



Trade name: Formaldehyd Lösung(35%)/Sigma-Aldrich Gm

Substance number: 714300

Version: 2 / CH

Date revised: 23.02.11

Replaces Version: 1 / CH

Date of printing: 22.06.12

1. Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Formaldehyd Lösung(35%)/Sigma-Aldrich Gm
Item-No. 71430004

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

Use of the substance/preparation

Chemical for synthesis

1.3. Details of the supplier of the safety data sheet

Address

Hänseler AG
Industriestrasse 35
9101 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

2. Hazards identification

2.1. Classification of the substance or mixture

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

Classification (Regulation (EC) No. 1272/2008)
Carc. 2 H351
Acute Tox. 3 H331
Acute Tox. 3 H311
Acute Tox. 3 H301
Skin Corr. 1B H314
Skin Sens. 1 H317
STOT SE 1 H370

Classification in accordance with EC directives

Classification Carc.Cat.3, R40
T, R23/24/25-R39/23/24/25
C, R34
R43

2.2. Label elements

Labelling according to regulation (EC) No 1272/2008

Hazard pictograms



Signal Word

Danger

Hazard statements



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H351	Suspected of causing cancer.
H331	Toxic if inhaled.
H311	Toxic in contact with skin.
H301	Toxic if swallowed.
H314	Causes severe skin burns and eye damage.
H317	May cause an allergic skin reaction.
H370	Causes damage to organs.

Precautionary statements

P301+P330+P331	IF SWALLOWED: rinse mouth. Do NOT induce vomiting.
P310	Immediately call a POISON CENTER or doctor/physician.
P261	Avoid breathing dust/fume/gas/mist/vapours/spray.
P243	Take precautionary measures against static discharge.
P210	Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
P202	Do not handle until all safety precautions have been read and understood.

Labelling in accordance with EC directives 1999/45/EC and 67/548/EEC

The product is classified and labelled in accordance with EC directives/the relevant national laws.

Hazard symbols

Toxic

R phrases

23/24/25	Toxic by inhalation, in contact with skin and if swallowed.
34	Causes burns.
37	Irritating to respiratory system.
39/23/24/25	Toxic: danger of very serious irreversible effects through inhalation, in contact with skin and if swallowed.
40	Limited evidence of a carcinogenic effect.
43	May cause sensitization by skin contact.

S phrases

24	Avoid contact with skin.
26	In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
28	After contact with skin, wash immediately with plenty of . . . (to be specified by the manufacturer).
36/37/39	Wear suitable protective clothing, gloves and eye/face protection.
45	In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).
60	This material and its container must be disposed of as hazardous waste.

Hazardous component(s) to be indicated on label

contains Formaldehyde;Methanol

3. Composition/information on ingredients**Hazardous ingredients****Methanol**

CAS No.	67-56-1				
EINECS no.	200-659-6				
Concentration	>=	10	<	25	%
Classification	T, R23/24/25-R39/23/24/25 F, R11				



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

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

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

STOT SE 2	H371	<= 3 < 10
STOT SE 1	H370	>= 10

Formaldehyde

CAS No.	50-00-0			
EINECS no.	200-001-8			
Concentration	>= 25	<	50	%
Classification	Carc.Cat.3, R40			
	T, R23/24/25			
	C, R34			
	R43			

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

Acute Tox. 3	H331
Acute Tox. 3	H311
Acute Tox. 3	H301
Skin Corr. 1B	H314
Skin Sens. 1	H317
Carc. 2	H351

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

STOT SE 3	H335	>= 5
Skin Sens. 1	H317	>= 0,2
Skin Corr. 1B	H314	>= 25
Eye Irrit. 2	H319	<= 5 < 25
Skin Irrit. 2	H315	<= 5 < 25

4. First aid measures**4.1. Description of first aid measures****General information**

Remove affected person from danger area, lay him down. Remove contaminated clothing immediately and dispose of safely. Keep warm, calm and covered up. Adhere to personal protective measures when giving first aid.

After inhalation

Remove the casualty into fresh air and keep him calm. Summon a doctor immediately. Irregular breathing/no breathing: artificial respiration. If the patient is likely to become unconscious, place and transport in stable sideways position.

After skin contact

Wash immediately with plenty of water for several minutes. Cover wounds with sterile dressing. Take for medical treatment.

After eye contact

Separate eyelids, wash the eyes thoroughly with water (15 min.). Seek medical aid immediately. Shield unaffected eye.

After ingestion



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Summon a doctor immediately. Rinse out mouth and give plenty of water to drink. Administer activated charcoal. Do not induce vomiting. Turn a vomiting person lying on his back onto his side.

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

The following symptoms may occur: Headache, Gastrointestinal complaints, Unconsciousness, Shortness of breath, Irritation of mucosa, Chemical burn, Irritating to respiratory system.

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

Hints for the physician / treatment

If swallowed, flush stomach

Hints for the physician / hazards

Risk of pulmonary oedema

5. Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media

Carbon dioxide, Dry powder, Water spray jet, Extinguish greater fire with water spray or alcohol-resistant foam.

Non Suitable extinguishing media

Full water jet

5.2. Special hazards arising from the substance or mixture

In the event of a fire, toxic and combustible gases can be formed. Can build mixtures of gas and air which are capable of explosion. Carbon monoxide (CO); Carbon dioxide (CO₂)

5.3. Advice for firefighters

Special protective equipment for fire-fighting

Use self-contained breathing apparatus. Wear full protective suit.

Other information

Cool endangered containers with water spray jet. Fire residues and contaminated fire-fighting water must be disposed of in accordance with the local regulations.

6. Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Wear protective equipment. Keep away unprotected persons. Ensure supply of fresh air.

6.2. Environmental precautions

Dilute with lot of water. Do not discharge into the drains/surface waters/groundwater.

6.3. Methods and material for containment and cleaning up

Pick up with absorbent material (eg sand, kieselgur, acid binder, universal binder). When picked up, treat material as prescribed under heading "Disposal". Ensure adequate ventilation.

7. Handling and storage

7.1. Precautions for safe handling

Advice on safe handling

Provide good ventilation of working area (local exhaust ventilation if necessary). Provide good room ventilation even at ground level (vapours are heavier than air). Open and handle container with care. Avoid formation of aerosols. Keep limited supplies at workplace. If workplace limites are exceeded, a respiration protection approved for this particular job must be worn.



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Advice on protection against fire and explosion

Keep away from sources of ignition - refrain from smoking. Vapours can form an explosive mixture with air. Take precautionary measures against static charges. Use explosion-proof equipment/fittings and non-sparking tools. Risk of explosion if the liquid enters the drains. Hold breathing apparatus.

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

Value 10 °C

Requirements for storage rooms and vessels

explosion proof. Provide solvent-resistant and impermeable floor. Use stainless steel containers. Use aluminium containers. Use glass containers. Do not use steel containers. Do not use containers, lines etc. made of copper or copper alloys. Do not use zinc containers.

Hints on storage assembly

Do not store with oxidizing agents. Do not store with acids. Do not store with alkalis.

Further information on storage conditions

Keep container tightly closed. Keep container in a well-ventilated place. Protect from light. Keep under lock and key or accessible only to specialists or people who are authorized.

8. Exposure controls/personal protection**8.1. Control parameters****Exposure limit values****Formaldehyde**

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

Maximum limit value: 4x15; Pregnancy group: C; Status: 2005;

Methanol

List	SUVA			
Type	MAK			
Value	260	mg/m ³	200	ppm(V)
Short term exposure limit	1040	mg/m ³	800	ppm(V)

Maximum limit value: 4x15; Skin resorption / sensibilisation: H; Pregnancy group: C; Status: 2005;
Remarks: B

8.2. Exposure controls**General protective and hygiene measures**

Keep away from food-stuffs, beverages and feed-stocks. Store work clothing separately. Wash hands before breaks and after work. Avoid contact with eyes and skin. Hold eye wash fountain available. At work do not eat, drink, smoke or take drugs. Remove contaminated, soaked clothing immediately and dispose of safely.

Respiratory protection

necessary; combination filter B-P3

Hand protection

Gloves (solvent-resistant)				
Appropriate Material	nitrile			
Material thickness	0.35	mm		
Penetrating time	>= 8	h		
Gloves (solvent-resistant)				
Appropriate Material	Butyl rubber - Butyl			
Material thickness	0.5	mm		



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Penetrating time >= 8 h
 Gloves (solvent-resistant)
 Appropriate Material Fluoro carbon rubber - FKM
 Material thickness 0.4 mm
 Penetrating time >= 8 h
 Not suitable: rubber gloves
 Not suitable: PVC gloves
 Not suitable: leather gloves
 Not suitable: gloves made of thick material

Eye protection

Safety goggles

Body protection

Solvent-resistant protective clothing

9. Physical and chemical properties**9.1. Information on basic physical and chemical properties**

Form	liquid		
Colour	colourless		
Odour	pungent		
pH			
Value	4.0		
Temperature	20	°C	
Melting point			
Value	< -15		°C
Boiling point			
Value	98		°C
Flash point			
Value	61		°C
Flammability			
Not self inflammable			
Explosion limits			
Lower explosion limit	5.5		%(V)
Upper explosion limit	72.0		%(V)
Vapour pressure			
Value	128		hPa
Temperature	20	°C	
Density			
Value	1.0072		g/cm ³
Temperature	20	°C	
Solubility in water			
Value	51.0		
Remarks	Completely miscible		
Solubility in other solvents			
organic solvents			
Value	49.0		%
Octanol/water partition coefficient (log Pow)			
log Pow	0.779		
Ignition temperature			



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Value	380	°C
method	DIN 51794	

**Viscosity
dynamic****9.2. Other information****Other information**

The product is not dangerous for explosions.

10. Stability and reactivity**10.4. Conditions to avoid**

To avoid thermal decomposition, do not overheat. No decomposition if stored and applied as directed.

10.5. Incompatible materials

Strong oxidising agents, Acids, Bases, Reactions with alkali metals. Polymerisation

10.6. Hazardous decomposition products

Carbon monoxide, Methanol, Formaldehyde, Flammable gases/vapours

11. Toxicological information**11.1. Information on toxicological effects****Acute oral toxicity**

Reference substance	Formaldehyde		
Species	rat		
LD50	100		mg/kg
Reference substance	Methanol		
Species	rat		
LD50	5620		mg/kg
Reference substance	Methanol		
Species	Human		
LDLo	143		mg/kg

Acute dermal toxicity

Reference substance	Formaldehyde		
Species	rabbit		
LD50	270		mg/kg

Acute inhalational toxicity

Reference substance	Formaldehyde		
Species	rat		
LC50	0.578		mg/l
Duration of exposure	4	h	
Reference substance	Methanol		
Species	rat		
LC50	64000		ppm(V)
Duration of exposure	4	h	

Skin corrosion/irritation

Remarks Corrosive action on the skin and mucous membrane.

Serious eye damage/irritation

valuation strongly corrosive

Sensitization

Remarks Possibility of sensitization through skin contact.



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Subacute, subchronic, chronic toxicity

Remarks Suspicion about carcinogenic effect.
 Remarks Chronic exposure causes damage of respiratory organs.
 Remarks Repeated absorption/exposure may cause disorder of the kidneys.

Experience in practice

After Swallowing: burns in mouth, throat, oesophagus and gastrointestinal tract. Risk of perforation in the oesophagus and stomach.

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

Reference substance	Formaldehyde		
Species	zebra fish (Brachydanio rerio)		
LC50	41		mg/l
Duration of exposure	96	h	
Reference substance	Methanol		
Species	Bluegill (Lepomis macrochirus)		
LC50	15400		mg/l
Duration of exposure	96	h	
Reference substance	Formaldehyde		
Species	Fathead minnow (Pimephales promelas)		
LC50	24		mg/l
Duration of exposure	96	h	

Daphnia toxicity

Reference substance	Formaldehyde		
Species	Daphnia magna		
EC50	2		mg/l
Duration of exposure	48	h	
Reference substance	Methanol		
Species	Daphnia magna		
EC50	> 10000		mg/l
Duration of exposure	48	h	

Algae toxicity

Reference substance	Formaldehyde		
Species	Scenedesmus quadricauda		
IC5	2.5		mg/l
Duration of exposure	8	d	

Bacteria toxicity

Reference substance	Formaldehyde		
Species	Pseudomonas putida		
EC0	14		mg/l
Duration of exposure	16	h	

12.2. Persistence and degradability**Biodegradability**

Value	97		%
Duration of test valuation	5	d	
	Readily biodegradable		

12.3. Bioaccumulative potential**Octanol/water partition coefficient (log Pow)**

log Pow	0.779
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12.6. Other adverse effects

General information / ecology

Harmful to aquatic organisms. Do not allow it to reach ground water, water bodies or sewage system.
Hazard for drinking water supplies. Do not allow undiluted product or large quantities of it to reach ground water, water bodies or sewage system.

13. Disposal considerations

13.1. Waste treatment methods

Disposal recommendations for the product

EWC waste code No not dispose with rubbish.
EWC waste code Should not be released into the sanitary sewer system.
In accordance with regulations for special waste, must be taken, to an authorised special waste incineration plant.

Disposal recommendations for packaging

Disposal in compliance with local and national regulations.

14. Transport information

Land transport ADR/RID

14.1. UN number

UN 2209

14.2. UN proper shipping name

FORMALDEHYDE SOLUTION

14.3. Transport hazard class(es)

Class 8

Label 8

14.4. Packing group

Packing group III

Marine transport IMDG/GGVSee

14.1. UN number

UN 2209

14.2. UN proper shipping name

FORMALDEHYDE SOLUTION

Danger releasing substance Methanol

14.3. Transport hazard class(es)

Class 8

14.4. Packing group

Packing group III

14.5. Environmental hazards

no

Air transport ICAO/IATA

14.1. UN number

UN 2209

14.2. UN proper shipping name

FORMALDEHYDE SOLUTION

Danger releasing substance Methanol

14.3. Transport hazard class(es)

Class 8

14.4. Packing group

Packing group III



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15. Regulatory information

15.2. Chemical safety assessment

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

16. Other information

R-phrases listed in chapter 3

11	Highly flammable.
23/24/25	Toxic by inhalation, in contact with skin and if swallowed.
34	Causes burns.
39/23/24/25	Toxic: danger of very serious irreversible effects through inhalation, in contact with skin and if swallowed.
40	Limited evidence of a carcinogenic effect.
43	May cause sensitization by skin contact.

Hazard statements listed in chapter 3

H225	Highly flammable liquid and vapour.
H301	Toxic if swallowed.
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.
H351	Suspected of causing cancer.
H370	Causes damage to organs.

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.