

**Safety Data Sheet**

according to 29 CFR 1910.1200(g)

**NATURAL FORMIC ACID 80%**

Revision date: 07/29/2022

Product code: 248700US

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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:         | Andreas Goertz             | Telephone: + 49 2822 68561 37 |
| e-mail:                 | andreas.goertz@axxence.com |                               |
| Internet:               | www.axxence.de             |                               |
| Responsible Department: | QM - Regulatory Affairs    |                               |

**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.  
Store in a well-ventilated place. Keep container tightly closed.  
Store locked up.  
Dispose of contents/container to Organic waste.

**Hazards not otherwise classified**

No information available.

**3. Composition/information on ingredients****Mixtures**Sum formula: C H<sub>2</sub> O<sub>2</sub>

Molecular weight: 46,03

**Hazardous components**

| 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**

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#### **Suitable extinguishing media**

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

#### **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/stream 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.

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## 8. Exposure controls/personal protection

### Control parameters

#### Exposure limits

| CAS No  | Substance   | ppm | mg/m <sup>3</sup> | f/cc | Category      | Origin     |
|---------|-------------|-----|-------------------|------|---------------|------------|
| 64-18-6 | Formic acid | 5   | 9                 |      | TWA (8 h)     | PEL        |
|         |             | 5   | 9                 |      | TWA (8 h)     | REL        |
|         |             | 5   |                   |      | TWA (8 h)     | ACGIH-2022 |
|         |             | 10  |                   |      | STEL (15 min) | ACGIH-2022 |

### 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

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  |                           |
| Solid/liquid:   | 520 °C                    |
| Gas:  | not applicable            |
| Lower explosion limits:                                   | 10 vol. %                 |
| Upper explosion limits:                                   | 45,5 vol. %               |
| Flash point:  | 69 °C                     |
| Auto-ignition temperature:                                | 520 °C                    |
| Decomposition temperature:                                | not determined            |

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|  |                         |
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| pH-Value (at 20 °C):                           | 2,2                     |
| Viscosity / kinematic:<br>(at 40 °C)           | 1,02 mm <sup>2</sup> /s |
| Water solubility:<br>(at 20 °C)                | 1000 g/L                |
| Solubility in other solvents<br>not determined |                         |
| Partition coefficient n-octanol/water:         | -2,1                    |
| Vapor pressure:<br>(at 20 °C)                  | 43 hPa                  |
| Vapor pressure:<br>(at 50 °C)                  | 170 hPa                 |
| Density (at 20 °C):                            | 1,17 g/cm <sup>3</sup>  |
| Relative vapour density:<br>(at 20 °C)         | 1,59                    |

#### Other information

##### **Information with regard to physical hazard classes**

###### Explosive properties

The product is not: Explosive. not hazard of explosion 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:  
(at 20 °C) 1,8 mPa·s

## 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/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) 3125,0 mg/kg; ATE (inhalation vapour) 9,81 mg/l; ATE (inhalation dust/mist) 0,625 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**

Causes severe skin burns and eye damage  
Causes serious eye damage

#### **Sensitizing effects**

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

#### **Carcinogenic/mutagenic/toxic effects for reproduction**

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.

#### **Further 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**

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.

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#### Other adverse effects

No information available.

#### Further information

Avoid release to the environment.

### 13. Disposal considerations

#### Waste treatment methods

##### Disposal recommendations

Do not allow to enter into surface water or drains. 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



Limited quantity Passenger:

0.5 L

Passenger LQ:

Y840

Excepted quantity:

E2

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| 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

Revision date: 29.07.2022

Revision No: 104

#### **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



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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).

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