECHA
reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1)	55965-84-9	NOEC	35 d	≥46,4 µg/l	zebra fish (Danio rerio)	OECD Guideline 210	ECHA
reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1)	55965-84-9	NOEC	21 d	11,1 µg/l	daphnia magna	OECD Guideline 211	ECHA
reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1)	55965-84-9	NOEC	3 h	0,91 mg/l	activated sludge of a predominantly domestic sewage	OECD Guideline 209	ECHA
reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one	55965-84-9	LOEL	36 d	0,06 mg/l	fathead minnow (Pimephales promelas)	EPA OPP 72-4	ECHA



Name of substance	CAS No	Endpoint	Exposure time	Value	Species	Method	Source
and 2-methyl-2H-isothiazol-3-one (3:1)							
reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1)	55965-84-9	LOEC	28 d	0,144 mg/l	rainbow trout (Oncorhynchus mykiss)	OECD Guideline 215	ECHA

## 12.2 Persistence and degradability

### Biodegradation

Test data are not available for the complete mixture.

### Degradability of components

Name of substance	CAS No	Process	Degradation rate	Time	Method	Source
1,2-benzisothiazolin-3-one	2634-33-5	carbon dioxide generation	62 %	4 d	OECD Guideline 301 C	ECHA
2-methylisothiazol-3(2H)-one	2682-20-4	carbon dioxide generation	47,6 %	29 d	OECD Guideline 301 B	ECHA
2-methylisothiazol-3(2H)-one	2682-20-4	oxygen depletion	0 %	28 d	OECD Guideline 301 D	ECHA
reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1)	55965-84-9	carbon dioxide generation	38,8 %	29 d	OECD Guideline 301 B	ECHA

### Persistence

No data available.

## 12.3 Bioaccumulative potential

### n-octanol/water (log KOW)

not relevant  
(inorganic)

## Bioaccumulative potential of components

Name of substance	CAS No	BCF	Log KOW
1,2-benzisothiazolin-3-one	2634-33-5	6,62	0,63 (pH value: 7, 10 °C)
2-methylisothiazol-3(2H)-one	2682-20-4	5,75	-0,486 (pH value: 7, 25 °C)
reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1)	55965-84-9	54	≥-0,34 - ≤0,63 (pH value: 7, 10 °C)

### 12.4 Mobility in soil

No data available.

### 12.5 Results of PBT and vPvB assessment

Does not contain a PBT-/vPvB-substance at a concentration of ≥ 0,1%.

### 12.6 Endocrine disrupting properties

Does not contain an endocrine disruptor (ED) at a concentration of ≥ 0,1%.

### 12.7 Other adverse effects

Data are not available.

#### Remarks

Wassergefährdungsklasse, WGK (water hazard class): Nwg.

## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

Dispose of contents/container in accordance with local/regional/national/international regulations.

#### Sewage disposal-relevant information

Do not empty into drains.

#### Waste treatment of containers/packagings

Completely emptied packages can be recycled.

Handle contaminated packages in the same way as the substance itself.

#### Remarks

Please consider the relevant national or regional provisions.

## SECTION 14: Transport information

14.1	UN number or ID number	not assigned
14.2	UN proper shipping name	-
14.3	Transport hazard class(es)	-
14.4	Packing group	-
14.5	Environmental hazards	-

- 14.6 Special precautions for user** -
- 14.7 Maritime transport in bulk according to IMO - instruments** -

## SECTION 15: Regulatory information

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

#### Relevant provisions of the European Union (EU)

#### Restrictions according to REACH, Annex XVII

Name	Name acc. to inventory	CAS No	Restriction
silicic acid, potassium salt (MR >2,6)	this product meets the criteria for classification in accordance with Regulation No 1272/2008/EC	-	R3
2-methylisothiazol-3(2H)-one	substances in tattoo inks and permanent make-up	-	R75
reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1)	substances in tattoo inks and permanent make-up	-	R75
1,2-benzisothiazolin-3-one	substances in tattoo inks and permanent make-up	-	R75

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- R3** 1. Shall not be used in:
- ornamental articles intended to produce light or colour effects by means of different phases, for example in ornamental lamps and ashtrays,
  - tricks and jokes,
  - games for one or more participants, or any article intended to be used as such, even with ornamental aspects,
2. Articles not complying with paragraph 1 shall not be placed on the market.
3. Shall not be placed on the market if they contain a colouring agent, unless required for fiscal reasons, or perfume, or both, if they:
- can be used as fuel in decorative oil lamps for supply to the general public, and
  - present an aspiration hazard and are labelled with H304.
4. Decorative oil lamps for supply to the general public shall not be placed on the market unless they conform to the European Standard on Decorative oil lamps (EN 14059) adopted by the European Committee for Standardisation (CEN).
5. Without prejudice to the implementation of other Union provisions relating to the classification, labelling and packaging of substances and mixtures, suppliers shall ensure, before the placing on the market, that the following requirements are met:
- (a) lamp oils, labelled with H304, intended for supply to the general public are visibly, legibly and indelibly marked as follows: "Keep lamps filled with this liquid out of the reach of children"; and, by 1 December 2010, "Just a sip of lamp oil – or even sucking the wick of lamps – may lead to life-threatening lung damage";
  - (b) grill lighter fluids, labelled with H304, intended for supply to the general public are legibly and indelibly marked by 1 December 2010 as follows: 'Just a sip of grill lighter fluid may lead to life threatening lung damage';
  - (c) lamps oils and grill lighters, labelled with H304, intended for supply to the general public are packaged in black opaque containers not exceeding 1 litre by 1 December 2010.;
- R75** 1. Shall not be placed on the market in mixtures for use for tattooing purposes, and mixtures containing any such substances shall not be used for tattooing purposes, after 4 January 2022 if the substance or substances in

## Legend

question is or are present in the following circumstances:

- (a) in the case of a substance classified in Part 3 of Annex VI to Regulation (EC) No 1272/2008 as carcinogen category 1A, 1B or 2, or germ cell mutagen category 1A, 1B or 2, the substance is present in the mixture in a concentration equal to or greater than 0,00005 % by weight;
  - (b) in the case of a substance classified in Part 3 of Annex VI to Regulation (EC) No 1272/2008 as reproductive toxicant category 1A, 1B or 2, the substance is present in the mixture in a concentration equal to or greater than 0,001 % by weight;
  - (c) in the case of a substance classified in Part 3 of Annex VI to Regulation (EC) No 1272/2008 as skin sensitiser category 1, 1A or 1B, the substance is present in the mixture in a concentration equal to or greater than 0,001 % by weight;
  - (d) in the case of a substance classified in Part 3 of Annex VI to Regulation (EC) No 1272/2008 as skin corrosive category 1, 1A, 1B or 1C or skin irritant category 2, or as serious eye damage category 1 or eye irritant category 2, the substance is present in the mixture in a concentration equal to or greater than:
    - (i) 0,1 % by weight, if the substance is used solely as a pH regulator;
    - (ii) 0,01 % by weight, in all other cases;
  - (e) in the case of a substance listed in Annex II to Regulation (EC) No 1223/2009 (\*1), the substance is present in the mixture in a concentration equal to or greater than 0,00005 % by weight;
  - (f) in the case of a substance for which a condition of one or more of the following kinds is specified in column g (Product type, Body parts) of the table in Annex IV to Regulation (EC) No 1223/2009, the substance is present in the mixture in a concentration equal to or greater than 0,00005 % by weight:
    - (i) "Rinse-off products";
    - (ii) "Not to be used in products applied on mucous membranes";
    - (iii) "Not to be used in eye products";
  - (g) in the case of a substance for which a condition is specified in column h (Maximum concentration in ready for use preparation) or column i (Other) of the table in Annex IV to Regulation (EC) No 1223/2009, the substance is present in the mixture in a concentration, or in some other way, that does not accord with the condition specified in that column;
  - (h) in the case of a substance listed in Appendix 13 to this Annex, the substance is present in the mixture in a concentration equal to or greater than the concentration limit specified for that substance in that Appendix.
2. For the purposes of this entry use of a mixture "for tattooing purposes" means injection or introduction of the mixture into a person's skin, mucous membrane or eyeball, by any process or procedure (including procedures commonly referred to as permanent make-up, cosmetic tattooing, micro-blading and micro-pigmentation), with the aim of making a mark or design on his or her body.
3. If a substance not listed in Appendix 13 falls within more than one of points (a) to (g) of paragraph 1, the strictest concentration limit laid down in the points in question shall apply to that substance. If a substance listed in Appendix 13 also falls within one or more of points (a) to (g) of paragraph 1, the concentration limit laid down in point (h) of paragraph 1 shall apply to that substance.
4. By way of derogation, paragraph 1 shall not apply to the following substances until 4 January 2023:
- (a) Pigment Blue 15:3 (CI 74160, EC No 205-685-1, CAS No 147-14-8);
  - (b) Pigment Green 7 (CI 74260, EC No 215-524-7, CAS No 1328-53-6).
5. If Part 3 of Annex VI to Regulation (EC) No 1272/2008 is amended after 4 January 2021 to classify or re-classify a substance such that the substance then becomes caught by point (a), (b), (c) or (d) of paragraph 1 of this entry, or such that it then falls within a different one of those points from the one within which it fell previously, and the date of application of that new or revised classification is after the date referred to in paragraph 1 or, as the case may be, paragraph 4 of this entry, that amendment shall, for the purposes of applying this entry to that substance, be treated as taking effect on the date of application of that new or revised classification.
6. If Annex II or Annex IV to Regulation (EC) No 1223/2009 is amended after 4 January 2021 to list or change the listing of a substance such that the substance then becomes caught by point (e), (f) or (g) of paragraph 1 of this entry, or such that it then falls within a different one of those points from the one within which it fell previously, and the amendment takes effect after the date referred to in paragraph 1 or, as the case may be, paragraph 4 of this entry, that amendment shall, for the purposes of applying this entry to that substance, be treated as taking effect from the date falling 18 months after entry into force of the act by which that amendment was made.
7. Suppliers placing a mixture on the market for use for tattooing purposes shall ensure that, after 4 January 2022, the mixture is marked with the following information:
- (a) the statement "Mixture for use in tattoos or permanent make-up";
  - (b) a reference number to uniquely identify the batch;

## Legend

(c) the list of ingredients in accordance with the nomenclature established in the glossary of common ingredient names pursuant to Article 33 of Regulation (EC) No 1223/2009, or in the absence of a common ingredient name, the IUPAC name. In the absence of a common ingredient name or IUPAC name, the CAS and EC number. Ingredients shall be listed in descending order by weight or volume of the ingredients at the time of formulation. "Ingredient" means any substance added during the process of formulation and present in the mixture for use for tattooing purposes. Impurities shall not be regarded as ingredients. If the name of a substance, used as ingredient within the meaning of this entry, is already required to be stated on the label in accordance with Regulation (EC) No 1272/2008, that ingredient does not need to be marked in accordance with this Regulation;

(d) the additional statement "pH regulator" for substances falling under point (d)(i) of paragraph 1;

(e) the statement "Contains nickel. Can cause allergic reactions." if the mixture contains nickel below the concentration limit specified in Appendix 13;

(f) the statement "Contains chromium (VI). Can cause allergic reactions." if the mixture contains chromium (VI) below the concentration limit specified in Appendix 13;

(g) safety instructions for use insofar as they are not already required to be stated on the label by Regulation (EC) No 1272/2008.

The information shall be clearly visible, easily legible and marked in a way that is indelible.

The information shall be written in the official language(s) of the Member State(s) where the mixture is placed on the market, unless the Member State(s) concerned provide(s) otherwise.

Where necessary because of the size of the package, the information listed in the first subparagraph, except for point (a), shall be included instead in the instructions for use.

Before using a mixture for tattooing purposes, the person using the mixture shall provide the person undergoing the procedure with the information marked on the package or included in the instructions for use pursuant to this paragraph.

8. Mixtures that do not contain the statement "Mixture for use in tattoos or permanent make-up" shall not be used for tattooing purposes.

9. This entry does not apply to substances that are gases at temperature of 20 °C and pressure of 101,3 kPa, or generate a vapour pressure of more than 300 kPa at temperature of 50 °C, with the exception of formaldehyde (CAS No 50-00-0, EC No 200-001-8).

10. This entry does not apply to the placing on the market of a mixture for use for tattooing purposes, or to the use of a mixture for tattooing purposes, when placed on the market exclusively as a medical device or an accessory to a medical device, within the meaning of Regulation (EU) 2017/745, or when used exclusively as a medical device or an accessory to a medical device, within the same meaning. Where the placing on the market or use may not be exclusively as a medical device or an accessory to a medical device, the requirements of Regulation (EU) 2017/745 and of this Regulation shall apply cumulatively.

## List of substances subject to authorisation (REACH, Annex XIV) / SVHC - candidate list

None of the ingredients are listed.

## Seveso Directive

Not assigned.

## Directive on the restriction of the use of certain hazardous substances in electrical and electronic equipment (RoHS)

None of the ingredients are listed.

## Regulation on the marketing and use of explosives precursors

None of the ingredients are listed.

## Regulation on drug precursors

None of the ingredients are listed.

## Regulation on substances that deplete the ozone layer (ODS)

None of the ingredients are listed.



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Section	Former entry (text/value)	Actual entry (text/value)
15.1	-	Restrictions according to REACH, Annex XVII: change in the listing (table)

## Abbreviations and acronyms

Abbr.	Descriptions of used abbreviations
Acute Tox.	Acute toxicity
ADN	Accord européen relatif au transport international des marchandises dangereuses par voies de navigation intérieures (European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways)
ADR	Accord relatif au transport international des marchandises dangereuses par route (Agreement concerning the International Carriage of Dangerous Goods by Road)
Aquatic Acute	Hazardous to the aquatic environment - acute hazard
Aquatic Chronic	Hazardous to the aquatic environment - chronic hazard
ATE	Acute Toxicity Estimate
BCF	Bioconcentration factor
CAS	Chemical Abstracts Service (service that maintains the most comprehensive list of chemical substances)
CLP	Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures
DFG	Deutsche Forschungsgemeinschaft MAK-und BAT-Werte-Liste, Senatskommission zur Prüfung gesundheitsschädlicher Arbeitsstoffe, Wiley-VCH, Weinheim
DGR	Dangerous Goods Regulations (see IATA/DGR)
DNEL	Derived No-Effect Level
EC50	Effective Concentration 50 %. The EC50 corresponds to the concentration of a tested substance causing 50 % changes in response (e.g. on growth) during a specified time interval
EC No	The EC Inventory (EINECS, ELINCS and the NLP-list) is the source for the seven-digit EC number, an identifier of substances commercially available within the EU (European Union)
ED	Endocrine disruptor
EINECS	European Inventory of Existing Commercial Chemical Substances
ELINCS	European List of Notified Chemical Substances
ErC50	≡ EC50: in this method, that concentration of test substance which results in a 50 % reduction in either growth (EbC50) or growth rate (ErC50) relative to the control
Eye Dam.	Seriously damaging to the eye
Eye Irrit.	Irritant to the eye
GHS	"Globally Harmonized System of Classification and Labelling of Chemicals" developed by the United Nations
IATA	International Air Transport Association
IATA/DGR	Dangerous Goods Regulations (DGR) for the air transport (IATA)

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Abbr.	Descriptions of used abbreviations
IMDG	International Maritime Dangerous Goods Code
index No	The Index number is the identification code given to the substance in Part 3 of Annex VI to Regulation (EC) No 1272/2008
LC50	Lethal Concentration 50%: the LC50 corresponds to the concentration of a tested substance causing 50 % lethality during a specified time interval
LD50	Lethal Dose 50 %: the LD50 corresponds to the dose of a tested substance causing 50 % lethality during a specified time interval
LGK	Lagerklasse (storage class according to TRGS 510, Germany)
LOEC	Lowest Observed Effect Concentration
LOEL	Lowest Observed Effect Level
log KOW	n-Octanol/water
M-factor	Means a multiplying factor. It is applied to the concentration of a substance classified as hazardous to the aquatic environment acute category 1 or chronic category 1, and is used to derive by the summation method the classification of a mixture in which the substance is present
NLP	No-Longer Polymer
NOEC	No Observed Effect Concentration
PBT	Persistent, Bioaccumulative and Toxic
PNEC	Predicted No-Effect Concentration
ppm	Parts per million
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals
RID	Règlement concernant le transport International ferroviaire des marchandises Dangereuses (Regulations concerning the International carriage of Dangerous goods by Rail)
Skin Corr.	Corrosive to skin
Skin Irrit.	Irritant to skin
Skin Sens.	Skin sensitisation
STEL	Short-term exposure limit
SVHC	Substance of Very High Concern
TRGS	Technische Regeln für Gefahrstoffe (technical rules for hazardous substances, Germany)
TWA	Time-weighted average
vPvB	Very Persistent and very Bioaccumulative

## Key literature references and sources for data

Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures.

Regulation (EC) No. 1907/2006 (REACH), amended by 2020/878/EU.

Transport of dangerous goods by road, rail and inland waterway (ADR/RID/ADN).

International Maritime Dangerous Goods Code (IMDG).

Dangerous Goods Regulations (DGR) for the air transport (IATA).



## Classification procedure

Physical and chemical properties.

Health hazards.

Environmental hazards.

The method for classification of the mixture is based on ingredients of the mixture (additivity formula).

## List of relevant phrases (code and full text as stated in section 2 and 3)

Code	Text
H301	Toxic if swallowed.
H302	Harmful if swallowed.
H310	Fatal in contact with skin.
H311	Toxic in contact with skin.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H330	Fatal if inhaled.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.

## Responsible for the safety data sheet

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## Disclaimer

This information is based upon the present state of our knowledge.

This SDS has been compiled and is solely intended for this product.