

ANHYDROUS CITRIC ACID

according to 29 CFR 1910.1200

SECCIÓN 1. PRODUCT IDENTIFICATION

1.1 GHS Product Identifier

ANHYDROUS CITRIC ACID

This SDS applies to the following product presentations: granular, fine and extra fine, solution grade.

1.2. Others mean of identification

- Ácid 2-hidroxi 1,2,3-propanotricarboxílico.
- Beta hydroxytricarboxylic acid. Número
- CAS: 77-92-9.
- EC Number: 201-069-1

1.3 Recommended use of the chemical and restrictions.

Industrial use: additive and preservative in the food industry, raw material in the production of citrates (calcium citrate, magnesium citrate, potassium citrate, sodium citrate, zinc citrate), acidifier and pH regulator. NOT suitable for domestic use or other applications. It is NOT a food.

1.4 Supplier information

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SECTION.2 PRODUCT IDENTIFICATION

2.1 Classification of the substance or mixture

Serious eye damage/eye irritation (Category 2A)

2.2 GHS label elements, including precautionary statements



WARNING

Causes serious eye irritation

Precautionary statements

Wear eye and face protection equipment.
Store only in original container.
Keep container tightly closed.
Avoid dispersion and accumulation of dust.
Keep away from heat, hot surfaces, sparks, open flames and other sources of ignition. No Smoking.
Take precautionary measures against electrostatic discharge.
Grounding and equipotential bonding of the container and the receiving equipment.
Use explosion-proof equipment, electrical material, ventilation and lighting.
Do not use tools that produce sparks.
Do not eat, drink or smoke while handling the product.
Wash hands and face thoroughly after handling.
Store in a cool, well-ventilated, explosion-proof place.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses when present and can be done easily. Continue with the wash.
See an ophthalmologist immediately.
In case of contact or exposure, call a doctor if the person feels unwell.

2.3 Other hazards that do not lead to a classification

May form explosive dust-air mixture if dispersed.

SECCIÓN 3. COMPOSITION/INFORMATION ON INGREDIENTS

Citric acid (77-92-9)

Additional Information
Does not apply.

3.2 Mixtures:

N/A

SECTION 4. FIRST AID

4.1 Description of necessary first aid

INHALATION

Transport person to fresh air and keep in a position that facilitates breathing.

INGESTION

DO NOT induce vomiting. Rinse mouth with water and spit out. Give to drink one or two glasses of water in small proportions. Caution: never give anything by mouth to an unconscious person.

SKIN CONTACT

Remove all contaminated clothing. Rinse skin with plenty of water or shower for at least 15 minutes. DO NOT apply creams or ointments. Wash contaminated clothing before reuse.

EYE CONTACT

Immediately flush with a gentle but abundant stream of water for at least 15 uninterrupted minutes, separating the eyelids with the fingers. If applicable, remove contact lenses, if it can be done easily. continue washing.

4.2 Most important symptoms/effects, acute and delayed

The main symptoms are redness of the eyes, tearing, blurred vision and itching sensation in the affected part of the body. The only known acute effect of the product is reversible eye irritation. There are no known possible delayed effects of the product.

4.3 Indication of the need to receive immediate medical attention and, where appropriate, special treatment

In case of contact with eyes, see an ophthalmologist immediately. In case of contact or exposure, seek medical attention if the person feels unwell. Bring the tag or a photo of it. Follow supportive and symptomatic treatment

according to the person's condition.

SECTION 5. FIRE-FIGHTING MEASURES

5.1 Appropriate Extinguishing Media

Foam, dry chemical or halon (considering also the surrounding fire).

If water is used, it should be applied in overflowing amounts in spray or mist form.

5.2 Specific hazards of the chemical

May form explosive dust-air mixture if dispersed in confined spaces. During combustion, toxic fumes of carbon monoxide and carbon dioxide may be produced.

In a solid state, dust particles can increase the probability of explosion in confined spaces.

5.3 Special measures to be taken by fire fighting teams

Extinguish fire from a safe distance. If the fire is outdoors or in a drafty area, always face the wind at your back, never head on. If the situation warrants, wear an encapsulating suit with self-contained breathing apparatus (SCBA) to prevent contact with high concentrations of airborne vapors or fumes. Move unaffected containers from the fire area, if it can be done safely. Avoid dispersion of the product in the air. Prevent the waste generated in the fire from reaching the drains.

SECTION 6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Use recommended PPE (see Section 8). Isolate the contaminated area. Avoid dispersion of the product. Keep away from heat, ignition sources, sparks and open flames. No Smoking. Do not use tools that produce sparks.

6.2 Environmental precautions

Keep away from drains, surface and ground water. Dispose of used material and product residues in such a way that they do not represent a danger to people or the environment (see Section 13). Spills of large quantities in water or soil must be reported to the competent authorities.

6.3 Methods and materials for containment and cleaning of spills

DO NOT spread the product. Small spills can be controlled by absorbing the product with absorbent cloths moistened with water. Large spills can be controlled by vacuuming or by wet methods. Do not sweep or control spill by blowing. Do not use combustible materials such as sawdust. Collect immediately in stainless steel containers with tight lids. Ultimately, clean the affected area with water.

6.4 Reference to other sections:

See sections 8 and 13.

SECCIÓN 7. MANIPULATION AND STORAGE

7.1 Precautions to be taken to ensure safe handling

Use recommended PPE (see Section 8). Store only in original container. Keep container tightly closed, when not in use and when transporting. Avoid dispersion and accumulation of dust. DO NOT use in confined spaces. Open the container slowly, avoiding dispersing the product. Preserve the bags containing the product. Do not sift, grind, grind or any other operation that decreases the particle size and generates dust dispersion. Keep away from heat, hot surfaces, sparks, open flames and other sources of ignition. No Smoking. Take precautionary measures against electrostatic discharge. Grounding and equipotential bonding of the container and the receiving equipment. Ideally transfer in closed explosion-proof systems. When pouring, avoid free pouring from the container. Use explosion-proof equipment, electrical material, ventilation and lighting. Do not use tools that produce sparks. Keep the workplace clean and orderly. DO NOT sweep or blow, vacuum or use wet methods to clean. Store the product in the original container, do not transfer to another container. If it is necessary to transfer, do so in a stainless steel container and remember to label. DO NOT mix with incompatible substances (see Section 10). DO NOT use for other purposes (NOT suitable for domestic use). Do not eat. Keep away from food and drinks. DO NOT eat, drink or smoke when handling this product. Change contaminated clothing before leaving work and wash before reuse. Wash hands and face thoroughly after handling and before eating, drinking or smoking. Dispose of contents and packaging in accordance with Section 13.

7.2 Conditions for safe storage, including any incompatibilities

Store in a cool, well-ventilated area, ideally with localized exhaust. Keep away from heat, moisture, sources of ignition and incompatible substances (see Section 10). Recommended storage temperature: greater than or equal to 5°C. Maximum storage time: 2 years. Store only in the original container, tightly closed. Store in stainless steel containers. Once the containers are opened, close hermetically and in an upright position to avoid spillage. Protect the container and label from physical damage.

7.3 Specific end use(s):

Except for the instructions already specified it is not necessary to provide any special recommendation regarding the uses of this product.

SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Control parameters

The ACGIH® TLV® and BEI® values are protected by copyright.

Danger group (control banding): A.

8.2 appropriate engineering controls

A general ventilation system is recommended to prevent the accumulation of dust in the air and/or localized extraction with an anti-explosion system. In general, a localized exhaust system is preferred because it can control emissions at their source, preventing their dispersal into the work environment. Have facilities and equipment with anti-explosion systems. Have electrostatic discharge control systems. Have detection systems and fire extinguishing equipment. Have eyewash fountains close to the places where the product is used.

8.3 Individual protection measures, such as personal protective equipment (PPE)

Eye protection:

Wear a face shield or glasses with a full frame (monoglasses).

Hand protection:

Wear nitrile rubber gloves (minimum thickness 0.8 mm).

Body protection:

Wear natural fiber or antistatic clothing, without outer pockets. Wear safety shoes for chemical agents, with antistatic protection. In the event of spills, it may be necessary to wear a protective suit against chemical agents.

Respiratory protection:

Not required under normal use conditions.

In the event of a spill, use a full face mask with a particle filter with a minimum efficiency of 95%.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES AND SAFETY CHARACTERISTICS

Physical state: Solid

White color

Smell: odorless

Melting point / freezing point: 153°C

Boiling point or initial boiling point and boiling range: not available

Flammability: Combustible Dust

Upper and lower explosion/flammability limits: not applicable

Flash point: not applicable

Autoignition temperature: not applicable

Decomposition temperature: 175°C

pH: 1.5-1.6 at 20°C (10% w/w in water)

Kinematic viscosity: not applicable

Solubility: 750 g/l (20°C)

Partition coefficient n-octanol/water: -1.57

Vapor pressure: not applicable

Density and/or relative density: 1.66 g/cm³ (18°C, aqueous solution)

Relative vapor density: not applicable

Particle characteristics: not applicable

Particle size:

Presentation	Mesh (µm)	% Retention
Granular	1.400 (ASTM-E11, N° 14)	5,0 (máximo)
Fine	600 (ASTM-E11, N° 30)	1,0 (máximo)
Superfine	250 (ASTM-E11, N° 60)	35 (máximo)
Solution grade	Blend of different particle sizes (particle size is not tested)	n/a

SECTION 10. STABILITY AND REACTIVITY

10.1 Reactivity

May form explosive dust-air mixture if dispersed.

Information for the product in solution: can attack metals.

10.2 Chemical stability

Stable under normal conditions of temperature and pressure. Stable in contact with light and humidity. May form explosive dust-air mixture if dispersed. Thermally decomposes at 175°C.

10.3 Possibility of hazardous reactions

It reacts exothermically (releasing large amounts of heat), in contact with oxidizing agents, bases, reducing agents and metals.

10.4 Conditions to Avoid

Dispersion and accumulation of the product in the air. Lockdown. Heat, hot surfaces, open flames, sparks, electrostatic discharge, and other sources of ignition. Very dry atmospheres.

10.5 incompatible materials

Oxidizing agents, bases, reducing agents, metals.

10.6 Hazardous decomposition products

Methyl maleic anhydride.

SECTION 11. TOXICOLOGICAL INFORMACION

The classification was made based on the result of the acute inhalation toxicity test and the information available in reliable databases for the product. The only known acute effect of the product is reversible eye irritation. There are no known chronic effects of the product. Symptoms associated with product exposure are described in Section 4.

Likely routes of exposure

Ingestion, skin/eye exposure, inhalation.

ACUTE TOXICITY

LD50 (oral, rats) = 11,700 mg/kg (equivalent to OECD 401)

LD50 (dermal, rats) > 2,000 mg/kg (equivalent to OECD 402)

LC50 (inhalation, rats) > 5 mg/l, 4 hours (OECD 433)

SKIN CORROSION/IRRITATION

Mean value equal to 0 for erythema/eschar and for edema in the six animals tested (rabbit), at 24, 48 and 72 hours after patch removal (OECD 404).

SERIOUS EYE DAMAGE/EYE IRRITATION

Mean value equal to 0 for opacity of the cornea and iritis and greater than 2 for redness and edema of the conjunctiva, in the three animals tested (rabbit), at 24, 48 and 72 hours after removing the patch. Effects reversible after 14 days of trial (OECD 404).

RESPIRATORY OR SKIN SENSITIZATION

Not a skin sensitizer, in a test on guinea pigs (OECD 406).

GERM CELL MUTAGENICITY

Not available.

CARCINOGENICITY

Product not included in the IARC classification list.

REPRODUCTIVE TOXICITY

Not available.

SPECIFIC TARGET ORGAN SYSTEMIC TOXICITY - SINGLE EXPOSURE

Not irritating to the respiratory tract and not narcotic, according to the results of the acute inhalation toxicity test in rats (OECD 433).

SPECIFIC TARGET ORGAN SYSTEMIC TOXICITY - REPEATED EXPOSURE

Not available.

ASPIRATION HAZARD

Based on the product properties, the product is not hazardous by aspiration.

OTHER INFORMATION

Not available.

SECCIÓN 12. ECOTOXICOLOGICAL INFORMATION

The classification was made from the information available in reliable databases for the product. The product is not expected to be acutely toxic to the aquatic environment, to be persistent, or to bioaccumulate in the environment. No other information available.

12.1 Toxicity

LC50 (Leuciscus idus melanotus, 48 h) = 440 mg/l (OECD 203)

12.2 Persistence and degradability

Readily biodegradable: 97%, 28 days (OECD 301 B)

12.3 Bioaccumulative potential

Log Kow < 0 (see section 9)

12.4 Mobility in soil

Not available.

12.5 Other Adverse Effects

Not available.

SECCIÓN 13. INFORMATION REGARDING THE DISPOSAL OF THE PRODUCTS

13.1 Disposal methods

Dispose of contents and container in accordance with local regulations. Empty containers retain product residue and can be dangerous. Handle the container and its contents with due care (see Section 7). Use, mixtures or contamination may change the options for the disposal of this product. Recycle plastic and paper bags, if possible. Do not use empty bags to contain food or for domestic purposes. Large quantities of product, plastic bags and paper bags that cannot be recycled must be delivered to an authorized hazardous waste manager. Final disposal method for the product: landfill (prior neutralization of the product). Final disposal method for bags: incineration.

SECCIÓN 14. INFORMATION REGARDING TRANSPORTATION

14.1 Número ONU

Not applicable.

14.2 UN proper shipping name

Not applicable.

14.3 Transport Class(es)

Not applicable.

14.4 Packing group/package if applicable

Not applicable.

14.5 Environmental risks

Does not apply.

14.6 Special precautions for user

Preserve the bags during loading, transport and unloading, in order to avoid breaking the bags and dispersing the product (consider the size and weight of the bags). Carry out loading and unloading operations in well-ventilated areas. Wear eye protection.

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

Does not apply.

14.8 With regard to IMDG 39-18:

Does not apply.

SECCIÓN 15. REGULATORY INFORMATION

15.1 Specific provisions on safety, health and environment for the product in question

international provisions

Product not subject to the Montreal Protocol, Stockholm Convention, Rotterdam Convention, Minamata Convention.

Provisions applicable to Colombia

- Decree 1496/2018. Ministry of Labor.
- Resolution 773/2021. Ministry of Labor.
- Decree 4741/2005. Ministry of Environment, Housing and Territorial Development.

15.2 US federal regulations

This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200. All components are on the U.S. EPA TSCA Inventory List.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)

Not listed.

SARA 304 Emergency release notification

Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)

Not listed.

Toxic Substances Control Act (TSCA)

Superfund Amendments and Reauthorization Act of 1986

(SARA) SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous chemical YES

Classified hazard categories

Combustible dust

Categories

Serious eye damage or eye irritation

SARA 313 (TRI reporting)

Not regulated.

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Not regulated.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated

Safe Drinking Water Act (SDWA)

Contains component(s) regulated under the Safe Drinking Water Act.

Food and Drug

Total food additive

Administration (FDA)

Direct food additive

GRAS food additive

US state regulations

US. Massachusetts RTK - Substance List

Not regulated.

US. New Jersey Worker and Community Right-to-Know Act

Not listed.

US. Pennsylvania Worker and Community Right-to-Know Law

Not listed.

US. Rhode Island RTK



International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
Taiwan	Taiwan Chemical Substance Inventory (TCSI)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory – Listed as Active	Yes

*A "Yes" indicates this product complies with the inventory requirements administered by the governing country(s).

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

SECCIÓN 16. OTHER INFORMATION

This Safety Data Sheet was prepared in accordance with the 6th revised edition of the GHS (2015) and Regulation No. 773/2021 of the Ministry of Labor of Colombia, (applies to regulations for Colombia). Additionally, it is generated with the 2012 communication guidelines. 29 CFR 1910.1200

Abbreviations used

ACGIH®: American Conference of Governmental Industrial Hygienists.

BEI®: Biological Exposure Indices.

CAS: Chemical Abstract Service.

CL: Lethal concentration.

LD: lethal dose.

EC: European Commission.

PPE: Personal Protection Equipment.

SDS: Safety Data Sheet.

IARC: International Agency for Research on Cancer.

OECD: Organization for Economic Cooperation and Development.

GHS: Globally Harmonized System of classification and labeling of chemical products.

TLV®: Threshold Limit Values.

Hazard Statement Codes

[H319] Causes serious eye irritation

NFPA 704 Classification



Inflamability: 0

Health: 1

Reactivity: 0

Special Risk: None



Change control

Versión	Date	Modifications
01	18/10/2019	First version.
02	01/06/2021	All sections.
03	02/04/2024	All sections. Information associated with KST is included
04	28/06/2024	Solution grade particle size is attached and version is updated
05	29/01/2025	Add address and telephone number United States

next review: 02/04/2028

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