

Trade name: Acid formicicum 85%

Substance number: 202625

Version: 6 / CH

Date revised: 23.10.2019

Replaces Version: 5 / CH

Print date: 23.10.19

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

1.1. Product identifier

Acid formicicum 85%

Item No. 20262500

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

Acute Tox. 3 H331

Skin Corr. 1B H314

Eye Dam. 1 H318

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.

H331 Toxic if inhaled.

H314 Causes severe skin burns and eye damage.

EUH071 Corrosive to the respiratory tract.

Precautionary statements ***

P261 Avoid breathing dust/fume/gas/mist/vapours/spray.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P304+P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

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P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 P310 Immediately call a POISON CENTER or doctor.
 P501.3 Disposal in compliance with local and national regulations.

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

contains Formic acid

SECTION 3: Composition/information on ingredients *****Hazardous ingredients *******Formic acid**

CAS No.	64-18-6		
EINECS no.	200-579-1		
Registration no.	01-2119491174-37-XXXX		
Concentration	>=	78	< 90 %
Classification (Regulation (EC) No. 1272/2008)			
	Skin Corr. 1A		H314
	Acute Tox. 4		H302
	Flam. Liq. 3		H226
	Acute Tox. 3		H331

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

	Eye Irrit. 2	H319	>= 2 < 10
	Skin Corr. 1A	H314	>= 90
	Skin Corr. 1B	H314	>= 10 < 90
	Skin Irrit. 2	H315	>= 2 < 10
CLP	Regulation (EC) No 1272/2008, Annex VI, Note B		
DSD	Directive 67/548/EEC, Annex I, Note B		

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

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

After inhalation

Ensure supply of fresh air. If the patient is likely to become unconscious, place and transport in stable sideways position. Summon a doctor immediately.

After skin contact

After contact with skin, wash immediately with plenty of water. Take medical treatment.

After eye contact

Separate eyelids, wash the eyes thoroughly with water (15 min.). Summon a doctor immediately.

After ingestion

Rinse out mouth and give plenty of water to drink. Summon a doctor immediately.

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

Irritation of respiratory organs, Irritation of mucosa, Acidosis

SECTION 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

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foam.

Non suitable extinguishing media

Full water jet

5.2. Special hazards arising from the substance or mixture

Carbon monoxide (CO); Can build mixtures of gas and air which are capable of explosion.

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

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

Other information

Collect contaminated fire-fighting water separately, must not be discharged into the drains.

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

Wear protective equipment. Keep away unprotected persons. Respiratory protection

6.2. Environmental precautions

Do not discharge into the drains/surface waters/groundwater. Suppress gases/vapours/mists with water spray jet.

6.3. Methods and material for containment and cleaning up

Ensure adequate ventilation. When picked up, treat material as prescribed under Section 13 "Disposal".

6.4. Reference to other sections

Information regarding Safe handling, see Section 7. Information regarding personal protective measures, see Section 8. Information regarding waste disposal, see Section 13.

SECTION 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). Handle and open container with care. Avoid formation of aerosols.

Advice on protection against fire and explosion

Keep away from sources of ignition - No smoking. Vapours can form an explosive mixture with air. Take action to prevent static discharges.

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

Value < 30 °C

Requirements for storage rooms and vessels

Provide acid-resistant floor. Do not use light metal drums. Suitable materials: Polyethylene/Polypropylene.

Hints on storage assembly

Do not store together with: Alkalies, Do not store with oxidizing agents.

Storage classes

Storage class according to TRGS 510	3	Flammable liquid
Storage category (Switzerland)	6.1	Toxic substances

Further information on storage conditions

Keep container in a well-ventilated place. Keep container tightly closed. Protect from light.

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SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Exposure limit values

Formic acid

List	SUVA			
Type	MAK			
Value	9,5	mg/m ³	5	ppm(V)
Short term exposure limit	19	mg/m ³	10	ppm(V)
Pregnancy group: S; Status: 2017; Remarks: SSc; Auge & Haut, OAWKT AN; NIOSH, OSHA				

Derived No/Minimal Effect Levels (DNEL/DMEL)

Formic acid

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	19			mg/m ³

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	9.5			mg/m ³

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	9.5			mg/m ³

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	3			mg/m ³

Predicted No Effect Concentration (PNEC)

Formic acid

Type of value	PNEC			
Type	Freshwater			
Concentration	2			mg/l

Type of value	PNEC			
Type	Saltwater			
Concentration	0.2			mg/l

Type of value	PNEC			
Type	Sewage treatment plant (STP)			
Concentration	7.2			mg/l

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Type of value	PNEC		
Type	Soil		
Concentration	1.5		mg/kg

8.2. Exposure controls

General protective and hygiene measures

Keep away from food-stuffs, beverages and feed-stocks. Wash hands and face before breaks and after work. Avoid contact with skin and eyes. Hold eye wash fountain available. Do not inhale gases/vapours/aerosols.

Respiratory protection

Breathing apparatus in the event of aerosol or mist formation. Gas filter E.

Hand protection

Gloves (acid-resistant)

Gloves

Appropriate Material	Polychloroprene		
Material thickness	0.5		mm
Breakthrough time	>= 8		h

Gloves

Appropriate Material	Butyl rubber		
Material thickness	0.5		mm
Breakthrough time	>= 8		h

Gloves

Appropriate Material	Fluoro carbon rubber - FKM		
Material thickness	0.4		mm
Breakthrough time	>= 8		h

Not suitable: gloves made of thick material

Not suitable: leather gloves

Eye protection

Tightly fitting safety glasses; Face shield

Body protection

Acid-resistant protective clothing

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Form	liquid		
Colour	colourless to yellow		
Odour	pungent		
pH value			
Value	2.2		
Concentration/H ₂ O	10		g/l
Temperature	20		°C
Freezing point			
Value	- 13.5		°C
Initial boiling point and boiling range			
Value	107.3		°C
Flash point			
Value	65		°C
Method	DIN 51755		

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Upper/lower flammability or explosive limits

Lower explosion limit	14.9	%(V)
Upper explosion limit	47.6	%(V)

Vapour pressure

Value	24.2	hPa
Temperature	20	°C
Value	112.5	hPa
Temperature	50	°C

Density

Value	1.195	g/cm ³
Temperature	20	°C
Value	1.201	g/cm ³
Temperature	15	°C
Value	1.173	g/cm ³
Temperature	40	°C

Solubility in water

Remarks	Completely miscible
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Partition coefficient: n-octanol/water

log Pow	-1.9	
Temperature	23	°C

Ignition temperature

Value	500	°C
Method	DIN 51794	

Auto-ignition temperature

Value	500	°C
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Viscosity**dynamic**

Value	1.4	mPa.s
Temperature	20	°C

Oxidising properties

evaluation	None known
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9.2. Other information**Other information**

Forms explosive mixture with air are possible.

SECTION 10: Stability and reactivity**10.1. Reactivity**

No decomposition if stored and applied as directed.

10.2. Chemical stability

To avoid thermal decomposition, do not overheat.

10.3. Possibility of hazardous reactions

Possible incompatibility with materials listed under section 10.5.

10.4. Conditions to avoid

To avoid thermal decomposition, do not overheat. Sparks. Flames. Protect from direct sunlight.

10.5. Incompatible materialsStrong oxidising agents, Aluminium, Alkalies, Alkalis, hydrogen peroxide (H₂O₂). aluminium (Al),

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Reaction with Sulfuric acid.

10.6. Hazardous decomposition products

Carbon monoxide

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

ATE	811.120	mg/kg
	1	
Method	calculated value (Regulation (EC) No. 1272/2008)	

Acute oral toxicity (Components)**Formic acid**

Species	rat	
LD50	730	mg/kg
Method	OECD 401	
Remarks	Ingestion causes burns of the upper digestive and respiratory tracts.	

Acute inhalational toxicity

ATE	8.7223	mg/l
Administration/Form	Vapors	
Method	calculated value (Regulation (EC) No. 1272/2008)	
ATE	0.5556	mg/l
Administration/Form	Dust/Mist	
Method	calculated value (Regulation (EC) No. 1272/2008)	

Acute inhalative toxicity (Components)**Formic acid**

LC50	7.85	mg/l
Duration of exposure	4	h
Administration/Form	Vapors	
Method	OECD 403	
Remarks	Strong corrosive action on the skin and mucous membrane.	

Skin corrosion/irritation

Remarks	Corrosive action on the skin and mucous membrane.
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Skin corrosion/irritation (Components)**Formic acid**

Species	rabbit
evaluation	corrosive
Method	OECD 404
Remarks	Strong corrosive action on the skin and mucous membrane.

Serious eye damage/irritation

Remarks	strongly corrosive
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Serious eye damage/irritation (Components)**Formic acid**

evaluation	irritant - risk of serious damage to eyes
Remarks	Risk of serious damage to eyes.

Sensitization (Components)**Formic acid**

Species	guinea pig
evaluation	non-sensitizing
Method	OECD 406

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Mutagenicity (Components)**Formic acid**

evaluation No mutagenicity in the Ames-test.

Formic acid

evaluation No experimental information on genotoxicity in vitro available.

Experience in practice

Ingestion of aqueous solution causes burns in: Mouth. Throat. Perforation of gullet and stomach.

SECTION 12: Ecological information**12.1. Toxicity****Fish toxicity (Components)****Formic acid**

Species	zebra fish (<i>Brachydanio rerio</i>)	
LC50	130	mg/l
Duration of exposure	96	h
Method	OECD 203	
Remarks	Test conducted with a similar formulation.	

Daphnia toxicity (Components)**Formic acid**

Species	Daphnia magna	
EC50	365	mg/l
Duration of exposure	48	h
Method	OECD 202	
Remarks	Test conducted with a similar formulation.	

Algae toxicity (Components)**Formic acid**

Species	Selenastrum capricornutum	
EC50	1.240	mg/l
Duration of exposure	72	h
Method	OECD 201	
Remarks	Test conducted with a similar formulation.	

Bacteria toxicity (Components)**Formic acid**

Species	Pseudomonas putida	
EC50	46.7	mg/l
Duration of exposure	17	h
Method	DIN 38412 Part 8	
Remarks	Test conducted with a similar formulation.	

12.2. Persistence and degradability**Biodegradability (Components)****Formic acid**

Value	100	%
Duration of test evaluation	9	d
	Readily biodegradable	

Chemical oxygen demand (COD) (Components)**Formic acid**

Value	348	mg/g
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Biochemical oxygen demand (BOD5) (Components)

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Formic acid

Value 86 mg/g

12.3. Bioaccumulative potential**Partition coefficient: n-octanol/water**log Pow -1.9
Temperature 23 °C**12.4. Mobility in soil****General information**

There is no data available on the product apart from the information given in this subsection.

12.5. Results of PBT and vPvB assessment**Evaluation of persistence and bioaccumulation potential (Components)****Formic acid**

The Substance doesn't meet PBT/vPvB-criteria

12.6. Other adverse effects**General information / ecology**

Harmful to aquatic organisms. Do not allow undiluted product or large quantities of it to reach ground water, water bodies or sewage system. Product is slightly hazardous to water.

SECTION 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.
Disposal in compliance with local and national regulations.**Disposal recommendations for packaging**

Disposal in compliance with local and national regulations.

SECTION 14: Transport information

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	Land transport ADR/RID	Marine transport IMDG/GGVSee	Air transport ICAO/IATA
Tunnel restriction code	D/E		
14.1. UN number	1779	1779	1779
14.2. UN proper shipping name	FORMIC ACID, Solution	FORMIC ACID, Solution	FORMIC ACID, Solution
14.3. Transport hazard class(es)	8	8	8
Subsidiary risk	3	3	3
Label			
14.4. Packing group	II	II	II
Limited Quantity	1 I		
Transport category	2		

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 1

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

H226 Flammable liquid and vapour.
H302 Harmful if swallowed.
H314 Causes severe skin burns and eye damage.
H331 Toxic if inhaled.

CLP categories listed in Chapter 3

Acute Tox. 3 Acute toxicity, Category 3
Acute Tox. 4 Acute toxicity, Category 4
Flam. Liq. 3 Flammable liquid, Category 3
Skin Corr. 1A Skin corrosion, Category 1A

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.

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