


<p>Page 1 of 4</p> <p>Print Date 20.11.2018</p>	<p>Material Safety Data Sheet according to Regulation (EC) No. 1907/2006 (REACH)</p> <p>Citronensäure, wasserfreie cryst.</p>	 <p>Revision Date 20.11.2018</p>
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1 Identification of the substance/mixture and of the company/undertaking

· **Informations to product No. 2018**

· **Product name:**

Citronensäure, wasserfreie cryst.

Acidum citricum anhydricum plv.

Citric acid, anhydrous

· **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:** Warning

· **H-Phrases:**

H315 Causes skin irritation

H319 Causes serious eye irritation


· **P- Phrases:**

P305 IF IN EYES:

P351 Rinse continuously with water for several minutes

Eye Irrit. 2

Skin Irrit. 2

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3 Composition / information on ingredients

CAS-No. Substance name

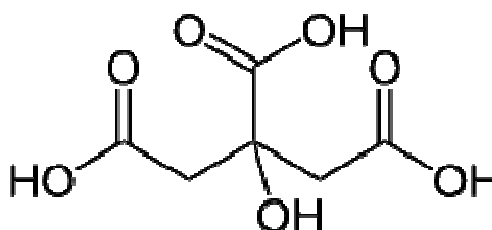
77-92-9 Citric acid, anhydrous

• **EINECS-No.:** 201-069-1

• **REACH-No.:** 01-2119457026-42

• **INCI-Name:** Citric Acid

• **Chemical characterization:**



4 First aid measures

- **after inhalation:** Fresh air. If irritation of respiratory ways continues seek medical advice.
- **after skin contact:** Take off contaminated clothes and shoes, wash immediately with plenty of water and soap.
- **After eye contact:** Rinse out with plenty of water with the eyelid wide open. If irritations continue, call in ophthalmologist.

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. In case of fire dangerous vapours/gases can be generated: Smoke gases.
- **Special protective equipment for fire-fighters:** Suitable protective clothes and respiratory protection.

6 Accidental release measures

- **Personal protective measures:** Avoid contact with substance.
- **Environmental protective measures:** No special measures required.
- **Methods for cleaning:** Take up dry. Avoid generation of dusts. Disposal according to Chapter 13 of this MSDS. Clean up with water.

7 Handling and storage

- **Handling:**
- **Advice on safe handling:** Avoid dust formation.
- **Storage:**
- **Requirements for storage areas and containers:**
Tightly closed. Store at a dry place. Not above 25 °C.

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8 Exposure controls / personal protective equipment

- **Personal protective equipment:**
- **General protective and hygiene measures:** Avoid contact with eyes and skin.
- **Respiratory protection:** Dust protection mask.
- **Hand protection:** Protection gloves.
- **Eye protection:** Safety glasses.

9 Physical and chemical properties

- **Form:** Crystalline powder
- **Colour:** white
- **Odour:** odourless
- **Melting point / melting range:** 145 °C
- **Flash point:** 345 °C
- **Decomposition temperature:** 153 °C
- **Density:**
- **Bulk density:** 1000 kg/m³
- **Solubility in / Miscibility with**
- **Water:** (20 °C) 1590 g/l
- **pH-range:** (10 g/l, 20 °C) ca. 2

10 Stability and reactivity


- **Thermal decomposition / materials to avoid:** No decomposition during appropriate usage.
- **Hazardous reactions:** no hazardous reactions known.
- **Hazardous decomposition products:** none.

11 Toxicological information

- **Acute toxicity:**
- **LD/LD50-data relevant for hazard classification:**
All data for: 77-92-9 Citric acid, anhydrous
Oral: LD50: 5400 mg/kg (mouse, OECD 501)
Oral: LD50: 11700 mg/kg (rat, OECD 401)
Dermal: LD50: > 2000 mg/kg (rat)
i.p.: LD50: 725 mg/kg (rat)
i.p.: LD50: 940 mg/kg (mouse)
- **Primary irritant effect:**
- **on skin:** (rabbit) Slightly irritant.
- **on eyes:** Irritant effect.
- **Sensitization:** Not sensitizing (OECD 406)

12 Ecological information

- **Aquatic toxicity:**
All data for: 77-92-9 Citric acid, anhydrous

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Fish toxicity: *Leuciscus idus* LC50: 440 mg/l, 48h (OECD 203)
Daphnia toxicity: *Daphnia magna* LC50: 1535 mg/l, 24h (static)
Algae toxicity: *Scenedesmus quadricauda*: 425 mg/l, 168h, (static)
Bacteria toxicity: *Pseudomonas putida*; > 10000 mg/l, 16h (static)
• **Information about elimination (persistence and degradability):**
Readily biodegradable: 100%, 19d (OECD 301E)
• **Log pOW:** 1,72
• **Water hazard class:** 1 (VwVwS, Annex 3): 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:**
Not classified as dangerous in the meaning of transport regulations.

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:** GHS07
- **Signal word:** Warning
- **H-Phrases:**
H315 Causes skin irritation
H319 Causes serious eye irritation
- **P- Phrases:**
P305 IF IN EYES:
P351 Rinse continuously with water for several minutes
- **National regulations (Germany):**
- **Water hazard class:** see chapter 12
- **Storage class TRGS 510:** 11

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.