

Trade name: Formaldehydi solutio 4%

Substance number: 074280

Version: 5 / CH

Date revised: 05.08.2024

Replaces Version: 4 / CH

Print date: 05.08.24

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

### **1.1. Product identifier**

Formaldehydi solutio 4%

Item No. 07428000

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

#### **Use of the substance/preparation**

Reagent for analyses

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

#### **Address/Manufacturer**

Hänseler AG

Industriestrasse 35

9100 Herisau

Telephone no. 0041 (0)71 353 58 58

E-mail address of sdb@haenseler.ch

person responsible

for this SDS

### **1.4. Emergency telephone number**

Switzerland :145 / Abroad +41 (0)44 251 51 51

## **SECTION 2: Hazards identification \*\*\***

### **2.1. Classification of the substance or mixture**

#### **Classification (Regulation (EC) No. 1272/2008)**

Classification (Regulation (EC) No. 1272/2008)

Acute Tox. 4 H302

Skin Sens. 1 H317

Muta. 2 H341

Carc. 1B H350

The product is classified and labelled in accordance with Regulation (EC) No 1272/2008

For explanation of abbreviations see section 16.

### **2.2. Label elements**

#### **Labelling according to regulation (EC) No 1272/2008**

##### **Hazard pictograms**



##### **Signal word**

Danger

##### **Hazard statements**

H302

Harmful if swallowed.

H317

May cause an allergic skin reaction.

H341

Suspected of causing genetic defects.

H350

May cause cancer.

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**Precautionary statements**

P201	Obtain special instructions before use.
P261	Avoid breathing dust/fume/gas/mist/vapours/spray.
P264.1	Wash hands thoroughly after handling.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P308+P313	IF exposed or concerned: Get medicinal advice/attention.
P501.3	Disposal in compliance with local and national regulations.

**Hazardous component(s) to be indicated on label (Regulation (EC) No. 1272/2008)**

contains \*\*\* methanol; formaldehyde ...%

**Supplemental information****Further supplemental information**

Restricted to professional users

**Other information**

Not for supply to the general public in Switzerland

**2.3. Other hazards**

The product contains no PBT substances. The product contains no vPvB substances. This product does not contain a substance that has endocrine disrupting properties with respect to human. The product does not contain a substance that has endocrine disrupting properties with respect to non-target organisms.

**SECTION 3: Composition/information on ingredients \*\*\*****Hazardous ingredients \*\*\*****formaldehyde ...%**

CAS No.	50-00-0
EINECS no.	200-001-8
Concentration	>= 3 < 5 %
Classification (Regulation (EC) No. 1272/2008)	
	Acute Tox. 3 H301
	Acute Tox. 3 H311
	Acute Tox. 3 H331
	Skin Corr. 1B H314
	Skin Sens. 1 H317
	Muta. 2 H341
	Carc. 1B H350

**Concentration limits (Regulation (EC) No. 1272/2008)**

	Eye Irrit. 2	H319	>= 5 < 25 %
	Skin Corr. 1B	H314	>= 25 %
	Skin Irrit. 2	H315	>= 5 < 25 %
	Skin Sens. 1	H317	>= 0.2 %
	STOT SE 3	H335	>= 5 %
cATpE	oral	100	mg/kg
cATpE	dermal	300	mg/kg
cATpE	inhalative, Dust/Mist	0.5	mg/l
cATpE	inhalative, Vapors	3	mg/l

Additional remarks:

CLP Regulation (EC) No 1272/2008, Annex VI, Note B, D

**methanol**

CAS No.	67-56-1
EINECS no.	200-659-6
Registration no.	01-2119433307-44-XXXX
Concentration	>= 1 < 2.2 %

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## Classification (Regulation (EC) No. 1272/2008)

Flam. Liq. 2	H225
Acute Tox. 3	H301
Acute Tox. 3	H311
Acute Tox. 3	H331
STOT SE 1	H370

## Concentration limits (Regulation (EC) No. 1272/2008)

	STOT SE 1	H370	>= 10 %
	STOT SE 2	H371	>= 3 < 10 %
ATE	oral	143	mg/kg
cATpE	dermal	300	mg/kg
cATpE	inhalative, Dust/Mist	0.5	mg/l

**Further ingredients \*\*\*****water**

CAS No.	7732-18-5		
EINECS no.	231-791-2		
Concentration		>= 50	%
Advice: [4]			

**Note**

[4] Voluntary information

**SECTION 4: First aid measures****4.1. Description of first aid measures****After inhalation**

Ensure supply of fresh air. Summon a doctor immediately.

**After skin contact**

After contact with skin, wash immediately with plenty of water. Summon a doctor immediately. Remove contaminated, soaked clothing immediately and dispose of safely.

**After eye contact**

In case of contact with the eyes, rinse immediately for at least 15 minutes with plenty of water. Eye treatment by an ophthalmologist.

**After ingestion**

Let plenty of water be drunk in small gulps. Summon a doctor immediately.

**4.2. Most important symptoms and effects, both acute and delayed**

Allergic symptoms, Irritation of mucosa, Coughing, Shortness of breath

**SECTION 5: Firefighting measures****5.1. Extinguishing media****Suitable extinguishing media**

Extinguishing measures to suit surroundings

**5.2. Special hazards arising from the substance or mixture**

The product is not combustible. If a fire breaks out nearby evolution of dangerous gases possible.

**5.3. Advice for firefighters****Special protective equipment for fire-fighting**

Use self-contained breathing apparatus. Wear protective clothing.

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**Other information**

Do not discharge into surface waters/groundwater.

**SECTION 6: Accidental release measures****6.1. Personal precautions, protective equipment and emergency procedures**

Do not inhale vapours. Avoid contact with skin, eyes and clothing. Ensure adequate ventilation.

**6.2. Environmental precautions**

Do not empty into drains.

**6.3. Methods and material for containment and cleaning up**

Take up with absorbent material (eg sand, kieselguhr, universal binder). When picked up, treat material as prescribed under Section 13 "Disposal". Clean up affected area.

**SECTION 7: Handling and storage****7.1. Precautions for safe handling****Advice on safe handling**

Work only in fume cupboards. Avoid dust formation. Avoid formation of aerosols. Avoid inhaling dusts/ billows/ steams. Observe safety references and application instructions mentioned on can.

**7.2. Conditions for safe storage, including any incompatibilities****Recommended storage temperature**

Value	15	25	°C
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**Requirements for storage rooms and vessels**

Do not use metal containers.

**Storage classes**

Storage class according to TRGS 510	6.1C	Combustible substances of acute toxicity, category 3 / hazardous substances that are toxic or produce chronic effects
Storage category (Switzerland)	6.1	

**Further information on storage conditions**

Keep container tightly closed.

**SECTION 8: Exposure controls/personal protection \*\*\*****8.1. Control parameters****Exposure limit values \*\*\*****methanol**

List	SUVA			
Type	MAK			
Value	260	mg/m <sup>3</sup>	200	ppm(V)
Short term exposure limit	520	mg/m <sup>3</sup>	400	ppm(V)

Skin resorption / sensibilisation: H; Pregnancy group: S; Remarks: H B SSc; ZNS; INRS NIOSH

**formaldehyde ...%**

List	SUVA			
Type	MAK			
Value	0,37	mg/m <sup>3</sup>	0,3	ppm(V)
Short term exposure limit	0,74	mg/m <sup>3</sup>	0,6	ppm(V)

Pregnancy group: S; Remarks: S C1#B SSc; Auge; HSE NIOSH DFG OSHA

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**Derived No/Minimal Effect Levels (DNEL/DMEL)**

**methanol**

Type of value	Derived No Effect Level (DNEL)	
Reference group	Worker	
Duration of exposure	Acute	
Route of exposure	dermal	
Mode of action	Systemic effects	
Concentration	40	mg/kg/d

Type of value	Derived No Effect Level (DNEL)	
Reference group	Worker	
Duration of exposure	Acute	
Route of exposure	inhalative	
Mode of action	Systemic effects	
Concentration	260	mg/m <sup>3</sup>

Type of value	Derived No Effect Level (DNEL)	
Reference group	Worker	
Duration of exposure	Acute	
Route of exposure	inhalative	
Mode of action	Local effects	
Concentration	260	mg/m <sup>3</sup>

Type of value	Derived No Effect Level (DNEL)	
Reference group	Worker	
Duration of exposure	Long term	
Route of exposure	dermal	
Mode of action	Systemic effects	
Concentration	40	mg/kg/d

Type of value	Derived No Effect Level (DNEL)	
Reference group	Worker	
Duration of exposure	Long term	
Route of exposure	inhalative	
Mode of action	Systemic effects	
Concentration	260	mg/m <sup>3</sup>

Type of value	Derived No Effect Level (DNEL)	
Reference group	Worker	
Duration of exposure	Long term	
Route of exposure	inhalative	
Mode of action	Local effects	
Concentration	260	mg/m <sup>3</sup>

Type of value	Derived No Effect Level (DNEL)	
Reference group	Consumer	
Duration of exposure	Acute	
Route of exposure	dermal	
Mode of action	Systemic effects	
Concentration	8	mg/kg/d

Type of value	Derived No Effect Level (DNEL)	
Reference group	Consumer	
Duration of exposure	Acute	
Route of exposure	inhalative	
Mode of action	Systemic effects	

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Concentration	50	mg/m <sup>3</sup>
Type of value	Derived No Effect Level (DNEL)	
Reference group	Consumer	
Duration of exposure	Acute	
Route of exposure	oral	
Mode of action	Systemic effects	
Concentration	8	mg/kg/d
Type of value	Derived No Effect Level (DNEL)	
Reference group	Consumer	
Duration of exposure	Long term	
Route of exposure	inhalative	
Mode of action	Local effects	
Concentration	50	mg/m <sup>3</sup>
Type of value	Derived No Effect Level (DNEL)	
Reference group	Consumer	
Duration of exposure	Long term	
Route of exposure	oral	
Mode of action	Systemic effects	
Concentration	8	mg/kg/d
Type of value	Derived No Effect Level (DNEL)	
Reference group	Consumer	
Duration of exposure	Long term	
Route of exposure	inhalative	
Mode of action	Systemic effects	
Concentration	50	mg/m <sup>3</sup>
Type of value	Derived No Effect Level (DNEL)	
Reference group	Consumer	
Duration of exposure	Long term	
Route of exposure	dermal	
Mode of action	Systemic effects	
Concentration	8	mg/kg/d
Type of value	Derived No Effect Level (DNEL)	
Reference group	Consumer	
Duration of exposure	Acute	
Route of exposure	inhalative	
Mode of action	Local effects	
Concentration	50	mg/m <sup>3</sup>

**Predicted No Effect Concentration (PNEC)****methanol**

Type of value	PNEC	
Type	Freshwater	
Concentration	154	mg/l
Type of value	PNEC	
Type	Saltwater	
Concentration	15.4	mg/l
Type of value	PNEC	
Type	Sediment	

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Concentration	570.4	mg/kg
Type of value	PNEC	
Type	Soil	
Concentration	23.5	mg/kg
Type of value	PNEC	
Type	Sewage treatment plant (STP)	
Concentration	100	mg/l
Conditions	Intermittend	
Concentration	1540	mg/l

## 8.2. Exposure controls

### General protective and hygiene measures

Remove contaminated, soaked clothing immediately and dispose of safely. Preventative skin protection. Wash hands and face after work. Do not inhale vapours.

### Respiratory protection

Breathing apparatus in the event of aerosol or mist formation.

### Hand protection

Protective gloves  
 Appropriate Material nitrile rubber - NBR  
 Material thickness 0.11 mm  
 Breakthrough time > 480 min

### Eye protection

necessary

### Body protection

protective overalls

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

<b>Physical state</b>	liquid, clear	
<b>Colour</b>	colourless	
<b>Odour</b>	characteristic	
<b>Boiling point or initial boiling point and boiling range</b>		
Value	appr. 100	°C
Source	Estimated value	
<b>Flash point</b>		
Value	> 79	°C
Source	Estimated value	
<b>Vapour pressure</b>		
Value	> 1	hPa
Source	Estimated value	
<b>Density and/or relative density</b>		
Value	1.01	g/cm <sup>3</sup>
Temperature	20	°C
Remarks	Relative Density according specification	

## SECTION 10: Stability and reactivity

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**10.1. Reactivity**

No decomposition if stored and applied as directed.

**10.2. Chemical stability**

No decomposition if stored and applied as directed.

**10.3. Possibility of hazardous reactions**

Vapours can form an explosive mixture with air. Oxidising agents

**10.4. Conditions to avoid**

To avoid thermal decomposition, do not overheat. Heat. Flames. Sparks

**10.5. Incompatible materials**Reacts violently with: Acids, Reacts with hydrogen peroxide (H<sub>2</sub>O<sub>2</sub>). Oxidising agents, Alkaline metals,  
Incompatible with: Metals**SECTION 11: Toxicological information****11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008****Acute oral toxicity**

ATE	1'869.72	mg/kg
	05	
Method	calculated value (Regulation (EC) No. 1272/2008)	

**Acute oral toxicity (Components)****methanol**

Species	Human	
LDLo	143	mg/kg
Source	RTECS	

**Acute dermal toxicity**

ATE	5'131.80	mg/kg
	18	
Method	calculated value (Regulation (EC) No. 1272/2008)	

**Acute dermal toxicity (Components)****methanol**

Species	rabbit	
LD50	17100	mg/kg

**Acute inhalational toxicity**

ATE	71.5751	mg/l
Administration/Form	Vapors	
Method	calculated value (Regulation (EC) No. 1272/2008)	
ATE	8.553	mg/l
Administration/Form	Dust/Mist	
Method	calculated value (Regulation (EC) No. 1272/2008)	

**Acute inhalative toxicity (Components)****methanol**

Species	rat	
LC50	131.25	mg/l
Duration of exposure	4	h
Administration/Form	Vapors	
Source	ECHA	

**Skin corrosion/irritation**

evaluation	slightly irritant
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**Skin corrosion/irritation (Components)****methanol**

Species rabbit  
 Remarks No effect of irritation known.  
 Source ECHA

**methanol**

Remarks Repeated and prolonged skin contact may lead to defatting and irritation of the skin.

**formaldehyde ...%**

Species rabbit  
 Duration of exposure 3 min  
 evaluation corrosive  
 Method OECD 404

**Serious eye damage/irritation**

evaluation slightly irritant

**Serious eye damage/irritation (Components)****methanol**

Species rabbit  
 Method OECD 405  
 Remarks None

**formaldehyde ...%**

Species rabbit  
 evaluation irritant - risk of serious damage to eyes

**Sensitization**

Remarks May cause allergic skin reactions.

**Sensitization (Components)****methanol**

Species guinea pig  
 Method OECD 406  
 Remarks No sensitisation effect known.  
 Source Maximierungstest (GMPT)

**formaldehyde ...%**

Route of exposure dermal  
 Species mouse  
 evaluation sensitizing  
 Method OECD 429

**Subacute, subchronic, chronic toxicity (Components)****methanol**

Remarks No data available.

**Mutagenicity (Components)****methanol**

Species Salmonella typhimurium  
 evaluation No mutagenicity in the Ames-test.  
 Method OECD 471  
 Remarks negative

**methanol**

Remarks negative on animals

**formaldehyde ...%**

evaluation Information on genotoxicity in vivo available.  
 Method Ames test

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Remarks positive

**Reproduction toxicity (Components)****methanol**

Species Rats (male/female)  
 Dose 1.33 mg/l  
 evaluation No negative effects

**formaldehyde ...%**

Route of exposure inhalative  
 Species rat  
 evaluation No negative effects

**Carcinogenicity**

Remarks May cause cancer.

**Carcinogenicity (Components)****methanol**

Remarks No data available

**formaldehyde ...%**

Route of exposure inhalative  
 Species rat  
 Duration of exposure 28 Months  
 evaluation Definitely confirmed as causing cancer in the experiment on test animals.

**Specific Target Organ Toxicity (STOT) (Components)****methanol****Single exposure**

evaluation Causes damage to organs.  
 Route of exposure oral  
 Organs: Eyes  
 Species Human

**methanol**

Route of exposure inhalative  
 Species rat  
 NOAEL 0.13 mg/l  
 Duration of exposure 365 d  
 Method OECD 453

**methanol**

Route of exposure inhalative  
 Species Rats (male/female)  
 LOAEL 1.3 mg/l  
 Duration of exposure 365 d  
 Method OECD 453  
 Source Merck KGaA Safety Data Sheet

**formaldehyde ...%**

evaluation May cause respiratory irritation.

**11.2 Information on other hazards****Endocrine disrupting properties with respect to humans**

The product does not contain a substance that has endocrine disrupting properties with respect to humans.

**Experience in practice**

Irritates the mucous membrane. After Swallowing: irritations in mouth, throat, oesophagus and gastrointestinal tract. Inhalation of thermal decomposition products may lead to adverse effects including pulmonary oedema.

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**Other information**

Quantitative data concerning toxicity are not available.  
Observe the usual precautions for handling chemicals.

**SECTION 12: Ecological information****12.1. Toxicity****Fish toxicity**

Remarks No data available.

**Fish toxicity (Components)****methanol**

Species	Bluegill ( <i>Lepomis macrochirus</i> )		
LC50	15400		mg/l
Duration of exposure	96	h	
Source	(EPA 600/3-75/009)		

**Daphnia toxicity (Components)****methanol**

Species	Daphnia magna		
EC50	> 10000		mg/l
Duration of exposure	48	h	
Source	IUCLID		

**methanol**

Species	Daphnia magna		
EC50	18260		mg/l
Duration of exposure	96	h	
Method	OECD 201		

**formaldehyde ...%**

Species	Daphnia pulex		
EC50	5.8		mg/l
Duration of exposure	48	h	
Method	OECD 201		

**Algae toxicity (Components)****methanol**

Species	Raphidocelis subcapitata		
EC50	22000		mg/l
Duration of exposure	96	h	
Method	OECD 201		

**formaldehyde ...%**

Species	Desmodesmus subspicatus		
EC50	4.89		mg/l
Duration of exposure	72	h	
Method	OECD 201		

**Bacteria toxicity (Components)****methanol**

Species	activated sludge		
IC50	> 1000		mg/l
Duration of exposure	3	h	
Method	OECD 209		

**formaldehyde ...%**

EC50	34.1		mg/l
Duration of exposure	120	h	

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## 12.2. Persistence and degradability

### Biodegradability

Remarks No data available.

### Biodegradability (Components)

#### formaldehyde ...%

Value	91	%
Duration of test	14	d
evaluation	Readily biodegradable	
Method	OECD 301C	
Remarks	Test conducted with a similar formulation.	

### Ready degradability (Components)

#### methanol

Value	99	%
Duration of test	30	d
Method	OECD 301D	
Source	Merck KGaA Safety Data Sheet	

### Chemical oxygen demand (COD) (Components)

#### methanol

Value	1420	mg/g
Source	IUCLID	

### Biochemical oxygen demand (BOD5) (Components)

#### methanol

Value	600	to	1120	mg/g
Source	IUCLID			

## 12.3. Bioaccumulative potential

### Octanol/water partition coefficient (log Pow) (Components)

#### methanol

log Pow	-0.77
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### Bioconcentration factor (BCF) (Components)

#### methanol

BCF	1.0
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## 12.4. Mobility in soil

### Mobility in soil (Components)

#### methanol

Will not adsorb on soil.

## 12.5. Results of PBT and vPvB assessment

### Results of PBT and vPvB assessment

The product contains no PBT substances  
The product contains no vPvB substances.

## 12.6 Endocrine disrupting properties

### Endocrine disrupting properties with respect to the environment

The product does not contain a substance that has endocrine disrupting properties with respect to non-target organisms.

## 12.7. Other adverse effects

### General information / ecology

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Do not allow it to reach ground water, water bodies or sewage system.




**SECTION 13: Disposal considerations****13.1. Waste treatment methods****Disposal recommendations for the product**

Disposal in compliance with local and national regulations.

**Disposal recommendations for packaging**

Dispose of as unused product.

**SECTION 14: Transport information**

	Land transport ADR/RID	Marine transport IMDG/GGVSee	Air transport ICAO/IATA
Tunnel restriction code	E		
14.1. UN number	2209	2209	2209
14.2. UN proper shipping name	FORMALDEHYDE SOLUTION	FORMALDEHYDE SOLUTION	FORMALDEHYDE SOLUTION
14.3. Transport hazard class(es)	8	8	8
Label			
14.4. Packing group	III	III	III
Limited Quantity	5 l		
Transport category	3		

**SECTION 15: Regulatory information****15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture****Water Hazard Class (Germany)**

Water Hazard Class (Germany) WGK 3

Remarks Derivation of WGK according to Annex 1 No. 5.2 AwSV

**15.2. Chemical safety assessment**

For this substance a chemical safety assessment has not been carried out.

**SECTION 16: Other information****Hazard statements listed in Chapter 3**

H225	Highly flammable liquid and vapour.
H301	Toxic if swallowed.
H302	Harmful if swallowed.

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H311	Toxic in contact with skin.
H314	Causes severe skin burns and eye damage.
H317	May cause an allergic skin reaction.
H331	Toxic if inhaled.
H341	Suspected of causing genetic defects.
H350	May cause cancer.
H370	Causes damage to organs.

**CLP categories listed in Chapter 3**

Acute Tox. 3	Acute toxicity, Category 3
Acute Tox. 4	Acute toxicity, Category 4
Carc. 1B	Carcinogenicity, Category 1B
Flam. Liq. 2	Flammable liquid, Category 2
Muta. 2	Germ cell mutagenicity, Category 2
Skin Corr. 1B	Skin corrosion, Category 1B
Skin Sens. 1	Skin sensitization, Category 1
STOT SE 1	Specific target organ toxicity - single exposure, Category 1

**Supplemental information**

Relevant changes compared with the previous version of the safety data sheet are marked with: \*\*\*  
This information is based on our present state of knowledge. However, it should not constitute a guarantee for any specific product properties and shall not establish a legally valid relationship.