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

· **Informations to product No. 7004**

· **Product name:**

Essigsäure 99%
Acidum aceticum glaciale
Acetic acid 99%

· **Supplier of the Product / responsible Company:**

Caesar & Loretz GmbH
Herderstr. 31
40721 Hilden
Tel.: 02103/4994-0
Fax: 02103/32360
e-mail: info@caelo.de

· **Emergency telephone:**

Giftinformationszentrum Mainz
Langenbeckstr. 1, 55131 Mainz
Tel.: 06131/19240

· **Relevant identified uses of the substance or mixture and uses advised against:**

No further relevant information available.

· **Application of the substance / mixture:**

Ingredient for pharmaceutical drugs or active pharmaceutical ingredient.

2 Hazards identification

· **GHS-Labeling Elements:**



· **Signal word:** Danger

· **H-Phrases:**

H314 Causes severe skin burns and eye damage

H226 Flammable liquid and vapour

· **P-Phrases:**

P260 Do not breathe dust/fume/gas/mist/vapours/spray

P280 Wear protective gloves/protective clothing/eye protection/face protection

P301 IF SWALLOWED:

P330 Rinse mouth


P353 Rinse skin with water/shower

P305 IF IN EYES:

P351 Rinse continuously with water for several minutes

P310 Immediately call a POISON CENTER or doctor/physician

Flam. Liq. 3

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Skin Corr. 1A

3 Composition / information on ingredients

• **Chemical characterization:**

CAS-No. Substance name

64-19-7 Acetic acid GHS02, GHS05; H226-H314 (99%)

• **EINECS-No.:** 200-580-7

• **Index-Nor:** 607-002-00-6

• **REACH Reg. No.:** 01-2119475328-30-0000

• **INCI-Name:** Acetic Acid

CAS-No. Substance name

7732-18-5 Water (1%)

• **EINECS-Nr.:** 231-791-2

• **REACH Reg. No.:** Exempted from the obligation to register according to Annex 4 / 5 REACH-regulation.

• **INCI-Name:** Aqua

4 First aid measures

• **General advices:** Take off contaminated clothes immediately.

• **after inhalation:** Fresh air or oxygen; get medical help.

• **after skin contact:** Wash away with water and soap immediately and rinse off.

Wash away with Polyethylenglycol 400.

• **after eye contact:** Rinse out with plenty of water with the eyelid wide open, seek medical advice, even if no immediate symptoms are observed.

• **after swallowing:** Drink immediately and repeatedly plenty of water., if possible with activated coal added. Do not induce vomiting (danger of aspiration).

Fresh air. Seek medical advice immediately. Laxans: Sodium sulfate (1 spoon. in 1 cup of water) with plenty of activated coal.

• **Medical advice:** If swallowed: 20 to 50 g of the pure acid are considered as life-endangering.

5 Fire-fighting measures

• **Suitable extinguishing media:** All regular extinguishing media can be used. Select fire fighting measures suitable to surrounding environment.


• **Specific hazards during fire fighting:** Combustible. Vapours heavier / denser than air. With air explosive mixtures can be formed.. precipitate vapours with water spray. In case of fire acetic acid vapours can be generated. Intact containers: Heating causes raise in pressure, Danger of bursting! Cool endangered containers with water or bring them out of danger area.

• **Special protective equipment for fire-fighters:** Wear respiratory protection.

• **Additional information:** Prevent fire extinguishing water from contaminating surface water, the ground water system or soil. Residues must be deposited according to local regulations.

6 Accidental release measures

• **Personal protective measures:** Good ventilation of working place. Keep away from ignition

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sources. Wear protective equipment. Keep away not protected persons. Avoid contact with substance.

• **Environmental protective measures:** Dilute with plenty of water. Prevent from entering into surface water, the ground water system or soil.

• **Methods for cleaning:** Neutralize with calcium carbonate or sodium hydroxide solution. Absorb with liquid-binding material: Sand, silica gel, acid binder, universal binder, saw dust. Disposal according to Chapter 13 of this MSDS. Clean up with water.

7 Handling and storage

• Handling:

• **Advice on safe handling:** Ensure good ventilation/exhaustion at the workplace. Handling corresponding to laboratory safety guidelines. Avoid formation of aerosols.

Use only acid-proof equipment. Check electric installations regularly because of higher corrosion rate.

• **Informations to fire or explosion protection:** Keep away from ignition sources. Do not smoke.. Take measures to prevent electrostatic charging. Protect from heat.

• Storage:

• **Requirements for storage areas and containers:** Keep container tightly closed, in good ventilated rooms. At room temperature. Suitable material for containers and tubes: Stainless steel.

Do not store acetic acid in aluminium tanks.

8 Exposure controls / personal protective equipment

Components with limit values that require monitoring at the workplace:

64-19-7 Acetic acid (100,0%)

MAK: 25 mg/m³, 10 ml/m³

• **General information:** Peak limit: Category I

• **Personal protective equipment:**

• **General protective and hygiene measures:**

Do not inhale gases/vapours/aerosols. Keep away from food, beverages and animal food. Take off contaminated clothes immediately. Wash hands before breaks and after work. Avoid contact with eyes and skin. Skin protection.

• **Respiratory protection:** Good ventilation / exhaustion or respiratory protection..

Recommended filters:

< 0.1 Vol% Filter EN 141 E1 (yellow)

< 0.5 Vol% Filter EN 141 E2 or E2-P2

< 1.0 Vol% Filter EN 141 E3 or E3-P2

> 1.0 Vol% full respiratory protection equipment.

• **Hand protection:** Protection gloves of rubber or latex.

• **Eye protection:** Safety glasses.

• **Body protection:** Acid-proof clothing.

9 Physical and chemical properties

• **Form:** liquid


• **Colour:** colourless

• **Odour:** pungent

• **Melting point / melting range:** 16,6 °C

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

• **Flash point:** 40 °C

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- **Ignition temperature:** 485 °C
- **Explosion hazard:** The product is not explosive, but explosive vapour-air-mixtures can be formed.
- **Explosion limits:**
- **lower:** 4 Vol %
- **upper:** 17 Vol %
- **Vapour pressure:** (20 °C) 16 hPa
- **Density:** (20 °C) 1,05 g/cm³
- **Solubility in / Miscibility with**
- **Water:** Completely miscible
- **pH-range:** (10 g/l, 20 °C) ca. 2,5
- **Viscosity:**
- **dynamic:** (25 °C) 1,53 mPas

10 Stability and reactivity

- **Thermal decomposition / conditions to avoid:**
Strong heating. Temperatures < 0°C.
- **Materials to avoid:** Anhydrides, water, aldehydes, alcohols, halogen-halogen-compounds, alkali metals, earth alkali metals, strong oxidants, peroxides, perchloric acid, non-metal-halogenides, strong bases, amines.
- **Hazardous reactions:**
Corrosive towards metals (including iron and zinc) with hydrogen gas release.
- **Hazardous decomposition products:** In case of fire: Carbon monoxide and Carbon dioxide.
- **Additional information:** In gaseous state (vapours) with air explosive..

11 Toxicological information

- **Acute toxicity:**
LD/LD50-data relevant for hazard classification:
64-19-7 Acetic acid
Oral: LD50: 3310 mg/kg (rat)
Dermal: LD50: 1060 mg/kg (rab)
oral 600 mg/kg rab
LDLo inhalativ/15min. 5620 ppm mou
- **Primary irritant effect:**
- **on skin:** Burning effect on skin and mucous membranes. The high lipide solubility accelerates penetration into skin with deep effect.
- **on eyes:** Strong burnings. Danger of corneal clouding or blindness!
- **on respiratory organs:** Irritant effect.
- **Additional toxicological informations:** After inhalation of vapours: irritations in respiratory ways. pneumonia; bronchitis. In respiratory tract inhalation can cause edema.
Acetic acid vapours cause in concentrations of more than 25 ml/m³ serious irritations on mucous membranes of eyes and respiratory ways, without irreversible damages. Because of this warning effect only few cases of health damage are known. Accomodation is possible.
After swallowing: Burnings in mouth and throat, in esophagus and in stomach; for esophagus and stomach danger of perforation. Stomach cramps, bleeding vomiting, respiratory insufficiency. After aspiration lung dysfunction possible.
Further possible health risks: shock, cardiovascular failure, acidosis.
Kidney damage: 20 to 50 g of the pure acid are considered as life-endangering.

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12 Ecological information

- **Behaviour in environmental systems:**
- **Log pOW:** -0,31 (anhydrous Substance)
- **Aquatic toxicity:** All following values for pure acetic acid:
Fish toxicity: leuciscus idus LC50: 410 mg/l
Arthropodes: Daphnia magna LC50: 47 mg/l/24h.
Toxic concentration limit: Pneumonas putida: 2850 mg/l
Scenedesmus quadricauda: 4000 mg/l
- **behaviour in sewage plants:** Elimination. BSB5: 0,88 g/g; BSB 36% of ThSB/5d
- **General advices:** Prevent from entering sewage water or drainage ditch undiluted or unneutralized.
- **Water hazard class:** 1 (VwVwS): slightly hazardous for water.

13 Disposal considerations


- **Product:**
- **Recommendation:** Disposal according to local regulations as pharmaceutical waste or organic laboratory chemicals.
- **Empty contaminated packaging:**
- **Recommendation:** Disposal according to the local regulations.

14 Transport informations

- **Land transport according to ADR:**
- **Proper shipping name:** Acetic acid, glacial
- **Class:** 8
- **UN-number:** 2789
- **Packing group:** II
- **Classification code:** CF1
- **Limited quantities (Table 3.4.6. ADR):** 1 L
- **Hazard classification number:** 83
- **Special provisions (Chapter 3.3 ADR):** -
- **Additional informations for sea transport IMDG:**
- **EMS-No.:** F-E, S-C
- **Properties:** Fp=40°C

15 Regulatory information

- **Labelling according to actual legislation (GHS, Globally Harmonized System of Classification and Labelling of Chemicals):**
The product is classified and labelled according to GHS-regulations.
- **Hazard symbols:** GHS05, GHS02
- **Signal word:** Danger
- **H-Phrases:**
H314 Causes severe skin burns and eye damage
H226 Flammable liquid and vapour
- **P-Phrases:**

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P310 Immediately call a POISON CENTER or doctor/physician

• **National regulations (Germany):**

• **Water hazard class:** see chapter 12

• **Storage class TRGS 510:** 8A

• **VbF class:** B

16 Other Information

The information provided in this MSDS is correct to the best of our knowledge at the date of edition.

• **Reason for last revision:** Adjustment to regulation (EC) 1907/2006 (REACH) and GHS-labelling system.