

## 1 Identification of the substance/mixture and of the company/undertaking

- **Product identifier**
- **Trade name:** Acetic acid 100 % BioChemica
- **Article number:** A3701
- **CAS Number:**  
64-19-7
- **EC number:**  
200-580-7
- **Index number:**  
607-002-00-6
- **Relevant identified uses of the substance or mixture and uses advised against**  
No further relevant information available.
- **Application of the substance / the preparation** Biochemistry
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**  
AppliChem GmbH  
Ottoweg 4  
D-64291 Darmstadt  
Tel.: +49 (0)6151 93570  
msds@applichem.com
- **Further information obtainable from:** Abteilung Qualitätskontrolle / Dep. Quality Control
- **Emergency telephone number:**  
+49(0)6151 93570 (während der normalen Geschäftszeiten / Inside normal business hours)

## 2 Hazards identification

- **Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**



GHS02 flame

Flam. Liq. 3 H226 Flammable liquid and vapour.



GHS05 corrosion

Skin Corr. 1A H314 Causes severe skin burns and eye damage.

- **Classification according to Directive 67/548/EEC or Directive 1999/45/EC**



C; Corrosive

R35: Causes severe burns.

R10: Flammable.

- **Label elements**
- **Labelling according to Regulation (EC) No 1272/2008**  
The substance is classified and labelled according to the CLP regulation.
- **Hazard pictograms**



GHS02



GHS05

- **Signal word** Danger
- **Hazard-determining components of labelling:**  
acetic acid

(Contd. on page 2)

**Trade name: Acetic acid 100 % BioChemica**

(Contd. of page 1)

- **Hazard statements**  
H226 Flammable liquid and vapour.  
H314 Causes severe skin burns and eye damage.
- **Precautionary statements**  
P280 Wear protective gloves/protective clothing/eye protection/face protection.  
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- **Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

### 3 Composition/information on ingredients

- **Chemical characterization: Substances**
- **CAS No. Description**  
64-19-7 acetic acid
- **Identification number(s)**
- **EC number:** 200-580-7
- **Index number:** 607-002-00-6

### 4 First aid measures

- **Description of first aid measures**
- **General information:** Immediately remove any clothing soiled by the product.
- **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- **After skin contact:**  
Immediately remove any clothing soiled by the product.  
Immediately rinse with water.  
If skin irritation continues, consult a doctor.
- **After eye contact:** Rinse opened eye for several minutes under running water. Then consult a doctor.
- **After swallowing:**  
Rinse out mouth.  
make victim drink water (maximum of 2 drinking glasses)  
Do not induce vomiting; call for medical help immediately.
- **Information for doctor:**
- **Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed**  
No further relevant information available.

### 5 Firefighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:**  
CO<sub>2</sub>, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **For safety reasons unsuitable extinguishing agents:** Water with full jet
- **Special hazards arising from the substance or mixture**  
Combustible.  
Vapours are heavier than air and may spread along floors.  
During heating or in case of fire poisonous gases are produced.
- **Advice for firefighters**
- **Protective equipment:** Wear self-contained respiratory protective device.
- **Additional information**  
Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.  
Cool endangered receptacles with water spray.

(Contd. on page 3)

**Trade name: Acetic acid 100 % BioChemica**

(Contd. of page 2)

Contain escaping vapours with water.

## 6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**  
Wear protective equipment. Keep unprotected persons away.  
Do not inhale steams/aerosols.  
Avoid substance contact.  
Ensure adequate ventilation
- **Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**  
Absorb with liquid-binding material (AppliSorb).  
Use neutralizing agent.  
Ensure adequate ventilation.  
Clean up affected area.  
Dispose of the material collected according to regulations.
- **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.

## 7 Handling and storage

- **Handling:**
- **Precautions for safe handling** Ensure good ventilation/exhaustion at the workplace.
- **Information about fire - and explosion protection:**  
Keep ignition sources away - Do not smoke.  
Protect against electrostatic charges.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:**  
Store away from oxidizing agents.  
Store away from metals.
- **Further information about storage conditions:**  
Keep container tightly sealed.  
Open receptacle only under localized extractor facilities.  
Store under lock and key and with access restricted to technical experts or their assistants only.
- **Recommended storage temperature:** 15-25 °C
- **Storage class:** 3
- **Specific end use(s)** No further relevant information available.

## 8 Exposure controls/personal protection

- **Additional information about design of technical facilities:** No further data; see item 7.
- **Control parameters**
- **Ingredients with limit values that require monitoring at the workplace:** Not required.
- **Additional information:** The lists valid during the making were used as basis.
- **Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:**  
Immediately remove all soiled and contaminated clothing  
Wash hands before breaks and at the end of work.  
Do not inhale gases / fumes / aerosols.  
Avoid contact with the eyes and skin.

(Contd. on page 4)

**Trade name: Acetic acid 100 % BioChemica**

(Contd. of page 3)

· **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.*

*Short term filter device:*

*Filter E-(P2)*

· **Protection of hands:**



Protective gloves

*The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Selection of the glove material 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.*

· **Penetration time of glove material**

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

· **For the permanent contact gloves made of the following materials are suitable:**

*Recommended thickness of the material:  $\geq 0.7$  mm*

*Butyl rubber, BR*

*Value for the permeation: Level  $\geq 480$  min*

· **As protection from splashes gloves made of the following materials are suitable:**

*Recommended thickness of the material:  $\geq 0.6$  mm*

*Natural rubber, NR*

*Value for the permeation: Level  $\geq 30$  min*

· **Eye protection:**



Tightly sealed goggles

· **Body protection:**

*Protective clothing should be selected specifically for the working place, depending on concentration and quantity of the hazardous substances handled.*

## 9 Physical and chemical properties

· **Information on basic physical and chemical properties**

· **General Information**

· **Appearance:**

**Form:** Fluid

**Colour:** Colourless

· **Odour:** Pungent

· **pH-value at 20 °C:** 2.5

· **Change in condition**

**Melting point/Melting range:** 17 °C

**Boiling point/Boiling range:** 118 °C

· **Flash point:** 39 °C

· **Ignition temperature:** 486 °C

· **Danger of explosion:** Product is not explosive. However, formation of explosive air/vapour mixtures are possible.

(Contd. on page 5)

**Trade name: Acetic acid 100 % BioChemica**

(Contd. of page 4)

- **Explosion limits:**
  - Lower:** 4 Vol %
  - Upper:** 17 Vol %
- **Vapour pressure at 20 °C:** 16 hPa
- **Density at 20 °C:** 1.05 g/cm<sup>3</sup>
- **Solubility in / Miscibility with water at 25 °C:** 1000 g/l
- **Viscosity:**
  - Dynamic:** Not determined.
  - Kinematic:** Not determined.
- **Solvent content:**
  - Organic solvents:** 100.0 %
  - VOC (EC)** 100.00 %
- **Other information** No further relevant information available.

## 10 Stability and reactivity

- **Reactivity**
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** Heating
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** strong oxidants
- **Hazardous decomposition products:** In the event of fire: See chapter 5
- **Additional information:**
  - Incompatible with:  
metals
  - Forms explosive mixtures with air on intense heating.

## 11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**

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

### 64-19-7 acetic acid

Oral	LD50	3310 mg/kg (rat)
Dermal	LD50	1060 mg/kg (rabbit)
Inhalative	LC50/4 h	11.4 mg/l (rat)

- **Primary irritant effect:**
  - **on the skin:** Strong caustic effect on skin and mucous membranes.
  - **on the eye:** Strong caustic effect.
  - **After inhalation:** Strong caustic effect on skin and mucous membranes.
- **Sensitization:** No sensitizing effects known.
- **Additional toxicological information:**
  - Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of esophagus and stomach.

## 12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.

(Contd. on page 6)

**Trade name: Acetic acid 100 % BioChemica**

(Contd. of page 5)

- **Persistence and degradability** The product is easily biodegradable.
- **Behaviour in environmental systems:**
- **Bioaccumulative potential** Distribution log Pow < 1.
- **Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:**  
 Water hazard class 1 (German Regulation) (Assessment by list): slightly hazardous for water  
 Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.  
 Do not allow to enter waters, waste water, or soil.
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

### 13 Disposal considerations

- **Waste treatment methods**
- **Recommendation**  
 Chemicals must be disposed of in compliance with the respective national regulations.  
 Must not be disposed together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packaging:**
- **Recommended cleansing agents:** Water, if necessary together with cleansing agents.

### 14 Transport information

- |  |                                |
|--|--------------------------------|
| · <b>UN-Number</b>                         | UN2789                         |
| · <b>ADR, IMDG, IATA</b>                   |                                |
| · <b>UN proper shipping name</b>           | 2789 ACETIC ACID, GLACIAL      |
| · <b>ADR</b>                               | ACETIC ACID, GLACIAL           |
| · <b>IMDG, IATA</b>                        |                                |
| · <b>Transport hazard class(es)</b>        |                                |
| · <b>ADR</b>                               |                                |
|  |                                |
| · <b>Class</b>                             | 8 (CF1) Corrosive substances.  |
| · <b>Label</b>                             | 8+3                            |
| <hr style="border-top: 1px dashed #000;"/> |                                |
| · <b>IMDG, IATA</b>                        |                                |
|  |                                |
| · <b>Class</b>                             | 8 Corrosive substances.        |
| · <b>Label</b>                             | 8+3                            |
| · <b>Packing group</b>                     | II                             |
| · <b>ADR, IMDG, IATA</b>                   |                                |
| · <b>Environmental hazards:</b>            |                                |
| · <b>Marine pollutant:</b>                 | No                             |
| · <b>Special precautions for user</b>      | Warning: Corrosive substances. |

(Contd. on page 7)

**Trade name: Acetic acid 100 % BioChemica**

(Contd. of page 6)

- |                                |         |
|--------------------------------|---------|
| · <b>Danger code (Kemler):</b> | 83      |
| · <b>EMS Number:</b>           | F-E,S-C |
| · <b>Segregation groups</b>    | Acids   |

- |  |                 |
|--|-----------------|
| · <b>Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</b> | Not applicable. |
|--|-----------------|

· **Transport/Additional information:**

- |                                  |     |
|----------------------------------|-----|
| · <b>ADR</b>                     |     |
| · <b>Limited quantities (LQ)</b> | 1L  |
| · <b>Transport category</b>      | 2   |
| · <b>Tunnel restriction code</b> | D/E |

- |                                 |   |
|---------------------------------|---|
| · <b>UN "Model Regulation":</b> | UN2789, ACETIC ACID, GLACIAL, 8 (3), II |
|---------------------------------|---|

### 15 Regulatory information

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

### 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.*

- **Department issuing MSDS:** Abteilung Qualitätskontrolle / Dept. Quality Control

- **Contact:** Hr. / Mr. Th. Stöckle

- **Abbreviations and acronyms:**

*RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)*

*ICAO: International Civil Aviation Organization*

*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*

*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*