Safety data sheet

according to Regulation (EC) No 1907/2006, Article 31

Printing date 01.10.2026 Version number 2.00 (replaces version 1.00) Revision: 01.10.2026

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

· **Product identifier**

· **Trade name: Citric acid**

· **Article number:** 7875
· **CAS Number:**
77-92-9
· **EC number:**
201-069-1
· **Index number:**
607-750-00-3
· **Registration number** The substance is exempt from REACH-registration.
· **Relevant identified uses of the substance or mixture and uses advised against**
· **Application of the substance / the mixture** Chemical
· **Uses advised against** No relevant information available.

· **Details of the supplier of the safety data sheet**
· **Manufacturer/Supplier:**
CAELO
Caesar & Loretz GmbH
Herderstr. 31
D-40721 Hilden
GERMANY

· **Further information obtainable from:**
E-mail: info@caelo.de
Tel.: +49210349940 (during regular opening hours)
· **Emergency telephone number:**
Poison Information Center Bonn
Venusberg-Campus 1, 53127 Bonn
Tel: +49 (0) 228-192400

2 Hazards identification

· **Classification of the substance or mixture**
· **Classification according to Regulation (EC) No 1272/2008**
Eye Irrit. 2 H319 Causes serious eye irritation.
STOT SE 3 H335 May cause respiratory irritation.

· **Label elements**
· **Labelling according to Regulation (EC) No 1272/2008**
The substance is classified and labelled according to the 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/fume/gas/mist/vapours/spray.
P280	Wear 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.
P405	Store locked up.
P501	Dispose of contents/container in accordance with local/regional/national/international regulations.

· **Other hazards**
· **Results of PBT and vPvB assessment**
· **PBT:** Not applicable
· **vPvB:** Not applicable
· **Determination of endocrine-disrupting properties** Not applicable.

3 Composition/information on ingredients

· **Substances**
· **CAS No. Description**
CAS: 77-92-9 citric acid
· **Identification number(s)**
· **EC number:** 201-069-1
· **Index number:** 607-750-00-3

4 First aid measures

· **Description of first aid measures**
· **After inhalation:**
Supply fresh air.
Seek medical treatment in case of complaints.
· **After skin contact:** Generally the product does not irritate the skin.
· **After eye contact:**
Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
· **After swallowing:** If symptoms persist consult doctor.

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· **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:**
All regular extinguishing media can be used.
Use fire extinguishing methods suitable to surrounding conditions.
· **Special hazards arising from the substance or mixture**
Combustible. In case of fire dangerous vapours/gases can be generated: Smoke gases.
· **Advice for firefighters**
· **Protective equipment:** In case of fire wear suitable protective clothes and respiratory protection.
· **Additional information**
Prevent from entering into drains. Fire residues must be disposed in accordance with official regulations.

6 Accidental release measures
· **Personal precautions, protective equipment and emergency procedures**
Avoid contact with the substance.
· **Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
· **Methods and material for containment and cleaning up:**
Take up dry. Clean up with water.
Dispose contaminated material as waste according to section 13.
· **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
· **Precautions for safe handling** No special precautions are necessary if used correctly.
· **Information about fire - and explosion protection:** No special measures required.

· **Conditions for safe storage, including any incompatibilities**
· **Storage:**
· **Requirements to be met by storerooms and receptacles:**
Tightly closed. Store at a dry place. At room temperature (+15°C to +25°C).
· **Information about storage in one common storage facility:** Not required
· **Further information about storage conditions:** No further information
· **Storage class:** TRHS 510: 11 Combustible solids
· **Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection
· **Control parameters**
· **Ingredients with limit values that require monitoring at the workplace:** Not required.

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· **Additional information:** The lists valid during the making were used as basis.

· **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:** Dust protection mask.
· **Hand protection** Protective gloves
· **Material of 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
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.
· **Eye/face protection** Tightly sealed goggles

9 Physical and chemical properties

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

· **Physical state**	Solid
· **Colour:**	White
· **Odour:**	Odourless
· **Odour threshold:**	Not determined
· **Melting point/freezing point:**	153 °C
· **Boiling point or initial boiling point and boiling range**	Undetermined
· **Flammability**	Product is not flammable.
· **Lower and upper explosion limit**	
· **Lower:**	Not determined
· **Upper:**	Not determined
· **Flash point:**	345 °C
· **Auto-ignition temperature:**	1,010 °C
· **Decomposition temperature:**	Not determined
· **pH (100 g/l) at 20 °C**	1.6
· **Viscosity:**	
· **Kinematic viscosity**	Not applicable
· **Dynamic:**	Not applicable
· **Solubility**	
· **water at 20 °C:**	600 g/l
· **Partition coefficient n-octanol/water (log value)**	Not determined

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· **Vapour pressure:**	Not applicable
· **Density and/or relative density**	
· **Density at 20 °C:**	1.665 g/cm³
· **Relative density**	Not determined
· **Bulk density:**	1000 kg/m³
· **Vapour density**	Not applicable
· **Particle characteristics**	Not determined
· **Other information**	
· **Appearance:**	
· **Form:**	Crystalline powder
· **Important information on protection of health and environment, and on safety.**	
· **Ignition temperature:**	Not determined
· **Explosive properties:**	Product does not present an explosion hazard.
· **Change in condition**	
· **Evaporation rate**	Not applicable.
· **Information with regard to physical hazard classes**	
· **Explosives**	Void Void
· **Flammable gases**	Void Void
· **Aerosols**	Void Void
· **Oxidising gases**	Void Void
· **Gases under pressure**	Void Void
· **Flammable liquids**	Void Void
· **Flammable solids**	Void Void
· **Self-reactive substances and mixtures**	Void Void
· **Pyrophoric liquids**	Void Void
· **Pyrophoric solids**	Void Void
· **Self-heating substances and mixtures**	Void Void
· **Substances and mixtures, which emit flammable gases in contact with water**	Void Void
· **Oxidising liquids**	Void Void

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· **Oxidising solids**	Void
	Void
· **Organic peroxides**	Void
	Void
· **Corrosive to metals**	Void
	Void
· **Desensitised explosives**	Void
	Void

10 Stability and reactivity

· **Reactivity** No further relevant information available.
· **Chemical stability**
· **Thermal decomposition / conditions to be avoided:**
No decomposition if used according to specifications.
· **Possibility of hazardous reactions** No dangerous reactions known.
· **Conditions to avoid** No further relevant information available.
· **Incompatible materials:** No further relevant information available.
· **Hazardous decomposition products:** Carbon dioxide
· **Additional information:** Sensitive to moisture

11 Toxicological information

· **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:**
CAS: 77-92-9 citric acid

Oral	LD50	5,400 mg/kg (mouse)
		11,700 mg/kg (rat)
Dermal	LD50	>2,000 mg/kg (rat)
	LD50 (i.p.)	940 mg/kg (mouse)
		725 mg/kg (rat)

· **Primary irritant effect:**
· **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.
· **Additional toxicological information:**
High concentrations can cause tiredness, dizziness or loss of consciousness.
Vapors and liquid can cause eye irritation.

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* 12 Ecological information

· **Toxicity**
· **Aquatic toxicity:**

CAS: 77-92-9 citric acid

LC50 440 mg/L /48h (fish: leuciscus idus)

1,535 mg/L /24h (Daphnia magna)

· **Persistence and degradability** Easily biodegradable
· **Bioaccumulative potential** No further relevant information available.
· **Mobility in soil** No further relevant information available.
· **Results of PBT and vPvB assessment**
· **PBT:** Not applicable
· **vPvB:** Not applicable
· **Endocrine disrupting properties**
The product does not contain substances with endocrine disrupting properties.
· **Other adverse effects**
· **Additional ecological information:**
· **General notes:**
Water hazard class 1 (German Regulation) (Assessment by list): slightly hazardous for water

13 Disposal considerations

· **Waste treatment methods**
· **Recommendation**
Must not be disposed together with household garbage. Do not allow product to reach sewage system.

· **Uncleaned packaging:**
· **Recommendation:** Disposal must be made according to local regulations.

* 14 Transport information

· **UN number or ID number**	Not subject to transport regulations.
· **ADR, IMDG, IATA**	not regulated
· **UN proper shipping name**	
· **ADR, IMDG, IATA**	not regulated
· **Transport hazard class(es)**	
· **ADR, ADN, IMDG, IATA**	
· **Class**	not regulated
· **Packing group**	
· **ADR, IMDG, IATA**	not regulated
· **Environmental hazards:**	Not applicable
· **Special precautions for user**	Not applicable
· **Maritime transport in bulk according to IMO instruments**	Not applicable
· **UN "Model Regulation":**	not regulated

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15 Regulatory information

· **Safety, health and environmental regulations/legislation specific for the substance or mixture**
· **LIST OF SUBSTANCES SUBJECT TO AUTHORISATION (ANNEX XIV)** Not listed
· **REGULATION (EC) No 1907/2006 ANNEX XVII**
Not listed
Conditions of restriction: 75
· **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.

· **National regulations:**
· **Storage of hazardous substances in in nonstationary vessels (TRGS 510) (Germany)**
TRHS 510: 11 Combustible solids
· **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

16 Other information

The information provided is based on our current level of knowledge. This MSDS has been compiled and is exclusively for this product intended.
· **Reasons for alterations** This version replaces all old versions.
· **Date of previous version:** 17.03.2023
· **Version number of previous version:** 1.00
· **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)
MAL-Code: Måleteknisk Arbejdshygiejnisk Luftbehov (Regulation for the labeling concerning inhalation hazards, Denmark)
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.**