Acetic acid (cas 64-19-7) MSDS

1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 Product identifiers

Product name : Acetic acid, ≥ 99.7%
Product Number : 320099
Brand : -
Index-No. : 607-002-00-6
CAS-No. : 64-19-7

1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses : Laboratory chemicals, Manufacture of substances

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008 [EU-GHS/CLP]
Flammable liquids (Category 3)
Skin corrosion (Category 1A)

Classification according to EU Directives 67/548/EEC or 1999/45/EC
Flammable. Causes severe burns.

2.2 Label elements

Labelling according Regulation (EC) No 1272/2008 [CLP]

Pictogram

Signal word : Danger
Hazard statement(s) : Flammable liquid and vapour.
H226 Causes severe skin burns and eye damage.
H314

Precautionary statement(s) : Wear protective gloves/ protective clothing/ eye protection/ face protection.
P280
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 or doctor/ physician.

Supplemental Hazard Statements : none


Hazard symbol(s)

R-phrase(s)
R10 Flammable.
R35 Causes severe burns.

S-phrase(s)
S23 Do not breathe gas/fumes/vapour/spray.
S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

2.3 Other hazards - none

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

Synonyms : Glacial acetic acid
Formula : C2H4O2
Molecular Weight : 60,05 g/mol

Component : Concentration
Acetic acid  
CAS-No. 64-19-7  
EC-No. 200-580-7  
Index-No. 607-002-00-6  

4. FIRST AID MEASURES  
4.1 Description of first aid measures  
General advice  
Consult a physician. Show this safety data sheet to the doctor in attendance.  

If inhaled  
If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.  

In case of skin contact  
Take off contaminated clothing and shoes immediately. Wash off with soap and plenty of water. Take victim immediately to hospital. Consult a physician.  

In case of eye contact  
Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.  

If swallowed  
Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.  

4.2 Most important symptoms and effects, both acute and delayed  
Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin, spasm, inflammation and edema of the larynx, spasm, inflammation and edema of the bronchi, pneumonitis, pulmonary edema, burning sensation. Cough, wheezing, laryngitis, Shortness of breath, Headache, Nausea, Vomiting, Ingestion or inhalation of concentrated acetic acid causes damage to tissues of the respiratory and digestive tracts. Symptoms include: hematemesis, bloody diarrhea, edema and/or perforation of the esophagus and pylorus, pancreatitis, hematuria, anuria, uremia, albuminuria, hemolysis, convulsions, bronchitis, pulmonary edema, pneumonia, cardiovascular collapse, shock, and death. Direct contact or exposure to high concentrations of vapor with skin or eyes can cause: erythema, blisters, tissue destruction with slow healing, skin blackening, hyperkeratosis, fissures, corneal erosion, - - 320099  
- opacification, iritis, conjunctivitis, and possible blindness. To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.  

4.3 Indication of any immediate medical attention and special treatment needed  
no data available  

5. FIREFIGHTING MEASURES  
5.1 Extinguishing media  
Suitable extinguishing media  
Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.  

5.2 Special hazards arising from the substance or mixture  
Carbon oxides  

5.3 Advice for firefighters  
Wear self contained breathing apparatus for fire fighting if necessary.  

5.4 Further information  
Use water spray to cool unopened containers.  

6. ACCIDENTAL RELEASE MEASURES  
6.1 Personal precautions, protective equipment and emergency procedures  
Wear respiratory protection. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.  

6.2 Environmental precautions  
Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.  

6.3 Methods and materials for containment and cleaning up  
Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations (see section 13).  

6.4 Reference to other sections  
For disposal see section 13.  

7. HANDLING AND STORAGE  
7.1 Precautions for safe handling  
Avoid contact with skin and eyes. Avoid inhalation of vapour or mist. Keep away from sources of ignition - No smoking. Take measures to prevent the build up of electrostatic charge.
7.2 Conditions for safe storage, including any incompatibilities
Store in cool place. Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

Moisture sensitive.

7.3 Specific end uses
no data available

8. EXPOSURE CONTROLS/PERSO NAL PROTECTION

8.1 Control parameters

Components with workplace control parameters

8.2 Exposure controls

Appropriate engineering controls
Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.

---

Personal protective equipment

Eye/face protection
Tightly fitting safety goggles. Faceshield (8-inch minimum). Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166 (EU).

Skin protection
Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove’s outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

Immersion protection
Material: butyl-rubber
Minimum layer thickness: 0,3 mm
Break through time: > 480 min
Material tested: Butoject? (Z677647, Size M)

Splash protection
Material: Nature latex/chloroprene
Minimum layer thickness: 0,6 mm
Break through time: > 30 min
Material tested: Lapren? (Z677558, Size M)

data source: KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 873000, e-mail sales@kcl.de, test method: EN374

If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an Industrial Hygienist familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

Body Protection
Complete suit protecting against chemicals, Flame retardant antistatic protective clothing. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection
Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

a) Appearance
Form: liquid
Colour: colourless

b) Odour
pungent

c) Odour Threshold
no data available

d) pH
2,4 at 60,05 g/l

e) Melting point/freezing point
Melting point/range: 16,2 °C - lit.

f) Initial boiling point
117 - 118 °C - lit.
g) Flash point 40.0 °C - closed cup
h) Evaporation rate no data available

i) Flammability (solid, gas) no data available
j) Upper/lower flammability or explosive limit: Upper explosion limit: 19.9 % (V)
   Lower explosion limit: 4 % (V)
k) Vapour pressure 73.3 hPa at 50.0 °C
   15.2 hPa at 20.0 °C
l) Vapour density no data available
m) Relative density 1.049 g/cm3 at 25 °C
n) Water solubility completely miscible
o) Partition coefficient: n-octanol/water log Pow: -0.17
p) Autoignition temperature 485.0 °C
q) Decomposition temperature no data available
r) Viscosity no data available
s) Explosive properties no data available
t) Oxidizing properties no data available

9.2 Other safety information
   Surface tension 28.8 mN/m at 10.0 °C

10. STABILITY AND REACTIVITY
10.1 Reactivity no data available
10.2 Chemical stability no data available
10.3 Possibility of hazardous reactions no data available
10.4 Conditions to avoid Heat, flames and sparks.
10.5 Incompatible materials Oxidizing agents, Soluble carbonates and phosphates, Hydroxides, Metals, Peroxides, permanganates, e.g. potassium permanganate, Amines, Alcohols
10.6 Hazardous decomposition products Other decomposition products - no data available

11. TOXICOLOGICAL INFORMATION
11.1 Information on toxicological effects
   Acute toxicity
   LD50 Oral - rat - 3.310 mg/kg
   LC50 Inhalation - mouse - 1 h - 5620 ppm
   LC50 Inhalation - rat - 4 h - 11.4 mg/l
   LD50 Dermal - rabbit - 1.112 mg/kg
   Skin corrosion/irritation no data available

   Serious eye damage/eye irritation
   Eyes - rabbit - Corrosive to eyes
   Respiratory or skin sensitization
   May cause sensitization by skin contact.
   Germ cell mutagenicity no data available
   Carcinogenicity
   IARC: No component of this product present at levels greater than or equal to 0.1% is identified as
probable, possible or confirmed human carcinogen by IARC.

Reproductive toxicity
no data available

Specific target organ toxicity - single exposure
no data available

Specific target organ toxicity - repeated exposure
no data available

Aspiration hazard
no data available

Potential health effects

**Inhalation**
Toxic if inhaled. Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract.

**Ingestion**
May be harmful if swallowed. Causes burns.

**Skin**
Harmful if absorbed through skin. Causes skin burns.

**Eyes**
Causes eye burns.

Signs and Symptoms of Exposure
Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin., spasms, inflammation and edema of the larynx, spasms, inflammation and edema of the bronchi, pneumonitis, pulmonary edema, burning sensation, Cough, wheezing, laryngitis, Shortness of breath, Headache, Nausea, Vomiting, Ingestion or inhalation of concentrated acetic acid causes damage to tissues of the respiratory and digestive tracts. Symptoms include: hematemesis, bloody diarrhea, edema and/or perforation of the esophagus and pylorus, pancreatitis, hematuria, anuria, uremia, albuminuria, hemolysis, convulsions, bronchitis, pulmonary edema, pneumonia, cardiovascular collapse, shock, and death. Direct contact or exposure to high concentrations of vapor with skin or eyes can cause: erythema, blisters, tissue destruction with slow healing, skin blackening, hyperkeratosis, fissures, corneal erosion, opacification, iritis, conjunctivitis, and possible blindness. To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Additional Information
RTECS: AF1225000

12. ECOLOGICAL INFORMATION

12.1 Toxicity
Toxicity to fish: semi-static test LC50 - Oncorhynchus mykiss (rainbow trout) - > 1.000 mg/l - 96 h
Method: OECD Test Guideline 203

Toxicity to daphnia and other aquatic invertebrates: EC50 - Daphnia magna (Water flea) - > 300,82 mg/l - 48 h
Method: OECD Test Guideline 202

12.2 Persistence and degradability
Biodegradability: aerobic - Exposure time 30 d
Result: 99 % - Readily biodegradable.
Remarks: Expected to be biodegradable

12.3 Bioaccumulative potential
no data available

12.4 Mobility in soil
no data available

12.5 Results of PBT and vPvB assessment
no data available

12.6 Other adverse effects
Harmful to aquatic life.

Additional ecological information: no data available

Biochemical Oxygen Demand (BOD): 880 mg/g

13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods
**Product**
Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Offer surplus and non-recyclable solutions to a licensed disposal company.

**Contaminated packaging**
Dispose of as unused product.
14. TRANSPORT INFORMATION

14.1 UN number
ADR/RID: 2789  
IMDG: 2789  
IATA: 2789

14.2 UN proper shipping name
ADR/RID: ACETIC ACID, GLACIAL  
IMDG: ACETIC ACID, GLACIAL  
IATA: Acetic acid, glacial

14.3 Transport hazard class(es)
ADR/RID: 8 (3)  
IMDG: 8 (3)  
IATA: 8 (3)

14.4 Packaging group
ADR/RID: II  
IMDG: II  
IATA: II

14.5 Environmental hazards
ADR/RID: no  
IMDG Marine pollutant: no  
IATA: no

14.6 Special precautions for user
no data available

15. REGULATORY INFORMATION
This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
no data available

15.2 Chemical Safety Assessment
no data available

16. OTHER INFORMATION
Further information
The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information this document is based on the resent state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. guidechem shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale.