

# Safety Data Sheet

according to 29 CFR 1910.1200(g)

## NATURAL FORMIC ACID 80%

Revision date: 10/17/2024

Product code: 248730US

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### 1. Identification

#### Product identifier

NATURAL FORMIC ACID 80%

CAS No: 64-18-6

#### Recommended use of the chemical and restrictions on use

##### Use of the substance/mixture

Manufacturing of: - Air care products - Perfumes, fragrances - Pharmaceuticals - Cosmetics, personal care products - Flavouring Substances - Other

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

Company name:	Axxence Aromatic GmbH		
Street:	Tackenweide 28		
Place:	D-46446 Emmerich am Rhein		
Telephone:	+ 49 2822 68561 0	Telefax:	+ 49 2822 68561 39
E-mail:	info@axxence.com		
Contact person:	Safety Team	Telephone:	+ 49 2822 68561 0
E-mail:	safety-documentation@axxence.com		
Internet:	www.axxence.de		
Responsible Department:	Safety Management		

**Emergency phone number:** +49 2822 68561 99

### 2. Hazard(s) identification

#### Classification of the chemical

##### 29 CFR Part 1910.1200

Flammable liquids: Flam. Liq. 4  
 Acute toxicity: Acute Tox. 3 (inhalation)  
 Acute toxicity: Acute Tox. 4 (oral)  
 Skin corrosion/irritation: Skin Corr. 1A  
 Serious eye damage/eye irritation: Eye Dam. 1

#### Label elements

##### 29 CFR Part 1910.1200

**Signal word:** Danger

**Pictograms:**



#### Hazard statements

Combustible liquid  
 Harmful if swallowed  
 Causes severe skin burns and eye damage  
 Toxic if inhaled

#### Precautionary statements

Keep away from heat/sparks/open flames/hot surfaces. - No smoking.  
 Do not breathe dust/fume/gas/mist/vapors/spray.  
 Wash hands thoroughly after handling.  
 Do not eat, drink or smoke when using this product.  
 Use only outdoors or in a well-ventilated area.  
 Wear protective gloves/protective clothing/eye protection/face protection.  
 If swallowed: Rinse mouth. Do NOT induce vomiting.

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Call a poison center/doctor if you feel unwell.  
If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.  
Wash contaminated clothing before reuse.  
If inhaled: Remove person to fresh air and keep comfortable for breathing.  
Immediately call a poison center/doctor.  
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.  
Continue rinsing.  
Immediately call a poison center/doctor.  
In case of fire: Use Carbon dioxide (CO<sub>2</sub>) / Foam / Extinguishing powder / Water spray jet to extinguish.  
Store in a well-ventilated place. Keep container tightly closed.  
Store locked up.  
Dispose of contents/container to Organic waste.

### 3. Composition/information on ingredients

#### Mixtures

Sum formula: C H<sub>2</sub> O<sub>2</sub>  
Molecular weight: 46,03 g/mol

#### Relevant ingredients

CAS No	Components	Quantity
64-18-6	NATURAL FORMIC ACID min. 99%	80 - 85 %
7732-18-5	Water	15 - 20 %

### 4. First-aid measures

#### Description of first aid measures

##### General information

First aider: Pay attention to self-protection! Remove affected person from the danger area and lay down.

##### After inhalation

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.

##### After ingestion

Observe risk of aspiration if vomiting occurs. Rinse mouth immediately and drink 1 glass of water. 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.

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

No information available.

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

Treat symptomatically.

### 5. Fire-fighting measures

#### Extinguishing media

##### Suitable extinguishing media

Co-ordinate fire-fighting measures to the fire surroundings.

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### Specific hazards arising from the chemical

Non-flammable. Vapors may form explosive mixtures with air.

### Special protective equipment and precautions for fire-fighters

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

### Additional information

Use water spray jet to protect personnel and to cool endangered containers. Suppress gases/vapors/mists with water spray jet. Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.

## 6. Accidental release measures

### Personal precautions, protective equipment and emergency procedures

#### **General advice**

Do not breathe gas/fume/vapor/spray. Avoid contact with skin, eyes and clothes. Use personal protection equipment.

### Environmental precautions

Do not allow to enter into surface water or drains.

### Methods and material for containment and cleaning up

#### **For cleaning up**

Absorb with liquid-binding material (sand, diatomaceous earth, acid- or universal binding agents). Treat the recovered material as prescribed in the section on waste disposal.

#### **Other information**

Absorb with liquid-binding material (sand, diatomaceous earth, acid- or universal binding agents). Treat the recovered material as prescribed in the section on waste disposal.

### Reference to other sections

Safe handling: see section 7

Personal protection equipment (PPE): see section 8

Disposal: see section 13

## 7. Handling and storage

### Precautions for safe handling

#### **Advice on safe handling**

If handled uncovered, arrangements with local exhaust ventilation have to be used. Do not breathe gas/fume/vapor/spray.

#### **Advice on protection against fire and explosion**

No special fire protection measures are necessary.

#### **Advice on general occupational hygiene**

Remove contaminated, saturated clothing immediately. Draw up and observe skin protection programme. Wash hands and face before breaks and after work and take a shower if necessary. When using do not eat, drink, smoke, sniff. Remove contaminated, saturated clothing immediately. Draw up and observe skin protection programme. Wash hands and face before breaks and after work and take a shower if necessary. When using do not eat, drink, smoke, sniff.

### 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 exhaust at critical locations.

#### **Hints on joint storage**

No special measures are necessary.

## 8. Exposure controls/personal protection

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### Control parameters

#### Exposure limits

CAS No	Substance	ppm	mg/m³	Category	Origin
64-18-6	Formic acid	5	9	TWA (8 h)	PEL
		5	9	TWA (8 h)	REL
		5		TWA (8 h)	ACGIH-2024

### Exposure controls



#### Appropriate engineering controls

If handled uncovered, arrangements with local exhaust ventilation have to be used. Do not breathe gas/fume/vapor/spray.

#### Individual protection measures, such as personal protective equipment

##### Eye/face protection

Suitable eye protection: goggles.

##### Hand protection

Suitable gloves type: Butyl caoutchouc (butyl rubber) / FKM (fluoro rubber).

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.

##### Skin protection

Use of protective clothing.

##### Respiratory protection

In case of inadequate ventilation wear respiratory protection.

## 9. Physical and chemical properties

### Information on basic physical and chemical properties

Physical state:	Liquid
Color:	Colourless to pale yellow
Odor:	stinging
Melting point/freezing point:	8 °C
Boiling point or initial boiling point and boiling range:	100 °C
Flammability:	520 °C
Lower explosion limits:	10 vol. %
Upper explosion limits:	45,5 vol. %
Flash point:	69 °C
Auto-ignition temperature:	520 °C
Decomposition temperature:	not determined
pH-Value (at 20 °C):	2,2
Viscosity / kinematic: (at 40 °C)	1,02 mm²/s
Water solubility: (at 20 °C)	1000 g/l

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Solubility in other solvents

not determined

Partition coefficient n-octanol/water:

-2,1

Vapor pressure:

43 hPa

(at 20 °C)

Vapor pressure:

170 hPa

(at 50 °C)

Density (at 20 °C):

1,17 g/cm<sup>3</sup>

Relative vapour density:

1,59

(at 20 °C)

Particle characteristics:

not applicable

### Other information

#### Information with regard to physical hazard classes

Explosive properties

The product is not: Explosive. not explosive according to EU A.14

Oxidizing properties

The product is not: oxidising.

#### Other safety characteristics

Evaporation rate:

not determined

Solvent content:

0%

Solid content:

0%

Viscosity / dynamic:

1,8 mPa·s

(at 20 °C)

## 10. Stability and reactivity

### Reactivity

No hazardous reaction when handled and stored according to provisions.

### Chemical stability

The product is stable under storage at normal ambient temperatures.

### Possibility of hazardous reactions

No known hazardous reactions.

### Conditions to avoid

none

### Incompatible materials

No information available.

### Hazardous decomposition products

No known hazardous decomposition products.

## 11. Toxicological information

### Information on toxicological effects

#### Acute toxicity

Toxic if inhaled

Harmful if swallowed

#### ATEmix calculated

ATE (oral) 912,5 mg/kg; ATE (dermal) > 2000 mg/kg; ATE (inhalation vapour) 9,810 mg/l; ATE (inhalation dust/mist) 0,6250 mg/l

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CAS No	Components				
	Exposure route	Dose	Species	Source	Method
64-18-6	NATURAL FORMIC ACID min. 99%				
	oral	LD50 730 mg/kg	Rat	REACH registration	OECD 401
	dermal	LD50 >2000 mg/kg	Rabbit	REACH registration	OECD 402
	inhalation (4 h) vapour	LC50 7,85 mg/l	Rat	REACH registration	OECD 403
	inhalation dust/mist	ATE 0,5 mg/l			
7732-18-5	Water				
	oral	LD50 >89800 mg/kg	Rat		

### Irritation and corrosivity

Skin corrosion/irritation: Causes severe skin burns and eye damage

Serious eye damage/eye irritation: Causes serious eye damage

### Sensitizing effects

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

### Carcinogenic/mutagenic/toxic effects for reproduction

Germ cell mutagenicity: Based on available data, the classification criteria are not met.

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

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

### Specific target organ toxicity (STOT) - single exposure

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

### Specific target organ toxicity (STOT) - repeated exposure

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

Carcinogenicity (OSHA): No ingredient of this mixture is listed.

Carcinogenicity (IARC): No ingredient of this mixture is listed.

Carcinogenicity (NTP): No ingredient of this mixture is listed.

### Aspiration hazard

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

### Information on other hazards

#### Endocrine disrupting properties

No information available.

#### Other information

The mixture is classified as hazardous according to regulation (EC) No 1272/2008 [CLP]. Specific hazards arising from the chemical!

## 12. Ecological information

### Ecotoxicity

The product is not: Ecotoxic.

### Persistence and degradability

The product has not been tested.

### Bioaccumulative potential

The product has not been tested.

### Mobility in soil

The product has not been tested.

### Endocrine disrupting properties

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This product does not contain a substance that has endocrine disrupting properties with respect to non-target organisms as no components meets the criteria.

No information available.

### Other adverse effects

No information available.

### Further information

Do not allow to enter into surface water or drains. Do not allow to enter into soil/subsoil.

## 13. Disposal considerations

### Waste treatment methods

#### **Disposal recommendations**

Do not allow to enter into surface water or drains. Do not allow to enter into soil/subsoil. Dispose of waste according to applicable legislation.

#### **Contaminated packaging**

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

## 14. Transport information

### **U.S. DOT 49 CFR 172.101**

UN number or ID number:

UN 3412

Proper shipping name:

FORMIC ACID

Transport hazard class(es):

8

Packing group:

II

Hazard label:

8



### **Marine transport (IMDG)**

UN number or ID number:

UN 3412

UN proper shipping name:

FORMIC ACID

Transport hazard class(es):

8

Packing group:

II

Hazard label:

8



Special Provisions:

-

Limited quantity:

1 L

Excepted quantity:

E2

EmS:

F-A, S-B

Segregation group:

1 - acids

### **Air transport (ICAO-TI/IATA-DGR)**

UN number or ID number:

UN 3412

UN proper shipping name:

FORMIC ACID

Transport hazard class(es):

8

Packing group:

II

Hazard label:

8

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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

### Environmental hazards

ENVIRONMENTALLY HAZARDOUS: No

### Special precautions for user

Warning: strongly corrosive.

### Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

not applicable

## 15. Regulatory information

### U.S. Regulations

#### National regulatory information

SARA Section 304 CERCLA:

Formic acid (64-18-6): Reportable quantity = 5,000 (2270) lbs. (kg)

SARA Section 311/312 Hazards:

Formic acid (64-18-6): Fire hazard, Immediate (acute) health hazard

SARA Section 313 Toxic release inventory:

Formic acid (64-18-6): De minimis limit = 1.0 %, Reportable threshold = Standard

### State Regulations

#### Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65, State of California)

This product can not expose you to chemicals known to the State of California to cause cancer, birth defects or other reproductive harm.

## 16. Other information

### Changes

Revision date: 10/17/2024

Revision No: 100

This data sheet contains changes from the previous version in section(s): 2,8,12.



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### Abbreviations and acronyms

ADR: Accord européen sur le transport des marchandises dangereuses par Route  
(European Agreement concerning the International Carriage of Dangerous Goods by Road)  
IMDG: International Maritime Code for Dangerous Goods  
IATA: International Air Transport Association  
GHS: Globally Harmonized System of Classification and Labelling of Chemicals  
EINECS: European Inventory of Existing Commercial Chemical Substances  
ELINCS: European List of Notified Chemical Substances  
CAS: Chemical Abstracts Service  
LC50: Lethal concentration, 50%  
LD50: Lethal dose, 50%  
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  
DNEL: Derived No Effect Level  
DMEL: Derived Minimal Effect Level  
PNEC: Predicted No Effect Concentration  
ATE: Acute toxicity estimate  
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  
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)  
EmS: Emergency Schedules  
MFAG: Medical First Aid Guide  
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>  
For abbreviations and acronyms, see: ECHA Guidance on information requirements and chemical safety assessment, chapter R.20 (Table of terms and abbreviations).  
EC/EEC: European Community/European Economic Community  
EU: European Union  
M-factor: Multiplication factor  
IATA: International Air Transport Association  
DGR: Dangerous Goods Regulations  
ICAO: International Civil Aviation Organization  
TI: Technical Instructions  
VOC: volatile organic compound

### Other data

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.

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*(The data for the relevant ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.)*