

**Safety data sheet**  
according to 1907/2006/EC, Article 31

Printing date 16.01.2024






Version number 1

Revision: 16.01.2024

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

- **1.1 Product identifier**
- **Trade name: Formic Acid 80% Natural**
- **Product number: 1289**
- **1.2 Relevant identified uses of the substance or mixture and uses advised against**  
No further relevant information available.
- **Application of the substance / the mixture** Flavoring Ingredients
- **1.3 Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**  
Advanced Biotech  
10 Taft Road  
Totowa, NJ 07512 USA
- **Further information obtainable from:**  
Product Safety Department  
productsafety@adv-bio.com
- **1.4 Emergency telephone number:**  
Infotrac: 1-800-535-5053 (Domestic) & 1-352-323-3500 (International)  
Email: responders@infotrac.net & During normal business hours: 1-973-339-6242

**SECTION 2: Hazards identification**

- **2.1 Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**
-  GHS06 skull and crossbones  
Acute Tox. 3 H331 Toxic if inhaled.
-  GHS05 corrosion  
Skin Corr. 1B H314 Causes severe skin burns and eye damage.  
Eye Dam. 1 H318 Causes serious eye damage.
-  GHS07  
Acute Tox. 4 H302 Harmful if swallowed.
- **Labelling according to Regulation (EC) No 1272/2008**  
The product is classified and labelled according to the GB CLP regulation.
- **Hazard pictograms**
-    
GHS05 GHS06
- **Signal word** Danger

(Contd. on page 2)

**Safety data sheet**  
 according to 1907/2006/EC, Article 31

Printing date 16.01.2024

Version number 1

Revision: 16.01.2024

**Trade name: Formic Acid 80% Natural**

(Contd. of page 1)

· **Hazard-determining components of labelling:**

formic acid

· **Hazard statements**

H302 Harmful if swallowed.

H331 Toxic if inhaled.

H314 Causes severe skin burns and eye damage.

· **Precautionary statements**

P260 Do not breathe dusts or mists.

P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].

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.

P321 Specific treatment (see on this label).

P405 Store locked up.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

· **2.3 Other hazards**

· **Results of PBT and vPvB assessment**

· **PBT:** Not applicable.

· **vPvB:** Not applicable.

**SECTION 3: Composition/information on ingredients**

· **3.2 Mixtures**

· **Description:** Mixture of substances listed below with nonhazardous additions.

· **Dangerous components:**

CAS: 64-18-6 EINECS: 200-579-1	formic acid ⚠ Flam. Liq. 3, H226; ⚠ Acute Tox. 3, H331; ⚠ Skin Corr. 1A, H314; Eye Dam. 1, H318; ⚠ Acute Tox. 4, H302 ATE: LD50 oral: 730 mg/kg LC50/4 h inhalative: 7.8 mg/l Specific concentration limits: Skin Corr. 1A; H314: C ≥ 90 % Skin Corr. 1B; H314: 10 % ≤ C < 90 % Skin Irrit. 2; H315: 2 % ≤ C < 10 % Eye Irrit. 2; H319: 2 % ≤ C < 10 %	≥50-<90%
-----------------------------------	---	----------

· **Additional information:** For the wording of the listed hazard phrases refer to section 16.

**SECTION 4: First aid measures**

· **4.1 Description of first aid measures**

· **General information:**

Immediately remove any clothing soiled by the product.

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

Remove breathing equipment only after contaminated clothing have been completely removed.

In case of irregular breathing or respiratory arrest provide artificial respiration.

· **After inhalation:**

Supply fresh air or oxygen; call for doctor.

In case of unconsciousness place patient stably in side position for transportation.

(Contd. on page 3)

## Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 16.01.2024

Version number 1

Revision: 16.01.2024

**Trade name: Formic Acid 80% Natural**

(Contd. of page 2)

- **After skin contact:** Immediately wash with water and soap and rinse thoroughly.
- **After eye contact:** Rinse opened eye for several minutes under running water. Then consult a doctor.
- **After swallowing:** Call for a doctor immediately.
- **4.2 Most important symptoms and effects, both acute and delayed**  
No further relevant information available.
- **4.3 Indication of any immediate medical attention and special treatment needed**  
No further relevant information available.

### SECTION 5: Firefighting measures

- **5.1 Extinguishing media**
- **Suitable extinguishing agents:**  
CO<sub>2</sub>, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **5.2 Special hazards arising from the substance or mixture**  
During heating or in case of fire poisonous gases are produced.
- **5.3 Advice for firefighters**
- **Protective equipment:** Mouth respiratory protective device.
- **Additional information**  
Cool endangered receptacles with water spray.  
Collect contaminated fire fighting water separately. It must not enter the sewage system.

### SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures**  
Mount respiratory protective device.  
Wear protective equipment. Keep unprotected persons away.
- **6.2 Environmental precautions:**  
Dilute with plenty of water.  
Do not allow to enter sewers/ surface or ground water.
- **6.3 Methods and material for containment and cleaning up:**  
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).  
Use neutralising agent.  
Dispose contaminated material as waste according to section 13.  
Ensure adequate ventilation.
- **6.4 Reference to other sections**  
See Section 7 for information on safe handling.  
See Section 8 for information on personal protection equipment.  
See Section 13 for disposal information.

### SECTION 7: Handling and storage

- **7.1 Precautions for safe handling**  
Ensure good ventilation/exhaustion at the workplace.  
Open and handle receptacle with care.  
Prevent formation of aerosols.
- **Information about fire - and explosion protection:** Keep respiratory protective device available.
- **7.2 Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:**  
No special requirements.

(Contd. on page 4)

## Safety data sheet according to 1907/2006/EC, Article 31

Printing date 16.01.2024

Version number 1

Revision: 16.01.2024

**Trade name: Formic Acid 80% Natural**

(Contd. of page 3)

- Please refer to the product specification and/or Certificate of Analysis for product storage requirements.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** Keep container tightly sealed.
- **7.3 Specific end use(s)** No further relevant information available.

### SECTION 8: Exposure controls/personal protection

#### · 8.1 Control parameters

##### · **Ingredients with limit values that require monitoring at the workplace:**

**CAS: 64-18-6 formic acid**

WEL	Long-term value: 9.6 mg/m <sup>3</sup> , 5 ppm
-----	--

- **Additional information:** The lists valid during the making were used as a basis.

#### · 8.2 Exposure controls

- **Appropriate engineering controls** No further data; see section 7.
- **Individual protection measures, such as personal protective equipment**

##### · **General protective and hygienic measures:**

- Keep away from foodstuffs, beverages and feed.
- Immediately remove all soiled and contaminated clothing
- Wash hands before breaks and at the end of work.
- Store protective clothing separately.
- Avoid contact with the eyes.
- Avoid contact with the eyes and skin.

##### · **Respiratory protection:**

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.

##### · **Hand protection**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material should be based on consideration of the penetration times, rates of diffusion and the degradation

##### · **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

##### · **Penetration time of glove material**

The exact break through time has to be determined by the manufacturer of the protective gloves and has to be observed.

(Contd. on page 5)

**Safety data sheet**  
 according to 1907/2006/EC, Article 31

Printing date 16.01.2024

Version number 1

Revision: 16.01.2024

Trade name: Formic Acid 80% Natural

(Contd. of page 4)

· Eye/face protection



Tightly sealed goggles

**SECTION 9: Physical and chemical properties**

· 9.1 Information on basic physical and chemical properties

· General Information

· Physical state	Fluid
· Colour:	According to product specification
· Odour:	According to product specification
· Odour threshold:	Not determined.
· Melting point/freezing point:	Undetermined.
· Boiling point or initial boiling point and boiling range	100 °C
· Flammability	Not applicable.
· Lower and upper explosion limit	
· Lower:	14 Vol %
· Upper:	33 Vol %
· Flash point:	68 °C
· Auto-ignition temperature:	520 °C
· Decomposition temperature:	Not determined.
· pH	Not determined.
· Viscosity:	
· Kinematic viscosity	Not determined.
· Dynamic:	Not determined.
· Solubility	
· water:	Fully miscible.
· Partition coefficient n-octanol/water (log value)	Not determined.
· Vapour pressure at 20 °C:	43 hPa
· Density and/or relative density	
· Density at 20 °C:	1.19 g/cm <sup>3</sup>
· Relative density	Not determined.
· Refractive Index	
· Vapour density	Not determined.

· 9.2 Other information

· Appearance:	
· Form:	Liquid
· Important information on protection of health and environment, and on safety.	
· Ignition temperature:	Product is not selfigniting.
· Explosive properties:	Product does not present an explosion hazard.
· Solvent content:	
· Organic solvents:	80.0 %
· Water:	20.0 %
· VOC (EC)	80.00 %

(Contd. on page 6)

**Safety data sheet**  
 according to 1907/2006/EC, Article 31

Printing date 16.01.2024

Version number 1

Revision: 16.01.2024

**Trade name: Formic Acid 80% Natural**

(Contd. of page 5)

- **Change in condition**
- **Evaporation rate** Not determined.

- **Information with regard to physical hazard classes**
- **Explosives** Void
- **Flammable gases** Void
- **Aerosols** Void
- **Oxidising gases** Void
- **Gases under pressure** Void
- **Flammable liquids** Void
- **Flammable solids** Void
- **Self-reactive substances and mixtures** Void
- **Pyrophoric liquids** Void
- **Pyrophoric solids** Void
- **Self-heating substances and mixtures** Void
- **Substances and mixtures, which emit flammable gases in contact with water** Void
- **Oxidising liquids** Void
- **Oxidising solids** Void
- **Organic peroxides** Void
- **Corrosive to metals** Void
- **Desensitised explosives** Void

**SECTION 10: Stability and reactivity**

- **10.1 Reactivity** No further relevant information available.
- **10.2 Chemical stability**
- **Thermal decomposition / conditions to be avoided:**  
 No decomposition if used according to specifications.
- **10.3 Possibility of hazardous reactions** No dangerous reactions known.
- **10.4 Conditions to avoid** No further relevant information available.
- **10.5 Incompatible materials:** No further relevant information available.
- **10.6 Hazardous decomposition products:** No dangerous decomposition products known.

**SECTION 11: Toxicological information**

- **11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008**
- **Acute toxicity**  
 Harmful if swallowed.  
 Toxic if inhaled.

· **LD/LC50 values relevant for classification:**

**ATE (Acute Toxicity Estimates)**

Oral	LD50	913 mg/kg (ATE)
Inhalative	LC50/4 h	9.8 mg/l (ATE)

**CAS: 64-18-6 formic acid**

Oral	LD50	730 mg/kg (ATE) 1,100 mg/kg (rat)
------	------	--------------------------------------

(Contd. on page 7)

**Safety data sheet**  
according to 1907/2006/EC, Article 31

Printing date 16.01.2024

Version number 1

Revision: 16.01.2024

**Trade name: Formic Acid 80% Natural**

(Contd. of page 6)

Inhalative	LC50/4 h	7.8 mg/l (ATE)
------------	----------	----------------

- **Skin corrosion/irritation** Causes severe skin burns and eye damage.
- **Serious eye damage/irritation** Causes serious eye damage.
- **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.
- **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.
- **STOT-single exposure** Based on available data, the classification criteria are not met.
- **STOT-repeated exposure** Based on available data, the classification criteria are not met.
- **Aspiration hazard** Based on available data, the classification criteria are not met.
- **11.2 Information on other hazards**

· **Endocrine disrupting properties**

None of the ingredients is listed.

**SECTION 12: Ecological information**

- **12.1 Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **12.2 Persistence and degradability** No further relevant information available.
- **12.3 Bioaccumulative potential** No further relevant information available.
- **12.4 Mobility in soil** No further relevant information available.
- **12.5 Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **12.6 Endocrine disrupting properties**  
The product does not contain substances with endocrine disrupting properties.
- **12.7 Other adverse effects**
- **Additional ecological information:**
- **General notes:**  
Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water  
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.  
Must not reach sewage water or drainage ditch undiluted or unneutralised.

**SECTION 13: Disposal considerations**

- **13.1 Waste treatment methods**
- **Recommendation**  
Must not be disposed together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.
- **Recommended cleansing agents:** Water, if necessary together with cleansing agents.

**SECTION 14: Transport information**

- |                                      |        |
|--------------------------------------|--------|
| · <b>14.1 UN number or ID number</b> |        |
| · <b>ADR, IMDG, IATA</b>             | UN3412 |

(Contd. on page 8)

**Safety data sheet**  
 according to 1907/2006/EC, Article 31



Printing date 16.01.2024

Version number 1

Revision: 16.01.2024

Trade name: Formic Acid 80% Natural

(Contd. of page 7)

<ul style="list-style-type: none"> <li>· 14.2 UN proper shipping name</li> <li>· ADR</li> <li>· IMDG, IATA</li> </ul>	<p>3412 FORMIC ACID                  FORMIC ACID</p>
<ul style="list-style-type: none"> <li>· 14.3 Transport hazard class(es)</li> <li>· ADR</li> </ul> 	<p>8 (C3) Corrosive substances.                  8</p>
<ul style="list-style-type: none"> <li>· IMDG, IATA</li> </ul> 	<p>8 Corrosive substances.                  8</p>
<ul style="list-style-type: none"> <li>· 14.4 Packing group</li> <li>· ADR, IMDG, IATA</li> </ul>	<p>II</p>
<ul style="list-style-type: none"> <li>· 14.5 Environmental hazards:</li> <li>· Marine pollutant:</li> </ul>	<p>No</p>
<ul style="list-style-type: none"> <li>· 14.6 Special precautions for user</li> <li>· Hazard identification number (Kemler code):</li> <li>· EMS Number:</li> <li>· Segregation groups</li> <li>· Stowage Category</li> <li>· Stowage Code</li> <li>· Segregation Code</li> </ul>	<p>Warning: Corrosive substances.                  80                  F-A,S-B                  (SGG1) Acids                  A                  SW2 Clear of living quarters.                  SG36 Stow "separated from" SGG18-alkalis.                  SG49 Stow "separated from" SGG6-cyanides</p>
<ul style="list-style-type: none"> <li>· 14.7 Maritime transport in bulk according to IMO instruments</li> </ul>	<p>Not applicable.</p>
<ul style="list-style-type: none"> <li>· Transport/Additional information:</li> </ul>	
<ul style="list-style-type: none"> <li>· ADR</li> <li>· Limited quantities (LQ)</li> <li>· Excepted quantities (EQ)</li> </ul>	<p>1L                  Code: E2                  Maximum net quantity per inner packaging: 30 ml                  Maximum net quantity per outer packaging: 500 ml</p>
<ul style="list-style-type: none"> <li>· Transport category</li> <li>· Tunnel restriction code</li> </ul>	<p>2                  E</p>
<ul style="list-style-type: none"> <li>· IMDG</li> <li>· Limited quantities (LQ)</li> </ul>	<p>1L</p>

(Contd. on page 9)



**Safety data sheet**  
according to 1907/2006/EC, Article 31

Printing date 16.01.2024

Version number 1

Revision: 16.01.2024

**Trade name: Formic Acid 80% Natural**

(Contd. of page 8)

- |                                   |   |
|-----------------------------------|---|
| · <b>Excepted quantities (EQ)</b> | Code: E2<br>Maximum net quantity per inner packaging: 30 ml<br>Maximum net quantity per outer packaging: 500 ml |
| · <b>UN "Model Regulation":</b>   | UN 3412 FORMIC ACID, 8, II  |

**SECTION 15: Regulatory information**

- **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**

- **Poisons Act**

- **Regulated explosives precursors**

None of the ingredients is listed.

- **Regulated poisons**

None of the ingredients is listed.

- **Reportable explosives precursors**

None of the ingredients is listed.

- **Reportable poisons**

CAS: 64-18-6   formic acid	25%
----------------------------	-----

- **Labelling according to Regulation (EC) No 1272/2008**

The product is classified and labelled according to the GB CLP regulation.

- **Hazard pictograms**



GHS05 GHS06

- **Signal word** Danger

- **Hazard-determining components of labelling:**

formic acid

- **Hazard statements**

H302 Harmful if swallowed.

H331 Toxic if inhaled.

H314 Causes severe skin burns and eye damage.

- **Precautionary statements**

P260 Do not breathe dusts or mists.

P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].

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.

P321 Specific treatment (see on this label).

P405 Store locked up.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

- **Directive 2012/18/EU**

- **Named dangerous substances - ANNEX I** None of the ingredients is listed.

(Contd. on page 10)

## Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 16.01.2024

Version number 1

Revision: 16.01.2024

**Trade name: Formic Acid 80% Natural**

(Contd. of page 9)

- **Seveso category H2 ACUTE TOXIC**
- **Qualifying quantity (tonnes) for the application of lower-tier requirements 50 t**
- **Qualifying quantity (tonnes) for the application of upper-tier requirements 200 t**
- **REGULATION (EC) No 1907/2006 ANNEX XVII** Conditions of restriction: 3

· **DIRECTIVE 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment – Annex II**

None of the ingredients is listed.

· **REGULATION (EU) 2019/1148**

· **Annex I - RESTRICTED EXPLOSIVES PRECURSORS (Upper limit value for the purpose of licensing under Article 5(3))**

None of the ingredients is listed.

· **Annex II - REPORTABLE EXPLOSIVES PRECURSORS**

None of the ingredients is listed.

· **Regulation (EC) No 273/2004 on drug precursors**

None of the ingredients is listed.

· **Regulation (EC) No 111/2005 laying down rules for the monitoring of trade between the Community and third countries in drug precursors**

None of the ingredients is listed.

· **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

### SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Relevant phrases**

- H226 Flammable liquid and vapour.
- H302 Harmful if swallowed.
- H314 Causes severe skin burns and eye damage.
- H315 Causes skin irritation.
- H318 Causes serious eye damage.
- H319 Causes serious eye irritation.
- H331 Toxic if inhaled.

· **Department issuing SDS:** Product safety department

· **Contact:**

Product Safety Department  
 productsafety@adv-bio.com

· **Date of previous version:** 10.01.2023

· **Abbreviations and acronyms:**

- ADR: Accord relatif au transport international 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 Harmonised 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 (division of the American Chemical Society)
- VOC: Volatile Organic Compounds (USA, EU)
- LC50: Lethal concentration, 50 percent
- LD50: Lethal dose, 50 percent
- PBT: Persistent, Bioaccumulative and Toxic
- vPvB: very Persistent and very Bioaccumulative

(Contd. on page 11)

**Safety data sheet**  
according to 1907/2006/EC, Article 31

Printing date 16.01.2024

Version number 1

Revision: 16.01.2024

**Trade name: Formic Acid 80% Natural**

(Contd. of page 10)

ATE: Acute toxicity estimate values  
Flam. Liq. 3: Flammable liquids – Category 3  
Acute Tox. 4: Acute toxicity – Category 4  
Acute Tox. 3: Acute toxicity – Category 3  
Skin Corr. 1A: Skin corrosion/irritation – Category 1A  
Skin Corr. 1B: Skin corrosion/irritation – Category 1B  
Eye Dam. 1: Serious eye damage/eye irritation – Category 1

GB

Advanced Biotech