

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

revised on: 14.06.2023

Version number 8

Creation Date: 30.03.2017

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

- **1.1 Product identifier**
- **Trade name:** Citric acid monohydrate
- **Article number:** 2417, 2432, 2456
- **CAS Number:**  
5949-29-1
- **EC number:**  
201-069-1
- **Registration number** 01-2119457026-42-xxxx
- **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**  
Reagent for analysis  
Industrial use  
Food additive
- **1.3 Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**  
Th. Geyer GmbH & Co. KG  
Dornierstr. 4 – 6  
D-71272 Renningen  
  
Tel.: +49(0)7159-1637-0, Fax:+49 (0)7159/18417  
www.thgeyer.de  
sicherheitsdatenblaetter@thgeyer.de
- **Further information obtainable from:** Product management department
- **1.4 Emergency telephone number:**  
National Poisons Information Service  
City Hospital  
Dudley Road  
Birmingham B18 7QH  
Tel.:Emergency: (00 44) 87 06 00 62 66

### SECTION 2: Hazards identification

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



GHS07

- Eye Irrit. 2 H319 Causes serious eye irritation.
- STOT SE 3 H335 May cause respiratory irritation.

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

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**· Hazard pictograms**


GHS07

**· Signal word** Warning

**· Hazard statements**

H319 Causes serious eye irritation.

H335 May cause respiratory irritation.

**· Precautionary statements**

P261 Avoid breathing dust.

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

P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P337+P313 If eye irritation persists: Get medical advice/attention.

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

**· 3.1 Substances**
**· CAS No. Description**

5949-29-1 Citric acid

**· Identification number(s)**
**· EC number:** 201-069-1

### SECTION 4: First aid measures

**· 4.1 Description of first aid measures**
**· General information:**

First aider needs to protect himself.

Take affected persons out into the fresh air.

Immediately remove any clothing soiled by the product.

**· After inhalation:**

Supply fresh air.

Seek medical treatment in case of complaints.

**· After skin contact:**

Flush contaminated skin with soap and plenty of water.

After prolonged contact or any signs of skin changes (redness or other signs of inflammation) seek medical attention.

**· After eye contact:**

Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.

Remove any contact lenses if possible.

Continue rinsing.

**· After swallowing:**

Rinse out mouth and then drink plenty of water.

Seek medical treatment.

**· 4.2 Most important symptoms and effects, both acute and delayed**

No further relevant information available.

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- **4.3 Indication of any immediate medical attention and special treatment needed** Symptomatic treatment.

### SECTION 5: Firefighting measures

- **5.1 Extinguishing media**
- **Suitable extinguishing agents:** Carbon dioxide, powder, water spray or alcohol-resistant foam.
- **For safety reasons unsuitable extinguishing agents:** Water with full jet.
- **5.2 Special hazards arising from the substance or mixture**  
Combustible.  
In case of fire, the following can be released:  
Carbon dioxides (CO, CO<sub>2</sub>)  
Under certain fire conditions, traces of other toxic gases cannot be excluded.
- **5.3 Advice for firefighters**
- **Protective equipment:**  
Wear self-contained respiratory protective device.  
Do not inhale explosion gases or combustion gases.
- **Additional information**  
Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.

### SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures**  
Ensure adequate ventilation.  
Avoid formation of dust.  
Avoid contact with eyes and skin.  
Wear protective clothing.
- **6.2 Environmental precautions:** Do not allow to enter sewers/surface or ground water.
- **6.3 Methods and material for containment and cleaning up:**  
Cover drains.  
Avoid dust formation.  
Ensure adequate ventilation.  
Dispose of the material collected according to regulations.
- **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**  
Store in cool, dry place in tightly closed receptacles.  
Ensure good ventilation/exhaustion at the workplace.
- **7.2 Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:**  
Dry.  
Tightly closed.  
Store only in the original receptacle.
- **Information about storage in one common storage facility:**  
Store away from oxidising agents.  
Store away from water.
- **Further information about storage conditions:**  
Store in dry conditions.  
Protect from humidity and water.  
Keep container tightly sealed.

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- **Storage class:** 11
- **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:** Not required.
- **PNECs**
  - 0.44 mg/L - freshwater :
  - 0.044 mg/L - marine water:
  - 3.46 mg/kg - freshwater sediment:
  - 34.6 mg/kg - marine water sediment.
  - >1000 mg/L - STP
  - 33.1 mg/kg - soil
- **Additional information:** The lists valid during the making were used as 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.
  - Avoid contact with the eyes.
  - Avoid contact with the eyes and skin.
- **Respiratory protection:**
  - Filter P3
  - 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. If air-purifying respiratory protection is required according to the risk assessment, wear a respirator with full-face mask with combination filter (US) or with filter type ABEK (EN 14387) filter cartridge. If the respirator is the only protective measure, an ambient air self-contained breathing apparatus with a full face mask must be worn. Respirators and components must be approved to appropriate government standards (for example, NIOSH (US) or CEN (EU)). Translated with [www.DeepL.com/Translator](http://www.DeepL.com/Translator) (free version)
- **Hand protection**



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.
  - NBR: acrylonitrile-butadiene rubber
  - Material thickness > 0.11 mm
- **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.
  - Level 6 for applications > 480 min
- **Eye/face protection**



Safety glasses

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**· Body protection:**

Protective work clothing (e. g. safety shoes EN ISO 20345, long-sleeved protective working garments).

### SECTION 9: Physical and chemical properties

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

· <b>Colour:</b>	White
· <b>Odour:</b>	Characteristic
· <b>Melting point/freezing point:</b>	135-152 °C
· <b>Boiling point or initial boiling point and boiling range</b>	Undetermined.
· <b>Flammability</b>	Product is not flammable.
· <b>Lower and upper explosion limit</b>	
· <b>Lower:</b>	Not determined.
· <b>Upper:</b>	Not determined.
· <b>Flash point:</b>	Not applicable.
· <b>Auto-ignition temperature:</b>	345 °C
· <b>Decomposition temperature:</b>	Not determined.
· <b>pH</b>	1.85
· <b>Viscosity:</b>	
· <b>Kinematic viscosity</b>	Not applicable.
· <b>Dynamic:</b>	Not applicable.
· <b>Solubility</b>	
· <b>water at 20 °C:</b>	1630 g/l
· <b>Partition coefficient n-octanol/water (log value)</b>	Not determined.
· <b>Vapour pressure at 20 °C:</b>	0.1 hPa
· <b>Density and/or relative density</b>	
· <b>Density at 20 °C:</b>	1.54 g/cm <sup>3</sup>
	Not determined.
· <b>Relative density</b>	Not determined.
· <b>Bulk density:</b>	800-1,000 kg/m <sup>3</sup>
· <b>Vapour density</b>	Not applicable.
· <b>Particle characteristics</b>	
See section 3.	

**· 9.2 Other information**

· <b>Appearance:</b>	
· <b>Form:</b>	Powder
· <b>Important information on protection of health and environment, and on safety.</b>	
· <b>Ignition temperature:</b>	Not determined.
· <b>Explosive properties:</b>	Product does not present an explosion hazard.
· <b>Change in condition</b>	
· <b>Evaporation rate</b>	Not applicable.

**· Information with regard to physical hazard classes**

· <b>Explosives</b>	Void
· <b>Flammable gases</b>	Void
· <b>Aerosols</b>	Void
· <b>Oxidising gases</b>	Void
· <b>Gases under pressure</b>	Void
· <b>Flammable liquids</b>	Void

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· 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** Stable with proper storage and handling.
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **10.3 Possibility of hazardous reactions**  
Exothermic reaction.  
Reacts with reducing agents.  
Reacts with alkali (lyes).  
Reacts with oxidising agents.  
Reacts with certain metals.
- **10.4 Conditions to avoid** Heating
- **10.5 Incompatible materials:** No further relevant information available.
- **10.6 Hazardous decomposition products:** On fire: see chapter 5

### SECTION 11: Toxicological information

- **11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008**
- **Acute toxicity** Based on available data, the classification criteria are not met.

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

Oral	LD50	6,730 mg/kg (rat)
Dermal	LD50	>2,000 mg/kg (rat)

- **Skin corrosion/irritation** Based on available data, the classification criteria are not met.
- **Serious eye damage/irritation**  
Causes serious eye irritation.
- **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**  
May cause respiratory irritation.
- **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** Substance is not listed.

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### SECTION 12: Ecological information

- **12.1 Toxicity**
- **Aquatic toxicity:**  
LC50: 440 mg/L (Leuciscus idus melanotus, 48 h), static test  
LC50: 1535 mg/L (Daphnia magna, 24 h), static test
- **12.2 Persistence and degradability** Easily biodegradable
- **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** For information on endocrine disrupting properties see section 11.
- **12.7 Other adverse effects**
- **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.  
Rinse off of bigger amounts into drains or the aquatic environment may lead to decreased pH-values. A low pH-value harms aquatic organisms. In the dilution of the use-level the pH-value is considerably increased, so that after the use of the product the aqueous waste, emptied into drains, is only low water-dangerous.

### 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.

- **European waste catalogue**

07 00 00	WASTES FROM ORGANIC CHEMICAL PROCESSES
07 07 00	wastes from the MFSU of fine chemicals and chemical products not otherwise specified
07 07 08*	other still bottoms and reaction residues
HP 4	Irritant - skin irritation and eye damage

- **Uncleaned packaging:**
- **Recommendation:** Packaging may be reused or recycled after cleaning.

### SECTION 14: Transport information

- |   |                 |
|---|-----------------|
| · <b>14.1 UN number or ID number</b><br>· <b>ADR, ADN, IMDG, IATA</b>                       | not regulated   |
| · <b>14.2 UN proper shipping name</b><br>· <b>ADR, ADN, IMDG, IATA</b>                      | not regulated   |
| · <b>14.3 Transport hazard class(es)</b><br>· <b>ADR, ADN, IMDG, IATA</b><br>· <b>Class</b> | not regulated   |
| · <b>14.4 Packing group</b><br>· <b>ADR, IMDG, IATA</b>                                     | not regulated   |
| · <b>14.5 Environmental hazards:</b>  | Not applicable. |
| · <b>14.6 Special precautions for user</b>  | Not applicable. |

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- |   |                 |
|---|-----------------|
| <ul style="list-style-type: none"> <li>· <b>14.7 Maritime transport in bulk according to IMO instruments</b></li> </ul> | Not applicable. |
| <ul style="list-style-type: none"> <li>· <b>UN "Model Regulation":</b></li> </ul>                                       | not regulated   |

### SECTION 15: Regulatory information

- **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **Directive 2012/18/EU**
- **Named dangerous substances - ANNEX I** Substance is not listed.
- **DIRECTIVE 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment – Annex II**  
Substance is not listed.
- **REGULATION (EU) 2019/1148**
- **Annex I - RESTRICTED EXPLOSIVES PRECURSORS (Upper limit value for the purpose of licensing under Article 5(3))**  
Substance is not listed.
- **Annex II - REPORTABLE EXPLOSIVES PRECURSORS** Substance is not listed.
- **Regulation (EC) No 273/2004 on drug precursors** Substance is not listed.
- **Regulation (EC) No 111/2005 laying down rules for the monitoring of trade between the Community and third countries in drug precursors**  
Substance is not listed.
- **National regulations:**
- **Information about limitation of use:**  
Employment restrictions concerning juveniles must be observed.  
Employment restrictions concerning pregnant and lactating women must be observed.
- **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.

- **Department issuing SDS:** Product management
- **Contact:** Product management
- **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  
CAS: Chemical Abstracts Service (division of the American Chemical Society)  
PNEC: Predicted No-Effect Concentration (UK REACH)  
LC50: Lethal concentration, 50 percent  
LD50: Lethal dose, 50 percent  
PBT: Persistent, Bioaccumulative and Toxic  
vPvB: very Persistent and very Bioaccumulative  
Eye Irrit. 2: Serious eye damage/eye irritation – Category 2  
STOT SE 3: Specific target organ toxicity (single exposure) – Category 3
- **\* Data compared to the previous version altered.**

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