

CITRIC ACID >=20%**Code : 11454****SECTION 1. Identification of the substance/mixture and of the company/undertaking****1.1. Product identifier**

- * Chemical description : Citric acid anhydrous , solution (>=20%).
- Type of product : Pure product in solution .
- Reach registration number : 01-2119457026-42

1.2. Relevant identified uses of the substance or mixture and uses advised against

- Identified use(s) : See table on the front page of the annex.
- Use(s) advised against : This product is not recommended for any industrial, professional or consumer use other than identified in table on the front page of the annex.

1.3. Details of the supplier of the safety data sheet

- * Company identification : BRENNTAG N.V. - Nijverheidslaan 38 - BE-8540 DEERLIJK
TEL: +32(0)56/77.69.44 - FAX: +32(0)56/77.57.11
E-MAIL: info@brenntag.be - Website: www.brenntag.be

BRENNTAG Nederland B.V. - Donker Duyvisweg 44 - NL-3316 BM DORDRECHT
TEL: +31(0)78/65.44.944 - FAX: +31(0)78/65.44.919
E-MAIL: info@brenntag.nl - Website: www.brenntag.nl

1.4. Emergency telephone number

- * Emergency phone number : België : Antipoison Center - Brussels
TEL: +32(0)70/245.245

The Netherlands : National Poisoning Information Center - Bilthoven
TEL: +31(0)30/274.88.88 (Only for the purpose of informing medical personnel in cases of acute intoxications)

SECTION 2. Hazards identification**2.1. Classification of the substance or mixture****Classification according to Directive 67/548/EEC or 1999/45/EC**

Irritant (Xi; R36)

Classification according to Regulation (EC) No 1272/2008

Eye irritation - Category 2 - Warning (Eye Irrit. 2; H319)

2.2. Label elements**Label in accordance with Regulation (EC) No 1272/2008**

- Dangerous ingredient(s) : Citric acid anhydrous
- Hazard pictogram(s)



- Signal word : Warning
- Hazard statements : H319 - Causes serious eye irritation.
- Precautionary statements
 - Prevention : P264 - Wash skin thoroughly after handling. P280 - Wear protective gloves, protective clothing, eye protection, face protection.
 - Response : 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.

2.3. Other hazards

CITRIC ACID >=20%

Code : 11454

SECTION 2. Hazards identification (continued)

- * Physical/chemical hazards : The substance decomposes by heating above the melting point in information of methyl maleic anhydride.
- Hazards for the health : No significant danger.
- Hazards for the environment : Product causes a strong drop of the pH-value of water and soil. This product is no substance or contains no PBT or vPvB (in accordance with Annex XIII).
- Hazards for the safety : No significant danger.

SECTION 3. Composition/information on ingredients

3.1. Substances

Name component(s)	Weight %	CAS nr	EINECS nr	Index nr	Reach nr	CLASSIFICATION
Citric acid anhydrous	: >= 20 %	77-92-9	201-069-1	----	01-2119457026-42	Xi; R36 ----- Eye Irrit. 2; H319

The full text of the R-phrases and (EU)H-statements is in section 16.

SECTION 4. First aid measures

4.1. Description of first aid measures

- General : In case of doubt or persistent symptoms, call a physician. Never give anything by mouth to an unconscious person.
- First Aid Measures
- Inhalation : Remove victim into fresh air. Allow the affected person to rest in semi-sitting position. If not breathing, give artificial respiration. Consult a doctor.
- Skin Contact : Remove contaminated clothing. Rinse skin immediately with plenty of water. (shower if necessary). Consult doctor if irritation develops.
- Eye Contact : Rinse immediately thoroughly and long (at least 15 min.) with plenty of water. Remove contact lenses. Consult eye doctor. Do not use a neutralisation agent.
- Ingestion : DO NOT INDUCE VOMITING. Rinse mouth with water. Give victim plenty of water to drink. Consult a doctor.

4.2. Most important symptoms and effects, both acute and delayed

See section 11.

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

For specialist advice doctors should contact the NVCI or the Belgian Poison center.

SECTION 5. Firefighting measures

5.1. Extinguishing media

- Extinguishing Media
- Suitable : Extinguishing powder , Alcohol resistant foam , Carbon dioxide (CO2) , Water spray

CITRIC ACID \geq 20%**Code : 11454****SECTION 5. Firefighting measures (continued)**

* - Insuitable : Heavy water stream .

5.2. Special hazards arising from the substance or mixture

Special Exposure Hazards : Fire may liberate carbon oxides (CO) and smoke.

5.3. Advice for firefighters

Special Protective Equipment for Firefighters : Use self-contained breathing apparatus and wear protective clothes when in close proximity to fire.

Special Procedures : Apply water spray or fog to cool nearby equipment. Avoid fire-fighting water to enter environment.

SECTION 6. Accidental release measures**6.1. Personal precautions, protective equipment and emergency procedures**Personal Precautions : Evacuate all personnel immediately and ventilate area.
Avoid breathing vapour and contact with skin and eyes.
Wear recommended personal protective equipment. (See section 8)**6.2. Environmental precautions**Environmental Precautions : Shut off leaks if without risks.
Dike in the spilled product as much as possible with inert material.
Prevent entry of product in public water, sewers or soil.
Notify authorities if product enters sewers or public waters.**6.3. Methods and material for containment and cleaning up**Methods for Cleaning Up : Collect the spillage in closable, suitable disposal containers.
Residue is to be washed down with plenty of water.
Neutralise rinse liquid with base.**6.4. Reference to other sections**For personal protection, see section 8.
For the removal of the waste product, see section 13.**SECTION 7. Handling and storage****7.1. Precautions for safe handling**Handling : Avoid breathing vapour and contact with skin and eyes.
Wear recommended personal protective equipment. (See section 8)
When using, do not eat, drink or smoke.
Wash hands before and after working with the product.
Emergency eye wash fountains and showers should be available in the immediate vicinity of any potential exposure.**7.2. Conditions for safe storage, including any incompatibilities**Storage : Keep only in the original, safely locked container in a cool and well ventilated place.
All dangerous products should be placed on a drip tray or should be barreled.
Keep away from : Oxidizing agents , Bases , Metalnitrates .

Packaging Material : Polyethylene , Polypropylene .

Insuitable Packaging Material : Several metals .

7.3. Specific end use(s)

For identified uses, see subsection 1.2 and/or exposure scenarios.

CITRIC ACID >=20%**Code : 11454****SECTION 8. Exposure controls/personal protection****8.1. Control parameters**

Occupational Exposure Limits	: Not established.
Biological limit values	: They will be included when available.
DNELs	: • Citric acid anhydrous : Not applicable
PNECs	: • Citric acid anhydrous : Fresh water : 0,44 mg/l • Citric acid anhydrous : Marine water : 0,044 mg/l • Citric acid anhydrous : Fresh water sediment : 3,46 mg/kg • Citric acid anhydrous : Marine water sediment : 34,6 mg/kg • Citric acid anhydrous : Soil : 33,1 mg/kg • Citric acid anhydrous : Sewage treatment plant : >1000 mg/l

8.2. Exposure controls

* Engineering Measures	: Ventilation , Local exhaust .
Personal Protection Equipment	
* - Respiratory protection	: No special respiratory protection equipment is recommended under normal conditions of anticipated use with adequate ventilation.
- Skin protection	: Suitable protective clothing .
* - Hand protection	: Suitable material for safety gloves (EN 374): The suitability of the gloves and the breakthrough time for a specific workplace should be discussed with the producers of the protective gloves. - material : Butyl rubber - thickness : 0,11 mm - breakthrough time : > 8 h
- Eye/Face protection	: Closed safety glasses or face shield.
Environmental exposure controls	: See sections 6, 7, 12 and 13.

SECTION 9. Physical and chemical properties**9.1. Information on basic physical and chemical properties**

See technical data sheet for detailed information.

Physical State (20°C)	: Liquid .
Form/Colour	: Clear , Colourless .
Odour	: Odourless .
Odour threshold	: Not applicable.
pH value	: Strong acid .
Melting/Freezing point	: No data available.
Boiling Point/Range (1013 hPa)	: No data available.
Flash point	: Not applicable.
Fire hazard	: Not applicable.
Evaporation rate	: No data available.
Vapour pressure	: No data available.
Relative vapour density (air=1)	: No data available.
Density (20°C)	: 1,070 - 1,225 kg/l
Solubility in water	: 163 g/100ml
Soluble in	: Alcohol .
Log P Octanol/Water (20°C)	: -1,7
Auto-ignition temperature	: No data available.
Minimum ignition energy	: No data available.

CITRIC ACID >=20%**Code : 11454****SECTION 9. Physical and chemical properties (continued)**

Decomposition temperature	: No data available.
Viscosity	: No data available.
Explosive properties	: No chemical groups associated with explosive properties .
Oxidizing properties	: No chemical groups associated with oxidizing properties .

SECTION 10. Stability and reactivity**10.1. Reactivity**

Reactivity : Reacts violently with oxidizing agents and lyes.

10.2. Chemical stability

Stability : Stable at normal circumstances .

10.3. Possibility of hazardous reactions

Hazardous reactions : Reacts violently with: Metalnitrates => May cause fire and explosion!

10.4. Conditions to avoid

Conditions to avoid : High temperatures .

10.5. Incompatible materials

Materials to avoid : Oxidizing agents , Bases , Metalnitrates .

10.6. Hazardous decomposition products

Hazardous Decomposition Products : Carbon oxides .

SECTION 11. Toxicological information**11.1. Information on toxicological effects**

Acute toxicity	
* - Inhalation	: May be irritating to respiratory system. Symptoms include: Cough , Sore throat .
* - Skin contact	: May be irritating for the skin. Symptoms include: Redness , Pain . • Citric acid anhydrous : LD50 (Rat, dermal) : 2000 mg/kg
- Ingestion	: Symptoms include: Sore throat , Abdominal pain , Vomiting . • Citric acid anhydrous : LD50 (Rat, oral) : 3000 mg/kg • Citric acid anhydrous : LD50 (Mouse, oral) : 5400 mg/kg
Skin corrosion/irritation	: Slightly irritating .
* Serious eye damage/irritation	: Causes serious eye irritation.
Aspiration hazard	: Not considered hazardous.
Respiratory or skin sensitisation	: Not sensitive .
Carcinogenicity	: Not listed as carcinogenic .
Mutagenicity	: Not listed as mutagenic .
Reproductive toxicity	: Not listed for reproductive toxicity .
Specific target organ toxicity - single exposure	: To human : Listed not for organ toxicity . For animals : No effects known.
Specific target organ toxicity - repeated exposure	: To human : Listed not for organ toxicity . For animals : No effects known.

CITRIC ACID >=20%**Code : 11454****SECTION 12. Ecological information****12.1. Toxicity**

Ecotoxicity : • Citric acid anhydrous : LC50 (Fish, 96 h) : >400 mg/l (Leusiscus idus)

12.2. Persistence and degradability

Persistence and degradability : • Citric acid anhydrous : Persistence and degradability : Readily biodegradable .

12.3. Bioaccumulative potential

Bioaccumulation : • Citric acid anhydrous : Bioaccumulation : Bioaccumulation not expected .

12.4. Mobility in soil

Mobility : • Citric acid anhydrous : Mobility : Highly soluble in water .

12.5. Results of PBT and vPvB assessment

Evaluation : • Citric acid anhydrous : PBT/vPvB : No

12.6. Other adverse effects

WGK class (DE) : 1 (Weak water pollutant).

Water damaging (NL) : 11

Decontamination exertion (NL) : B

Photochemical ozone creation potential : No data available.

Ozone depletion potential : No data available.

Endocrine disrupting potential : No data available.

Global warming potential : No data available.

SECTION 13. Disposal considerations**13.1. Waste treatment methods**

Waste from residues/Unused products : The product has to be destroyed according to national or local legislation, by a company specialised in handling hazardous waste products.

European list of waste products : XXXXXX - European waste product code. This code is assigned on the basis of the most current applications and can not be representative for pollutions which are arisen at the effective use of the product. The producer of the waste has to evaluate its process himself and has to grant the appropriate waste coding. See Decision 2001/118/EC.

Removal contaminated packaging : Packing is to be used exclusively for the packing of this product.
After use, empty and close the packing very carefully.
In case of returned packing, the empty packing can be offered back to the supplier.**SECTION 14. Transport information****14.1. UN number**

UN Number : -

14.2. UN proper shipping name

ADR Name : -

ADN Name : -

IMDG Name : -

14.3. Transport hazard classe(s)

Class : -

14.4. Packing group

CITRIC ACID >=20%

Code : 11454

SECTION 14. Transport information (continued)

Packaging Group : -

14.5. Environmental hazards

Environmentally hazard : -

Marine pollutant : -

14.6. Special precautions for user

Danger number : -

Hazard Label(s) : -

EmS-N° : -

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Type ship : -

Pollution category : -

SECTION 15. Regulatory information

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

- * Inventories : European inventory (EINECS): Listed in inventory.
- * Relevant EU Rule(s) : Decision 2001/118/EC of the Commission of 16 January 2001 amending Decision 2000/532/EC as regards the list of wastes
Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006
Regulation (EU) No 453/2010 of 20 May 2010 amending Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (Reach)

15.2. Chemical Safety Assessment

- * A chemical safety assessment has been carried out for the material.

SECTION 16. Other information

This safety data sheet has been drawn up in accordance with Regulation (EU) No 453/2010.
This safety data sheet is exclusively made for industrial/professional use.

* Has changed compared to previous revision.

- * Changes : Section 1 , Section 2 , Section 5 , Section 8 , Section 11 , Section 15 .
- Sources of used key data : The information contained herein is based on the present state of our knowledge (Producers of starting materials , Chemical cards , ...).
See also on the webaddress:
<http://apps.echa.europa.eu/registered/registered-sub.aspx#search>
- R-phrases : R36 - Irritating to eyes.
- (EU)H-statements : H319 - Causes serious eye irritation.
- List of abbreviations and acronyms : ADN (Accord européen relatif au transport international des marchandises Dangereuses par voie de Navigation interieur) : European agreement concerning the international carriage of dangerous goods by inland waterways
ADR (Accord européen relatif au transport international des marchandises Dangereuses par Route) : European agreement concerning the international carriage of dangerous goods by road
CO : Carbon monoxide
DNEL (Derived No Effect Level) : an estimated safe exposure level
EmS (Emergency Schedule) : the first code refers to the relevant fire schedule and

CITRIC ACID \geq 20%**Code : 11454****SECTION 16. Other information (continued)**

the second code refers to the relevant spillage schedule
IMDG (International Maritime Dangerous Goods code)
NVC I : National Poisoning Information Center
PBT : persistent, bioaccumulative and toxic
PNEC (Predicted No Effect Concentration) : concentration below which exposure to a substance is not expected to cause adverse effects
REACH : Registration, Evaluation, Authorisation and restriction of Chemicals
vPvB : very persistent and very bioaccumulative
WGK (Wassergefährdungsklasse) : a German classification of substances that indicate the environmental hazard for surface water

This information is to our knowledge correct and complete on the date of issue of this safety data sheet. The information only concerns the product and does not give any guarantee for the quality and the completeness of the properties of the product, or in case of mixing or using in any other process. It remains the responsibility of the user to assure himself that the information is suitable and complete concerning the special use he makes of the product.
BRENNTAG denies all responsibility for loss or damage resulting from the use of these data.

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