

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

Printing date: 18.03.2024

Version number 6 (replaces version 5)

Revision: 18.03.2024

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

· **1.1 Product identifier**

· **Trade name:** Citric acid DAB

Zitronensäure DAB

· **Article number:** 86900200

· **CAS Number:**

77-92-9

· **EC number:**

201-069-1

· **Index number:**

607-750-00-3

· **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**

Pure chemical substance

Electroplating auxiliary

· **1.3 Details of the supplier of the safety data sheet**

· **Manufacturer/Supplier:**

Heimerle + Meule GmbH

Dennigstrasse 16

D-75179 Pforzheim

Telefon +49 (0) 7231 940-0

Telefax +49 (0) 7231 940-2199

www.heimerle-meule.com

· **Further information obtainable from: .**

· **1.4 Emergency telephone number:**

DEUTSCHLAND - GERMANY:

Vergiftungs-Informationen-Zentrale Freiburg, ++49 761 19240 (24 h)

(Poisoning Information Center)

GREAT BRITAIN:

National Poisons Information Service +44 121 507 4123

Members of the public seeking specific information on poisons should contact:

In England and Wales: NHS 111 - dial 111 - In Scotland: NHS 24 - dial 111

IRELAND

+353 1 809 2166 (7 Days 8 am -10 pm)

Healthcare Professionals: +353 1 809 2566

ITALY:

Istituto Superiore di Sanità (ISS) +3906499906140

Centro Antiveleni

Bergamo: +39 800 883300

Firenze +39 055 794 7819

Milano: +39 055 794 7819

Roma +39 06 68593726

Roma +39 06 49978000

Roma +39 06 3954343

KROATIA - REPUBLIKA HRVATSKA:

(+385) 01 2348 342

ESTLAND - ESTONIA:

Tervisemeti Mürgistusteabekeskuse

National (24/7): 16662

(Contd. on page 2)

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

Printing date: 18.03.2024

Version number 6 (replaces version 5)

Revision: 18.03.2024

Trade name: Citric acid DAB
Zitronensäure DAB

(Contd. of page 1)

(+372) 7943 794

LETTLAND - LATVIA:Valsts Toksikoloģijas centrs, Saindēšanās un zāļu informācijas centrs,
(24h) 112

(24h) +371 67042473

LITAUEN - LIETUVOS RESPUBLIKA:

Poison Information Bureau (24/7), Tel.: +8 5 236 20 52

Apsinuodijimų informacijos biuras

SECTION 2: Hazards identification

- **2.1 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.

- **2.2 Label elements**
- **Labelling according to Regulation (EC) No 1272/2008**

The substance is classified and labelled according to the GB CLP regulation.

- **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.

- **2.3 Other hazards**

- **Results of PBT and vPvB assessment**

· **PBT:** Not applicable.· **vPvB:** Not applicable.

GB

(Contd. on page 3)

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

Printing date: 18.03.2024

Version number 6 (replaces version 5)

Revision: 18.03.2024

Trade name: Citric acid DAB
Zitronensäure DAB

(Contd. of page 2)

SECTION 3: Composition/information on ingredients

- **3.1 Substances**
- **CAS No. Description**
CAS: 77-92-9 citric acid; 1,2,3-Propanetricarboxylic acid, 2-hydroxy-; 2-Hydroxy-1,2,3-propanetricarboxylic acid
- **Identification number(s)**
- **EC number:** 201-069-1
- **Index number:** 607-750-00-3

SECTION 4: First aid measures

- **4.1 Description of first aid measures**
- **General information:**
Personal protection for the First Aider.
Take affected persons out of danger area and lay down.
Involve doctor immediately after an accident or unwell
- **After inhalation:** Supply fresh air; consult doctor 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:** Drink plenty of water and provide fresh air. Call for a doctor immediately.
- **4.2 Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **4.3 Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

SECTION 5: Firefighting measures

- **5.1 Extinguishing media**
- **Suitable extinguishing agents:**
CO₂, powder or water spray. Fight larger fires with 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** No further relevant information available.
- **5.3 Advice for firefighters**
- **Protective equipment:**
wear protective clothing



Wear self-contained respiratory protective device.

Beware: Filter masks provide protection for a short period of time only. They should only be used in exceptional cases, that is if a small amount of the substance has spilled out or in order to fight spillages and fire

- **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**
Avoid formation of dust.

(Contd. on page 4)

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

Printing date: 18.03.2024

Version number 6 (replaces version 5)

Revision: 18.03.2024

Trade name: Citric acid DAB
Zitronensäure DAB

(Contd. of page 3)

- Wear protective equipment. Keep unprotected persons away.*
Use respiratory protective device against the effects of fumes/dust/aerosol.
Only handle and refill product in closed systems.
- **6.2 Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
 - **6.3 Methods and material for containment and cleaning up:** Pick up mechanically.
 - **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**
Keep receptacles tightly sealed.
the usual precautionary measures are to be adhered to when handling chemicals.
Wear suitable respiratory protective device when decanting larger quantities without extractor facilities.
Do not dry clean dust covered objects and floors. Wash thoroughly with plenty of water.
- **Information about fire - and explosion protection:** No special measures required.
- **7.2 Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:**
Observe official regulations on storing packagings .
Observe official regulations on storing packagings .
Prevent any seepage into the ground.
- **Information about storage in one common storage facility:**

Store away from foodstuffs.
- **Further information about storage conditions:** *Keep container tightly sealed.*
- **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:**

CAS: 77-92-9 citric acid

AGW (Germany)	Long-term value: 2 E mg/m ³ 2(I);DFG, Y
---------------	---

- **Regulatory information AGW (Germany):** TRGS 900
- **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:**
The usual precautionary measures are to be adhered to when handling chemicals.
Immediately remove all soiled and contaminated clothing
Wash hands before breaks and at the end of work.
Do not inhale gases / fumes / aerosols.
Avoid contact with the eyes.
According to EC Directive 89/686/EEC

(Contd. on page 5)

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

Printing date: 18.03.2024

Version number 6 (replaces version 5)

Revision: 18.03.2024

Trade name: Citric acid DAB
Zitronensäure DAB

(Contd. of page 4)

- **Respiratory protection:**

Use suitable respiratory protective device in case of insufficient ventilation.

Beware: Filter masks provide protection for a short period of time only. They should only be used in exceptional cases, that is if a small amount of the substance has spilled out or in order to fight spillages and fire.

according to EN 143

Do not inhale dust / smoke / mist.

- **Recommended filter device for short term use: Filter P2**

- **Hand protection**



Protective gloves

according to EN 374

To avoid skin problems reduce the wearing of gloves to the required minimum.

Only use chemical-protective gloves with CE-labelling of category III.

Sensibilisation by the components in the glove materials is possible.

Check the permeability prior to each renewed use of the glove.

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

Prior to working with gloves the rubbing in with tanniferous skin-protecting agents for the avoidance of skin softening due to perspiration is recommended.

- **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.

Nitrile rubber, NBR

Recommended thickness of the material: ≥ 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.

The determined penetration times according to EN 16523-1:2015 are not performed under practical conditions. Therefore a maximum wearing time, which corresponds to 50% of the penetration time, is recommended.

- **Eye/face protection**



Tightly sealed goggles

according to EN 166

- **Body protection: Protective work clothing**

SECTION 9: Physical and chemical properties

- **9.1 Information on basic physical and chemical properties**

- **General Information**

- **Physical state**

Solid

- **Colour:**

White

- **Odour:**

Odourless

- **Odour threshold:**

Not determined.

(Contd. on page 6)

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

Printing date: 18.03.2024

Version number 6 (replaces version 5)

Revision: 18.03.2024

Trade name: Citric acid DAB
Zitronensäure DAB

(Contd. of page 5)

· Melting point/freezing point:	153°C (307.4°F)
· 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:	>93°C (>199.4°F)
· Auto-ignition temperature:	1,010°C (33.810°F)
· Decomposition temperature:	Not determined.
· pH	1.6
· Viscosity:	
· Kinematic viscosity	Not applicable.
· Dynamic:	Not applicable.
· Solubility	
· water at 20°C (68°F):	600 g/l
· Partition coefficient n-octanol/water (log value)	Not determined.
· Vapour pressure:	Not applicable.
· Density and/or relative density	
· Density at 20°C (68°F):	1.54 g/cm ³ (12.85 lbs/gal)
· Relative density	Not determined.
· Bulk density:	900 kg/m ³
· Vapour density	Not applicable.

· 9.2 Other information	
· Appearance:	
· Form:	Solid
· Important information on protection of health and environment, and on safety.	
· Ignition temperature:	Not determined.
· Explosive properties:	Product does not present an explosion hazard.
· Molecular weight	192.13 g/mol
· Change in condition	
· Evaporation rate	Not applicable.

· Information with regard to physical hazard classes	
· Explosives	Void
· Flammable gases	Void
· Aerosols	Void
· Oxidising gases	Void
· Gases under pressure	Void
· Flammable liquids	Void
· 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

(Contd. on page 7)

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

Printing date: 18.03.2024

Version number 6 (replaces version 5)

Revision: 18.03.2024

Trade name: Citric acid DAB
Zitronensäure DAB

(Contd. of page 6)

· **Desensitised explosives**

Void

SECTION 10: Stability and reactivity

- **10.1 Reactivity** No further relevant information available.
- **10.2 Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **10.3 Possibility of hazardous reactions** Reacts with acids, alkalis and oxidising agents.
- **10.4 Conditions to avoid** No further relevant information available.
- **10.5 Incompatible materials:** No further relevant information available.
- **10.6 Hazardous decomposition products:** No dangerous decomposition products known.

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)
------	------	-------------------

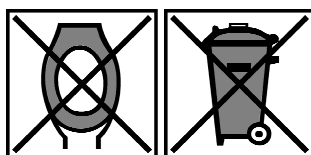
- **Serious eye damage/irritation** Causes serious eye irritation.
- **STOT-single exposure** May cause respiratory irritation.
- **11.2 Information on other hazards**
- **Endocrine disrupting properties** Substance is not listed.

SECTION 12: Ecological information

- **12.1 Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **12.2 Persistence and degradability** No further relevant information available.
- **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** Not applicable.
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **12.6 Endocrine disrupting properties**
The product does not contain substances with endocrine disrupting properties.
- **12.7 Other adverse effects**
- **Additional ecological information:**
- **General notes:** Water hazard class 1 (German Regulation) (Assessment by list): slightly hazardous for water

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.

Contact manufacturer for recycling information.

(Contd. on page 8)

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

Printing date: 18.03.2024

Version number 6 (replaces version 5)

Revision: 18.03.2024

Trade name: Citric acid DAB
Zitronensäure DAB

(Contd. of page 7)

· **Waste disposal key:**

The allocation of waste identity numbers/waste descriptions must be carried out according to the EEC, specific to the industry and process.

· **Uncleaned packaging:**

· **Recommendation:**

Disposal must be made according to official regulations.

Packaging which is uncleaned or soiled with product remains is to be treated like the product itself

Packaging free of product remains is to be supplied refuse for recycling. Only if no adequate collecting system is available, they may be disposed of through the domestic rubbish

· **Recommended cleansing agents:** Water, if necessary together with cleansing agents.

SECTION 14: Transport information

· **14.1 UN number or ID number**

· **ADR, ADN, IMDG, IATA** Void

· **14.2 UN proper shipping name**

· **ADR, ADN, IMDG, IATA** Void

· **14.3 Transport hazard class(es)**

· **ADR, ADN, IMDG, IATA**

· **Class** Void

· **14.4 Packing group**

· **ADR, IMDG, IATA** Void

· **14.5 Environmental hazards:**

Not applicable.

· **14.6 Special precautions for user**

Not applicable.

· **14.7 Maritime transport in bulk according to IMO instruments**

Not applicable.

· **Transport/Additional information:**

· **IATA**

· **Remarks:**

24h emergency contact -
(Dangerous goods emergency number)

+49 172 739 6970

· **UN "Model Regulation":**

Void

SECTION 15: Regulatory information

· **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**

COUNCIL DIRECTIVE 98/24/EC of 7 April 1998 on the protection of the health and safety of workers from the risks related to chemical agents at work (fourteenth individual Directive within the meaning of Article 16(1) of Directive 89/391/EEC)

DIRECTIVE 2012/18/EU OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 4 July 2012 on the control of major-accident hazards involving dangerous substances, amending and subsequently repealing Council Directive 96/82/EC

· **GADSL - Global Automotive Declarable Substance List** Substance is not listed.

(Contd. on page 9)

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

Printing date: 18.03.2024

Version number 6 (replaces version 5)

Revision: 18.03.2024

Trade name: Citric acid DAB
Zitronensäure DAB

(Contd. of page 8)

- **Poisons Act**
- **Regulated explosives precursors** Substance is not listed.
- **Regulated poisons** Substance is not listed.
- **Reportable explosives precursors** Substance is not listed.
- **Reportable poisons** Substance is not listed.
- **Directive 2012/18/EU**
- **Named dangerous substances - ANNEX I** Substance is not listed.
- **National regulations:**
- **Waterhazard class:** .
- **Other regulations, limitations and prohibitive regulations -**
- **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.

This Safety Data Sheet is in compliance with Regulation (EC) No 1907/2006, Article 31 as amended by Regulation (EU) 2020/878.

- **Reasons for revise**

If necessary, this safety data sheet can be revised according to legal guidelines.

Our current version for your reference is available on our website
www.heimerle-meule.com

- **Department issuing SDS:**

Abteilung BASU - Bau/Arbeitssicherheit/Umwelt
Department BASU - Construction / Occupational Safety / Environment

sds@heimerle-meule.com

- **Contact:**

Herr Thomas Knuth
thomas.knuth@heimerle-meule.com
sds@heimerle-meule.com

- **Abbreviations and acronyms:**

AwSV: Ordinance on facilities for handling water-polluting substances (German regulation).

TRGS: Technical rules for hazardous substances (German regulation)

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)

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.**