

SECTION1. Identification of the substance/mixture and of the company/undertaking**1.1. Product identifier**

Product code : ACIDO CITRICO

Trades code : 100130

Chemical Name: Citric acid CAS: 77-92-9 - EC No: 201-069-1

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

Photographic Process

Sectors of use:

Professional use[SU22]

Product category:

Photochemicals

Process categories:

Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact)[PROC5]

Uses advised against

Do not use for purposes other than those listed

1.3. Details of the supplier of the safety data sheet

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1.4. Emergency telephone number

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SECTION2. Hazards identification**2.1. Classification of the substance or mixture**

CAS 77-92-9 EINECS 201-069-1

2.1.1 Classification according to Regulation (EC) No 1272/2008:

Pictograms:

GHS07

Hazard Class and Category Code(s):

Eye Irrit. 2

Hazard statement Code(s):

H319 - Causes serious eye irritation.

If brought into contact with eyes, the product, causes significant irritations which may last for more than 24 hours.

2.2. Label elements

Labelling according to Regulation (EC) No 1272/2008:

Pictogram, Signal Word Code(s):

GHS07 - Warning

Hazard statement Code(s):

H319 - Causes serious eye irritation.

Supplemental Hazard statement Code(s):

not applicable

Precautionary statements:

Prevention



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

Response

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

2.3. Other hazards

The substance / mixture NOT contains substances PBT/vPvB according to Regulation (EC) No 1907/2006, Annex XIII
No information on other hazards

SECTION3. Composition/information on ingredients**3.1 Substances**

Refer to paragraph 16 for full text of hazard statements

Substance	Concentration[w/w]	Classification	Index	CAS	EINECS	REACH
Citric acid	100%	Eye Irrit. 2, H319		77-92-9	201-069-1	

3.2 Mixtures

Irrelevant

SECTION4. First aid measures**4.1. Description of first aid measures**

Inhalation:

Air the area. Move immediately the contaminated patient from the area and keep him at rest in a well ventilated area.
If you feel unwell seek medical advice.

Direct contact with skin (of the pure product).:

Take contaminated clothing Immediately off.

Wash immediately with plenty of running water and possibly with soap, the areas of the body that have, or are only suspected to have, come in contact with the product.

Direct contact with eyes (of the pure product).:

Wash immediately and thoroughly with running water, keeping eyelids open for at least 10 minutes, then protect your eyes with a dry sterile gauze. Seek medical advice immediately

Do not use eye drops or ointments of any kind before the examination or advice from an oculist.

Ingestion:

Not hazardous. It's possible to give activated charcoal in water or liquid paraffin medicine

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

No data available.

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

If eye irritation persists: Get medical advice attention.

SECTION5. Firefighting measures**5.1. Extinguishing media**

Advised extinguishing agents:

Water spray, CO2, foam, dry chemical, depending on the materials involved in the fire.

Extinguishing means to avoid:

Water jets. Use water jets only to cool the surfaces of the containers exposed to fire.

5.2. Special hazards arising from the substance or mixture

No data available.

5.3. Advice for firefighters

Use protection for the breathing apparatus

Safety helmet and full protective suit.

The spray water can be used to protect the people involved in the extinction

You may also use selfrespirator, especially when working in confined and poorly ventilated area and if you use halogenated extinguishers (Halon 1211 fluobrene, Solkan 123, NAF, etc...)

Keep containers cool with water spray

SECTION6. Accidental release measures**6.1. Personal precautions, protective equipment and emergency procedures**

6.1.1 For non-emergency personnel:

Leave the area surrounding the spill or release. Do not smoke

Wear mask, gloves and protective clothing.

6.1.2 For emergency responders:

Eliminate all unguarded flames and possible sources of ignition. No smoking.

Provision of sufficient ventilation.

Evacuate the danger area and, in case, consult an expert.

6.2. Environmental precautions

Contain spill

Inform the competent authorities.

Discharge the remains in compliance with the regulations

6.3. Methods and material for containment and cleaning up

6.3.1 For containment:

Rapidly recover the product, wear a mask and protective clothing

Recover the product for reuse, if possible, or the removal.

6.3.2 For cleaning up:

After wiping up, wash with water the area and materials involved

6.3.3 Other information:

None in particular.

6.4. Reference to other sections

Refer to paragraphs 8 and 13 for more information

SECTION7. Handling and storage**7.1. Precautions for safe handling**

Wear protective gloves protective clothing eye protection face protection.

At work do not eat or drink.

See also paragraph 8 below.

7.2. Conditions for safe storage, including any incompatibilities

Keep in original container closed tightly. Do not store in open or unlabeled containers.

Keep containers upright and safe by avoiding the possibility of falls or collisions.

Store in a cool place, away from sources of heat and `direct exposure of sunlight.

7.3. Specific end use(s)

Professional use:

Photographic and cinematographic treatment

SECTION8. Exposure controls/personal protection**8.1. Control parameters**

Related to contained substances:

Citric acid:

No exposure guidelines have been established.

ACGIH, NIOSH and OSHA have not developed exposure limits for this product.

The exposure limits given below are for particulates not otherwise classified:

ACGIH: 10 mg/m³ TWA (Total Inhalable fraction); 3 mg/m³ TWA (Respirable fraction)

OSHA: 15 mg/m³ TWA (Total dust); 5 mg/m³ TWA (Respirable Fraction)

8.2. Exposure controls



Appropriate engineering controls:

Professional use:

Not established

Individual protection measures:

(a) Eye / face protection

When handling the pure product use safety glasses (spectacles cage) (EN 166).

(b) Skin protection

(i) Hand protection

When handling the pure product use chemical resistant protective gloves (EN 374-1/EN374-2/EN374-3)

(ii) Other

When handling the pure product wear full protective skin clothing.

(c) Respiratory protection

Not needed for normal use.

(d) Thermal hazards

No hazard to report

Environmental exposure controls:

Use according to good working practices to avoid pollution into the environment.

SECTION9. Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical and chemical properties	Value	Determination method
Appearance	Powder	
Odour	Not determined	
Odour threshold	undefined	
pH	1.80 Sol 50 gr/l	
Melting point/freezing point	Irrilevant	
Initial boiling point and boiling range	Not determined	
Flash point	non flammable	
Evaporation rate	Not determined	
Flammability (solid, gas)	Irrilevant	
Upper/lower flammability or explosive limits	undefined	
Vapour pressure	Not determined	
Vapour density	Not determined	
Relative density	Not determined	
Solubility	in water	
Water solubility	Complete	
Partition coefficient: n-octanol/water	Not determined	
Auto-ignition temperature	Not determined	
Decomposition temperature	Not determined	
Viscosity	not determined	
Explosive properties	not explosive	
Oxidising properties	non-oxidizing	

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Physical and chemical properties	Value	Determination method
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9.2. Other information

No data available.

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

Related to contained substances:

Citric acid:

No data available

10.2. Chemical stability

Stable under recommended storage conditions.

10.3. Possibility of hazardous reactions

No data available

10.4. Conditions to avoid

Related to contained substances:

Citric acid:

No data available

10.5. Incompatible materials

Bases, oxidizing agents reducing agents, Nitrates

10.6. Hazardous decomposition products

No data available

SECTION 11. Toxicological information**11.1. Information on toxicological effects**ATE oral = ∞ ATE dermal = ∞ ATE inhal = ∞

(a) acute toxicity: based on available data, the classification criteria are not met.

(b) skin corrosion/irritation based on available data, the classification criteria are not met.

(c) serious eye damage/irritation: If brought into contact with eyes, the product, causes significant irritations which may last for more than 24 hours.

(d) respiratory or skin sensitization: based on available data, the classification criteria are not met.

(e) germ cell mutagenicity: based on available data, the classification criteria are not met.

(f) carcinogenicity: based on available data, the classification criteria are not met.

(g) reproductive toxicity: based on available data, the classification criteria are not met.

(h) specific target organ toxicity (STOT) single exposure: based on available data, the classification criteria are not met.

(i) specific target organ toxicity (STOT) repeated exposure based on available data, the classification criteria are not met.

(j) aspiration hazard: based on available data, the classification criteria are not met.

ACIDO CITRICO:

LD50 (rat) Oral (mg/kg body weight) = 5400

LD50 Dermal (rat or rabbit) (mg/kg body weight) = 2000

Related to contained substances:

Citric acid:

Routes of Entry: Inhalation. Ingestion.

Toxicity to Animals: Acute oral toxicity (LD50): 3000 mg/kg [Rat].

Chronic Effects on Humans: May cause damage to the following organs: teeth.

Other Toxic Effects on Humans:

Hazardous in case of inhalation (lung irritant).

Slightly hazardous in case of skin contact (irritant, sensitizer), of ingestion.

Special Remarks on Toxicity to Animals: LD₅₀[Rabbit] - Route: oral; Dose: 7000mg/kg

Special Remarks on Chronic Effects on Humans: Not available.

Special Remarks on other Toxic Effects on Humans:

Acute Potential Health Effects:

Skin: Causes mild to moderate skin irritation. May cause skin sensitization, an allergic reaction, which becomes evident upon re-exposure to this material.

Eyes: Causes moderate to severe eye irritation and possible injury.

Ingestion: May cause gastrointestinal (digestive) tract irritation with nausea, vomiting, diarrhea. Excessive intake may cause erosion of teeth and hypocalcemia (calcium deficiency in blood). May affect behavior/central nervous system (tremor, convulsions, muscle contraction or spasticity).

Inhalation: Causes moderate respiratory tract and mucous membrane irritation.

Chronic Potential Health Effects:

Frequent intake of citrated beverages may cause erosion of dental enamel and irritation of mucous membranes.

LD₅₀ (rat) Oral (mg/kg body weight) = 5400

LD₅₀ Dermal (rat or rabbit) (mg/kg body weight) = 2000

SECTION12. Ecological information

12.1. Toxicity

Related to contained substances:

Citric acid:

Toxicity to fish: LC₅₀/96 H goldfish: 440-760 mg/l

Toxicity to bacteria: > 10000 mg/l

COD: 750 mg/O₂/g

Use according to good working practices to avoid pollution into the environment.

12.2. Persistence and degradability

Readily biodegradable > 98% (DIN 38412)

12.3. Bioaccumulative potential

No data available.

12.4. Mobility in soil

No data available.

12.5. Results of PBT and vPvB assessment

No PBT/vPvB ingredient is present

12.6. Other adverse effects

No adverse effects

SECTION13. Disposal considerations

13.1. Waste treatment methods

Do not reuse empty containers. Dispose of them in accordance with the regulations in force. Any remaining product should be disposed of according to applicable regulations by addressing to authorized companies.

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Recover if possible. Operate according to local or national regulations

SECTION 14. Transport information**14.1. UN number**

Not included in the scope of application regulations concerning the transport of dangerous goods: by road (ADR); by rail (RID); by air (ICAO / IATA); by sea (IMDG).

14.2. UN proper shipping name

None

14.3. Transport hazard class(es)

None

14.4. Packing group

None

14.5. Environmental hazards

None

14.6. Special precautions for user

No data available.

14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

It is not intended to carry bulk

SECTION 15. Regulatory information**15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture**

Legislative Decree. 02/03/1997 n. 52 (Classification, packaging and labeling of dangerous substances). Legislative Decree 14/03/2003 n. 65 (Classification, packaging and labeling of dangerous substances). Legislative Decree. 02/02/2002 n. 25 (Risks related to chemical agents at work). D.M. 26/02/2004 Work (Exposure Limits Professional); D.M. 03/04/2007 (Implementation of Directive n. 2006/8 / EC). Regulation (EC) No. 1907/2006 (REACH), Regulation (EC) No. 1272/2008 (CLP), Regulation (EC) 790 / 2009.D.Lgs. September 21, 2005 n. 238 (Seveso Ter). REGULATION (EU) No 1357/2014 - waste:
HP4 - Irritant — skin irritation and eye damage

15.2. Chemical safety assessment

The supplier has made an assessment of chemical safety

SECTION 16. Other information**16.1. Other information**

Points modified compared to previous release: 2.3. Other hazards, 10.4. Conditions to avoid, 12.5. Results of PBT and vPvB assessment

Description of the hazard statements exposed to point 3

H319 = Causes serious eye irritation.

Main normative references:

Directive 1999/45/EC

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Directive 2001/60/EC

Regulation 1272/2008/EC

Regulation 2010/453/EC

Regolamento 529/2012 and subsequent updates

This data sheet cancels and replaces any previous edition.
