

Safety Data Sheet

according to Regulation (EC) No 1907/2006

Revision date: 10.11.2020

Ameisensäure ~ 98%, reinst

Product code: 13778.xxxxx

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SECTION 1: Identification of the substance/mixture and of the company/undertaking**1.1. Product identifier**

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REACH Registration Number: 01-2119491174-37-XXXX
CAS No: 64-18-6
Index No: 607-001-00-0

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

Intended for scientific research and development. Use as laboratory reagent.

Uses advised against

Any non-intended use.

1.3. Details of the supplier of the safety data sheet

Company name: MORPHISTO GmbH
Street: Weismüllerstr. 45
Place: D-60314 Frankfurt am Main
Telephone: +49 (0) 69 / 400 3019-60 Telefax: +49 (0) 69 / 400 3019-64
e-mail: info@morphisto.de
Internet: http://www.morphisto.de

1.4. Emergency telephone number:

Poison Information Center Mainz, Germany, Tel: +49(0)6131/19240

SECTION 2: Hazards identification**2.1. Classification of the substance or mixture****Regulation (EC) No. 1272/2008**

Hazard categories:

Flammable liquid: Flam. Liq. 3
Acute toxicity: Acute Tox. 3
Acute toxicity: Acute Tox. 4
Skin corrosion/irritation: Skin Corr. 1A
Serious eye damage/eye irritation: Eye Dam. 1
Hazard Statements:
Flammable liquid and vapour.
Toxic if inhaled.
Harmful if swallowed.
Causes severe skin burns and eye damage.
Causes serious eye damage.

2.2. Label elements**Regulation (EC) No. 1272/2008****Hazard components for labelling**

formic acid 98 %

Signal word: Danger**Pictograms:****Hazard statements**

H226 Flammable liquid and vapour.
H302 Harmful if swallowed.

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H314 Causes severe skin burns and eye damage.
 H331 Toxic if inhaled.

Precautionary statements

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
 P243 Take action to prevent static discharges.
 P260 Do not breathe dust/fume/gas/mist/vapours/spray.
 P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.
 P301+P330+P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
 P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.
 P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
 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/doctor.
 P403+P235 Store in a well-ventilated place. Keep cool.

Special labelling of certain mixtures

EUH071 Corrosive to the respiratory tract.
 Restricted to professional users.

2.3. Other hazards

No information available.

SECTION 3: Composition/information on ingredients
3.1. Substances
Chemical characterization

FORMIC ACID

Sum formula:

 HCO_2H

Molecular weight:

46,03 g/mol

Hazardous components

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	GHS Classification			
64-18-6	formic acid 98 %			100 %
	200-579-1	607-001-00-0		
	Flam. Liq. 3, Acute Tox. 3, Acute Tox. 4, Skin Corr. 1A, Eye Dam. 1; H226 H331 H302 H314 H318 EUH071			

Full text of H and EUH statements: see section 16.

SECTION 4: First aid measures
4.1. Description of first aid measures

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General information

IF exposed or concerned: Call a POISON CENTER. First aider: Pay attention to self-protection! Remove affected person from the danger area and lay down. If unconscious place in recovery position and seek medical advice. Never give anything by mouth to an unconscious person or a person with cramps. Remove contaminated, saturated clothing immediately. Do not leave affected person unattended.

After inhalation

Remove casualty to fresh air and keep warm and at rest. Provide fresh air. If breathing is irregular or stopped, administer artificial respiration. No mouth-to-mouth or mouth-to-nose resuscitation. Use Ambu bag or ventilator. Call a physician immediately.

After contact with skin

After contact with skin, wash immediately with plenty of water and soap. Take off immediately all contaminated clothing and wash it before reuse. Medical treatment necessary.

After contact with eyes

In case of contact with eyes flush immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart and consult an ophthalmologist. Remove contact lenses, if present and easy to do. Continue rinsing. Protect uninjured eye.

After ingestion

Observe risk of aspiration if vomiting occurs. Do NOT induce vomiting. Adverse human health effects and symptoms: Gastric perforation. Call a physician immediately. Do not allow a neutralisation agent to be drunk. Rinse mouth thoroughly with water.

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

No information available.

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

Treat symptomatically.

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

Water spray jet, Carbon dioxide (CO₂), Foam, Extinguishing powder.

Unsuitable extinguishing media

no restriction

5.2. Special hazards arising from the substance or mixture

Flammable. Vapours can form explosive mixtures with air. Can be released in case of fire: Carbon monoxide (CO). Carbon dioxide (CO₂).

5.3. Advice for firefighters

Wear a self-contained breathing apparatus and chemical protective clothing. Full protection suit.

Additional information

In case of fire and/or explosion do not breathe fumes. Use water spray jet to protect personnel and to cool endangered containers. Suppress gases/vapours/mists with water spray jet. Do not allow water used to extinguish fire to enter drains or waterways. In case of fire: Evacuate area.

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

Remove all sources of ignition. Provide adequate ventilation. Do not breathe gas/fumes/vapour/spray. Avoid contact with skin, eyes and clothes. Use personal protection equipment. Remove persons to safety.

6.2. Environmental precautions

Do not allow uncontrolled discharge of product into the environment. Explosion risk. Clean contaminated articles and floor according to the environmental legislation.

6.3. Methods and material for containment and cleaning up

Absorb with liquid-binding material (e.g. sand, diatomaceous earth, acid- or universal binding agents). Treat the

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recovered material as prescribed in the section on waste disposal.

6.4. Reference to other sections

Safe handling: see section 7

Personal protection equipment: see section 8

Disposal: see section 13

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

Use extractor hood (laboratory). If handled uncovered, arrangements with local exhaust ventilation have to be used. Do not breathe gas/fumes/vapour/spray. Provide adequate ventilation as well as local exhaustion at critical locations. Avoid contact with skin, eyes and clothes. Wear personal protection equipment (refer to section 8). Always close containers tightly after the removal of product.

Advice on protection against fire and explosion

Keep away from sources of ignition - No smoking. Take precautionary measures against static discharges. Vapours can form explosive mixtures with air. Usual measures for fire prevention.

Further information on handling

All work processes must always be designed so that the following is as low as possible: Inhalation. Skin contact. Eye contact. General protection and hygiene measures: See section 8.

7.2. Conditions for safe storage, including any incompatibilities
Requirements for storage rooms and vessels

Keep container tightly closed. Keep locked up. Store in a place accessible by authorized persons only. Provide adequate ventilation as well as local exhaustion at critical locations. Keep in a cool, well-ventilated place. Keep away from flammable materials. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Due to gaseous decomposition products, overpressure can occur in tightly sealed containers. Do not keep the container sealed.

Hints on joint storage

Do not store together with: Oxidizing agent. Pyrophoric or self-heating substances. Explosive substances. flammable solids. Self-reactive substances and mixtures. Combustible toxic substances. Non-combustible toxic substances. Keep away from flammable materials.

Further information on storage conditions

Keep the packing dry and well sealed to prevent contamination and absorption of humidity. Protect against: UV-radiation/sunlight. heat. Humidity. frost. Recommended storage temperature: 15-25°C.

7.3. Specific end use(s)

Intended for scientific research and development. Use as laboratory reagent.

SECTION 8: Exposure controls/personal protection
8.1. Control parameters
Exposure limits (EH40)

CAS No	Substance	ppm	mg/m ³	fibres/ml	Category	Origin
64-18-6	Formic acid	5	9.6		TWA (8 h)	WEL

8.2. Exposure controls


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Appropriate engineering controls

Technical measures and the application of suitable work processes have priority over personal protection equipment. If handled uncovered, arrangements with local exhaust ventilation have to be used. Do not breathe gas/fumes/vapour/spray. Provide eye shower and label its location conspicuously

Protective and hygiene measures

Wear suitable protective clothing. When handling with chemical substances, protective gloves must be worn with the CE-label including the four control digits. Remove contaminated, saturated clothing immediately. Wash hands and face before breaks and after work and take a shower if necessary. Draw up and observe skin protection programme. When using do not eat, drink, smoke, sniff.

Eye/face protection

Suitable eye protection: Eye glasses with side protection DIN EN 166.

Hand protection

When handling with chemical substances, protective gloves must be worn with the CE-label including the four control digits. The quality of the protective gloves resistant to chemicals must be chosen as a function of the specific working place concentration and quantity of hazardous substances. 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.

By short-term hand contact:

Suitable material: NR (Natural rubber (Caoutchouc), Natural latex).

Thickness of glove material: -

penetration time (maximum wearing period): >60min.

By long-term hand contact:

Suitable material: CR (polychloroprenes, Chloroprene rubber).

Thickness of glove material: -

penetration time (maximum wearing period): >480min.

Skin protection

Use of protective clothing. When handling with chemical substances, protective clothing with CE-labels including the four control digits must be worn.

Respiratory protection

In case of inadequate ventilation wear respiratory protection.

Full-/half-/quarter-face masks (DIN EN 136/140)

Suitable material:

ABEK2P3

Environmental exposure controls

Do not allow uncontrolled discharge of product into the environment.

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

Physical state:	liquid
Colour:	colourless
Odour:	stinging
Odour threshold:	not determined
pH-Value (at 20 °C):	<3
Changes in the physical state	
Melting point:	8
Initial boiling point and boiling range:	101 °C
Flash point:	42 °C

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Flammability

Solid: not applicable
Gas: not applicable

Explosive properties

The product is not: Explosive.

Lower explosion limits: 10 vol. %
Upper explosion limits: 45,5 vol. %
Ignition temperature: 520 °C

Auto-ignition temperature

Solid: not applicable
Gas: not applicable

Decomposition temperature: not determined

Oxidizing properties

Not oxidising.

Vapour pressure:
(at 20 °C) 44,6 hPa
Vapour pressure:
(at 50 °C) 174 hPa
Density (at 20 °C): 1,22 g/cm³
Water solubility: easily soluble

Solubility in other solvents

not determined

Partition coefficient: not determined

Vapour density: not determined

Evaporation rate: not determined

9.2. Other information

Solid content: not determined

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

Flammable. Corrosive to metals.

10.2. Chemical stability

The product is stable under storage at normal ambient temperatures.

10.3. Possibility of hazardous reactions

Exothermic reactions with: Base. Peroxides. Oxidizing agent

10.4. Conditions to avoid

Keep away from sources of heat (e.g. hot surfaces), sparks and open flames. Vapours can form explosive mixtures with air.

10.5. Incompatible materials

Materials to avoid: metals Base. Oxidizing agents. peroxides.

10.6. Hazardous decomposition productsCan be released in case of fire: Gases / vapours, highly flammable Carbon dioxide (CO₂) Carbon monoxide (CO).**SECTION 11: Toxicological information****11.1. Information on toxicological effects**

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Acute toxicity

CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
64-18-6	formic acid 98 %				
	oral	ATE 500 mg/kg			
	inhalation vapour	ATE 3 mg/l			
	inhalation aerosol	ATE 0,5 mg/l			

Additional information on tests

Special hazards arising from the substance or mixture. Classification according to Regulation (EC) No 1272/2008 [CLP]: health hazard properties.

SECTION 12: Ecological information

12.1. Toxicity

The product is not: Ecotoxic.

CAS No	Chemical name					
	Aquatic toxicity	Dose	[h] [d]	Species	Source	Method
64-18-6	formic acid 98 %					
	Acute fish toxicity	LC50 46 - 100 mg/l	96 h	Leuciscus idus	IUCLID	
	Acute algae toxicity	ErC50 27 mg/l	72 h	Desmodesmus subspicatus		
	Acute crustacea toxicity	EC50 34,2 mg/l	48 h	Daphnia magna	IUCLID	

12.2. Persistence and degradability

The product has not been tested.

12.3. Bioaccumulative potential

The product has not been tested.

Partition coefficient n-octanol/water

CAS No	Chemical name	Log Pow
64-18-6	formic acid 98 %	-0,54

12.4. Mobility in soil

The product has not been tested.

12.5. Results of PBT and vPvB assessment

The product has not been tested.

12.6. Other adverse effects

No information available.

Further information

Avoid release to the environment.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Disposal recommendations

Do not allow to enter into surface water or drains. Dispose of waste according to applicable legislation. Consult the appropriate local waste disposal expert about waste disposal. The allocation of waste identity numbers/waste descriptions must be carried out according to the EEC, specific to the industry and process.

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Contaminated packaging

Hazardous waste according to Directive 2008/98/EC (waste framework directive). Handle contaminated packages in the same way as the substance itself.

SECTION 14: Transport information
Land transport (ADR/RID)

14.1. UN number: UN 1779
14.2. UN proper shipping name: FORMIC ACID
14.3. Transport hazard class(es): 8
14.4. Packing group: II
 Hazard label: 8+3



Classification code: CF1
 Limited quantity: 1 L
 Excepted quantity: E2
 Transport category: 2
 Hazard No: 83
 Tunnel restriction code: D/E

Inland waterways transport (ADN)

14.1. UN number: UN 1779
14.2. UN proper shipping name: formic acid
14.3. Transport hazard class(es): 8
14.4. Packing group: II
 Hazard label: 8+3



Classification code: CF1
 Limited quantity: 1 L
 Excepted quantity: E2

Marine transport (IMDG)

14.1. UN number: UN 1779
14.2. UN proper shipping name: FORMIC ACID
14.3. Transport hazard class(es): 8
14.4. Packing group: II
 Hazard label: 8+3



Special Provisions: -
 Limited quantity: 1 L
 Excepted quantity: E2
 EmS: F-E, S-C

Air transport (ICAO-TI/IATA-DGR)

14.1. UN number: UN 1779

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14.2. UN proper shipping name:	FORMIC ACID
14.3. Transport hazard class(es):	8
14.4. Packing group:	II
Hazard label:	8+3
	 
Limited quantity Passenger:	0.5 L
Passenger LQ:	Y840
Excepted quantity:	E2
IATA-packing instructions - Passenger:	851
IATA-max. quantity - Passenger:	1 L
IATA-packing instructions - Cargo:	855
IATA-max. quantity - Cargo:	30 L

14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS: no

14.6. Special precautions for user

Warning: Combustible liquid. strongly corrosive.

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

not applicable

SECTION 15: Regulatory information**15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture****EU regulatory information**

Restrictions on use (REACH, annex XVII):

Entry 3: formic acid 98 %

2010/75/EU (VOC): 100 % (1220 g/l)

2004/42/EC (VOC): 100 % (1220 g/l)

Information according to 2012/18/EU (SEVESO III): H2 ACUTE TOXIC

Additional information: P5c

Additional information

Verordnung (EG) Nr. 1907/2006 des Europäischen Parlaments und des Rates vom 18. Dezember 2006 zur Registrierung, Bewertung, Zulassung und Beschränkung chemischer Stoffe (REACH), zur Schaffung einer Europäischen Agentur für chemische Stoffe, zur Änderung der Richtlinie 1999/45/EG und zur Aufhebung der Verordnung (EWG) Nr. 793/93 des Rates, der Verordnung (EG) Nr. 1488/94 der Kommission, der Richtlinie 76/769/EWG des Rates sowie der Richtlinien 91/155/EWG, 93/67/EWG, 93/105/EG und 2000/21/EG der Kommission - Verordnung (EG) Nr. 1272/2008 des Europäischen Parlaments und des Rates vom 16. Dezember 2008 über die Einstufung,

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Kennzeichnung und Verpackung von Stoffen und Gemischen, zur Änderung und Aufhebung der Richtlinien 67/548/EWG und 1999/45/EG und zur Änderung der Verordnung (EG) Nr. 1907/2006 - Verordnung (EU) Nr. 453/2010 der Kommission vom 20. Mai 2010 zur Änderung der Verordnung (EG) Nr. 1907/2006 des Europäischen Parlaments und des Rates zur Registrierung, Bewertung, Zulassung und Beschränkung chemischer Stoffe (REACH)

- Verordnung (EU) 2015/830 der Kommission vom 28. Mai 2015 zur Änderung der Verordnung (EG) Nr. 1907/2006 des Europäischen Parlaments und des Rates zur Registrierung, Bewertung, Zulassung und Beschränkung chemischer Stoffe (REACH)

National regulatory information

Employment restrictions:

Observe restrictions to employment for juveniles according to the 'juvenile work protection guideline' (94/33/EC). Observe employment restrictions under the Maternity Protection Directive (92/85/EEC) for expectant or nursing mothers. Observe employment restrictions for women of child-bearing age.

Water hazard class (D):

1 - slightly hazardous to water

15.2. Chemical safety assessment

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

SECTION 16: Other information**Changes**

Rev.1,00; 10.11.2020: Initial release

Abbreviations and acronyms

CLP: Classification, labelling and Packaging

REACH: Registration, Evaluation and Authorization of Chemicals

GHS: Globally Harmonised System of Classification, Labelling and Packaging of Chemicals

UN: United Nations

CAS: Chemical Abstracts Service

DNEL: Derived No Effect Level

DMEL: Derived Minimal Effect Level

PNEC: Predicted No Effect Concentration

ATE: Acute toxicity estimate

LC50: Lethal concentration, 50%

LD50: Lethal dose, 50%

LL50: Lethal loading, 50%

EL50: Effect loading, 50%

EC50: Effective Concentration 50%

ErC50: Effective Concentration 50%, growth rate

NOEC: No Observed Effect Concentration

BCF: Bio-concentration factor

PBT: persistent, bioaccumulative, toxic

vPvB: very persistent, very bioaccumulative

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

RID: Regulations concerning the international carriage of dangerous goods by rail

ADN: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways (Accord européen relatif au transport international des marchandises dangereuses par voies de navigation intérieures)

IMDG: International Maritime Code for Dangerous Goods

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EmS: Emergency Schedules
MFAG: Medical First Aid Guide
IATA: International Air Transport Association
ICAO: International Civil Aviation Organization
MARPOL: International Convention for the Prevention of Marine Pollution from Ships
IBC: Intermediate Bulk Container
VOC: Volatile Organic Compounds
SVHC: Substance of Very High Concern
For abbreviations and acronyms, see table at <http://abbrev.esdscom.eu>

Relevant H and EUH statements (number and full text)

H226	Flammable liquid and vapour.
H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.
H318	Causes serious eye damage.
H331	Toxic if inhaled.
EUH071	Corrosive to the respiratory tract.

Further Information

The information is based on the present level of our knowledge. It does not, however, give assurance of product properties and establishes no contract legal rights. The receiver of our product is singularly responsible for adhering to existing laws and regulations.

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material.