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Safety Data Sheet

Complies with Annex II of REACH - Regulation (EU) 2020/878

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

1.1. Product identifier

Code: ACICITC-ACICITJ
Name: CITRIC ACID MONOHYDRATE
Chemical name: 2-hydroxypropane-1,2,3-tricarboxylic acid
INDEX nr:
EC Number: 201-069-1
CAS Number: 5949-29-1
Registration number: 01-2119457026-42-0022

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

Description/Usage

1. Intermediary
2. Wording
3. Products for personal care
4. Laundry and cleaning agents
5. Paper industry
6. Construction products
7. Polymers and plastics
8. Oil industry
9. Paint and coatings
10. Photography products
11. Textile industry
12. Laboratory reagents
13. Water treatment
14. Treatment of metals surfaces
15. Agricultural applications
16. Medical tools

Uses advised against: Uses other than those indicated.

1.3. Details of the supplier of the safety data sheet

Supplier: **B&C Prodotti Chimici SRL**
Address: Via Pellico 37
Place and Country: 35020 Albignasego (Padova) ITALIA
tel. +39 049 8626491
fax +39 049 8629714

Downstream user / distributor: **W&H Sterilization Srl**
Address: Via Bolgara 2
Place and Country: 24060 Brusaporto (BG) ITALIA
tel. +39 035 66 63 000
fax +39 035 5096 988

email from the authorized person in charge of Safety Data Sheet: office.sterilization@wh.com

1.4. Emergency telephone number +39 38 224 444

For urgent inquiries please contact us

<https://www.eapcct.org/localpc.php>

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SECTION 2. Hazards identification

2.1. Classification of the substance or mixture

The product is classified as dangerous pursuant to the provisions of Regulation (EC) 1272/2008 (CLP) (and subsequent amendments and adjustments). The product therefore requires a safety data sheet that complies with the provisions of Regulation (EU) 2020/878. Any additional information regarding risks to health and/or the environment is given in sections 11 and 12 of this sheet.

Hazard classification and indications:

Eye irritation, category 2
Specific target organ toxicity - single exposure, category 3

H319 Causes serious eye irritation.
H335 May cause respiratory irritation.

2.2. Label elements

Hazard labelling pursuant to Regulation (EC) 1272/2008 (CLP) and subsequent amendments and adjustments.

Hazard pictograms:



Warnings:

Warning

Indications of danger:

H319 Causes serious eye irritation.
H335 May cause respiratory irritation.

Precautionary statements:

P261 Avoid breathing dust.
P280 Wear eye protection/ face protection.
P312 Call a POISON CENTER / doctor if you feel unwell.
P337+P313 P305+P351 If eye irritation persists: Get medical advice/ attention.
+ P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Contains: CITRIC ACID
INDEX 607-750-00-3

2.3. Other hazards

The substance has no persistence, bioaccumulation and toxicity (PBT) properties and is not very persistent and very bioaccumulative (vPvB).

The substance has no endocrine disrupting properties.

SECTION 3. Composition/information on ingredients

3.1. Substances

Contains:

Identification	Conc. %	Classification 1272/2008 (CLP)
CITRIC ACID		
CAS 77-92-9	100	Eye Irrit. 2 H319, STOT SE 3 H335
CE 201-069-1		
INDEX 607-750-00-3		
Reg. nr. REACH 01-2119457026-42-0022		

The complete text of the danger indications (H) is given in section 16 of the sheet.

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SECTION 4. First aid measures

4.1. Description of first aid measures

EYES: after contact with the eyes - due to possible lesions of the cornea - the injured person must be examined by a specialist doctor after carrying out first aid measures (rinsing with water or physiological saline solution, possibly treating pain).

SKIN: Ensure thorough rinsing of contaminated skin areas. Treat skin irritations with an ointment.

INHALATION: inhalation of crystalline acid powders or aerosols in concentrated solution requires the administration of glucocorticoids (inhalers and/or IV); if necessary, additional pulmonary edema prophylaxis measures should be performed.

Chesty cough can be treated with codeine. Provide respiratory support in case of laryngospasm or bronchospasm; if the patient suffers from bronchospasm, also administer bronchodilators.

INGESTION: Dilution therapy is often sufficient to treat cases of toxicity after ingestion of citric acid. Do not induce vomiting and do not administer activated charcoal.

PROTECTIVE MEASURES FOR FIRST AIDERS: for the PPE required for first aid interventions, refer to section 8.2 of this safety data sheet.

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

Acute Effects:

Eyes: Causes eye irritation. Burning sensation, pain, eyelid twitching, conjunctivitis, ulceration and corneal cloudiness.

Inhalation: may cause irritation of the nose, throat and upper respiratory tract, nasal obstruction; cough, dyspnoea, possibly bronchospasm, bronchoconstriction, in rare cases risk of pulmonary oedema.

Oral: burning or pain in the mouth, esophagus, stomach; nausea, vomiting, possible ulceration of the oral mucosa.

After accidental intake of highly concentrated doses, corrosive effects on the gastrointestinal tract with cardiovascular reactions (collapse, shock), vomiting bloody.

Chronic Effects:

Respiratory tract and skin irritation.

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

Treat symptomatically. In the event of an accident or if you feel unwell, consult a doctor immediately (show the instructions for use or the safety data sheet if possible).

SECTION 5. Firefighting measures

5.1. Extinguishing media

SUITABLE EXTINGUISHING MEANS

The extinguishing means are the traditional ones: carbon dioxide, foam, powder and nebulized water.

UNSUITABLE EXTINGUISHING MEANS

No one in particular.

5.2. Special hazards arising from the substance or mixture

HAZARDS CAUSED BY EXPOSURE IN THE EVENT OF FIRE

Avoid breathing combustion products.

Decomposition products may include the following materials: Carbon dioxide, carbon monoxide.

5.3. Advice for firefighters

GENERAL INFORMATION

Use jets of water to cool the containers to avoid product decomposition and the development of substances potentially hazardous to health.

Always wear full fire protection gear. Collect extinguishing water which must not be discharged into sewers. Dispose of the contaminated water used for extinguishing and the residue of the fire according to the regulations in force.

EQUIPMENT

Normal firefighting clothing, such as an open circuit compressed air breathing apparatus (EN 137), flame retardant suit (EN469), flame retardant gloves (EN 659) and firefighter boots (HO A29 or A30).

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SECTION 6. Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Avoid dust formation by spraying the product with water if there are no contraindications.

Wearing of suitable protective equipment (including personal protective equipment referred to in section 8 of the safety data sheet) to prevent contamination of skin, eyes and personal clothing.

6.1.1 Advice for non-emergency personnel:

Do not take any action involving any personal risk or without adequate training. Evacuate surrounding areas. Do not touch or walk on spilled material. Avoid dust formation by spraying the product with water.

Wear appropriate protective equipment (including personal protective equipment referred to in section 8 of this Safety Data Sheet) to prevent contamination of skin, eyes and personal clothing.

Wear an appropriate respirator when ventilation is inadequate.

Do not inhale dust. Avoid dispersion of the product in the environment. Follow the appropriate internal procedures for unauthorized personnel to intervene directly in case of accidental release.

6.1.2 Advice for emergency responders:

Stop the leak if there is no danger.

Evacuate unauthorized personnel. Wear suitable protective equipment. (See section 8 of this Safety Data Sheet).

Follow the appropriate internal procedures for authorized personnel. Check for dust. Isolate the danger area and deny entry. Ventilate enclosed spaces before entering.

6.2. Environmental precautions

Prevent the product from entering sewers, surface waters and groundwater.

6.3. Methods and material for containment and cleaning up

Collect the leaked product by mechanical means and place it in containers for recovery or disposal. Provide sufficient ventilation of the place affected by the leak. Avoid the generation and spread of dust.

Introduce the collected material into clean and labelled containers.

Disposal of contaminated material must be carried out in accordance with the provisions of point 13.

In case of dispersion of a large quantity of product, inform the local authorities as soon as possible. After removing the product, wash the contaminated area with plenty of water without the use of solvents, and retain the contaminated washing water to manage it as waste.

Cleaning products classified as incompatible agents (ref. section 10.5) must not be used.

6.4. Reference to other sections

Any information regarding individual protection and disposal is given in sections 8 and 13.

SECTION 7. Handling and storage

7.1. Precautions for safe handling

Check the integrity of the packaging before handling it. If possible, operate upwind.

Avoid contact with skin and eyes. Do not inhale dust. Do not eat, drink or smoke when using or handling. Wash the hands after use. Avoid dispersion of the product in the environment. Handle in a suitable place and with good general ventilation.

The containers, once emptied, they must be transferred without delay to the area identified for the collection of the same pending disposal or starting reuse.

Never reuse empty packaging before it has undergone industrial cleaning.

Keep away from heat, sparks and open flames, do not smoke or use matches or lighters. Avoid the accumulation of electrostatic charges.

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7.2. Conditions for safe storage, including any incompatibilities

Handle the product after consulting all other sections of this safety data sheet. Avoid dispersion of the product in the environment. Remove contaminated clothing and protective equipment before entering eating areas. Keep the packaging closed and labelled. The containers must also be protected from damage, accidental knocks and falls. Store in a well-ventilated, dry and cool place. Protect from direct sunlight. Minimize all possible sources of loss. Keep away from food, feed or drink. Keep only in the original container. The arrangement of the storage area must be such as to prevent accidental spills from percolating into the ground. Store containers away from any incompatible materials, checking section 10. Keep away from: metals, alkalis and oxidizing agents.

7.3. Specific end use(s)

No use other than as indicated in section 1.2 of this safety data sheet.

SECTION 8. Exposure controls/personal protection

8.1. Control parameters

CITRIC ACID		
Predicted no-effect concentration for the environment - PNEC		
Reference value in fresh water	0,44	mg/l
Reference value in sea water	0,044	mg/l
Reference value for sediments in fresh water	34,6	mg/kg/d
Reference value for sediments in marine water	3,46	mg/kg/d
Reference value for STP microorganisms	1000	mg/l
Reference value for the terrestrial compartment	33,1	mg/kg/d

VND = hazard identified but no DNEL/PNEC available;
NEA = no exposure expected;
NPI = no hazard identified;
LOW = low danger;
MED = medium danger;
HIGH= high danger.

8.2. Exposure controls

Considering that the use of adequate technical measures should always take priority over personal protective equipment, ensure good ventilation in the workplace through effective local aspiration.

When selecting personal protective equipment, seek advice from your chemical suppliers if necessary. Personal protective equipment must bear the CE marking which certifies their compliance with current standards. Install an emergency shower with a rinse basin for your face and eyes.

PROTECTION OF HANDS

Protect your hands with work gloves, category III (ref. standard EN 374).
Main recommended materials: PVC, CR rubber (chloroprene), butyl rubber, nitrile rubber (NBR).
Protection class: 6 (permeation time longer than 480 minutes).

When determining the relevant material and its thickness, it is strongly recommended to contact the PPE manufacturer directly to assess the effective protection with regard to the specific characteristics based on use and duration of use. Compatibility, degradation, breakthrough time and permeation must be taken into account.

In the case of preparations, the resistance of the work gloves must first be checked before use, as this is not predictable. The duration of wear of the gloves depends on the duration and method of use.

SKIN PROTECTION

Wear long-sleeved work clothes and safety footwear for professional use category I (ref. Regulation 2016/425 and standard EN ISO 20344). Wash the body with soap and water after removing protective clothing.

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EYE PROTECTION

Wear hermetically sealed safety glasses (ref. standard EN 166).

RESPIRATORY PROTECTION

Use a face mask with type P filter, whose class (1, 2 or 3) and effective need must be determined based on the result of the risk assessment (ref. standard EN 149).

ENVIRONMENTAL EXPOSURE CONTROLS

Emissions from manufacturing processes, including those from ventilation equipment, must be controlled to comply with environmental protection legislation.

SECTION 9. Physical and chemical properties

9.1. Information on basic physical and chemical properties

Characteristics	Value	Information
Physical status	Crystalline solid	
Colour	white	
Odor	odourless	
Melting point or freezing point	153°C	
Initial boiling point	not applicable	Reason for lack given: The substance decomposes without fusing
Flammability	non-flammable solid	
Lower explosion limit	not available	
Upper explosion limit	not available	
Flash point	not applicable	Reason for lack of data: Not applicable as it is a solid
Auto-ignition temperature	not applicable	Reason for missing data: solid with melting point $\leq 160^{\circ}\text{C}$
Decomposition temperature	175°C	
pH	1.7	(conc: 100 g/l) at 20°C
Kinematic viscosity	not applicable	Reason for missing data: On physical grounds status
Solubility	Complete soluble in water	
Partition coefficient n-octanol/water	-1.6 Log Kow	
Vapor pressure	not applicable	Reason for missing data: Based on physical state
Density and /or relative density	1,665	Temperature: 18 °C
Relative vapor tightness	not available	
Particle characteristics		
Size distribution		
D50		

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9.2. Other information

9.2.1. Information about physical hazard classes

Information not available

9.2.2. Other safety features

Non-corrosive substance but which in aqueous solution can lead to extreme pH.

SECTION 10. Stability and reactivity

10.1. Reactivity

Reactions with metal nitrates can be potentially explosive. The aqueous form is corrosive to copper, zinc, aluminium and their alloys.

10.2. Chemical stability

The product is stable under normal conditions of use and storage.

10.3. Possibility of hazardous reactions

Can react in contact with metals, strong bases, oxidizing agents, reducing agents.

10.4. Conditions to avoid

Avoid accumulation of dust in the environment.
Avoid heat and flames. Avoid exposing the product to direct sunlight.
Avoid moist environments.

10.5. Incompatible materials

Sodium nitrite, potassium nitrite, alkalis, metals and strong oxidizing agents.

10.6. Hazardous decomposition products

Thermal decomposition can lead to the release of irritants gasses and fumes. Carbon oxides.

SECTION 11. Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Metabolism, kinetics, mechanism of action and others information

A part of the circulating citric acid (mainly metabolized but also ingested) is excreted in the urine, with 24-hour reference values for urine ranging from 1.5 to 3.68 mmol, which corresponds to 0.29 to 0.71 g excreted citric acid per person per day.

Immediate, delayed and chronic effects as a result of short- term exposure and long term

Severe eye damage has been described in a patient who was sprayed into the eye with a saturated solution of citric acid. It can cause mouth ulcers and the inhalation of aerosols can cause coughing and bronchoconstriction (Bibliographic reference: SIAM 11, 26/01/2001 - OECD SIDS).

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ACUTE TOXICITY

Method: equivalent or similar to OECD 401 - tested substance: citric acid anhydrous
Reliability (Klimisch score): 2
Species: Mouse (Fullinsdorf Albino; male / female)
Routes of exposure: oral
Results: LD50 = 5400 mg/kg body weight

Acute inhalation toxicity: data not available

Method: OECD 402 - tested substance: Citric Acid Anhydrous
Reliability (Klimisch score): 1
Species: rat (Sprague-Dawley; male / female)
Routes of exposure: cutaneous
Results: LD50 > 2000 mg/kg body weight

SKIN CORROSION/SKIN IRRITATION

It does not meet the classification criteria for this hazard class.

Method: OECD 404 - tested substance: Citric Acid Anhydrous
Reliability (Khimich score): 1
Species: rabbit (New Zealand White)
Routes of exposure: cutaneous
Results: non-irritating.

SERIOUS EYE DAMAGE/EYE IRRITATION

Causes serious eye irritation.

Method: OECD 405 - tested substance: Citric Acid Anhydrous
Reliability (Klimisch score): 1
Species: rabbit (New Zealand White)
Results: The study reported that a 30% aqueous solution of citric acid caused well-defined and moderate conjunctival irritation that had not fully resolved after 14 days.
A 0.5 - 2% solution has been found irritating to rabbit eye when applied repeatedly for 7 days as evidenced by the presence of sporadic non-persistent areas of necrosis.
Bibliographical reference: Carpenter et al. 1946

RESPIRATORY OR SKIN SENSITIZATION

It does not meet the classification criteria for this hazard class.

Respiratory sensitization

No data available.

Skin sensitization

No data available.

Based on the weight of evidence of available data determined by expert judgement, the substance is not classified for the hazard class of respiratory or skin sensitization.

GERM CELL MUTAGENICITY

It does not meet the classification criteria for this hazard class.

Method: equivalent or similar to OECD 471 - in vitro test - tested substance: Citric Acid Anhydrous
Reliability (Klimisch score): 2
Species: S. typhimurium
Results: negative with and without metabolic activation.

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Method: equivalent or comparable to EU B 22 0 - in-vivo test - tested substance: Citric Acid Anhydrous

Reliability (Klimisch score): 2

Species: Rat (Sprague-Dawley; male / female)

Routes of exposure: oral

Results: negative.

CARCINOGENICITY

It does not meet the classification criteria for this hazard class.

No evidence of carcinogenicity was reported in a study with only 20 male rats given 5% citric acid in their diet (approximately 2 g/kg/d) for 2 years. (Bibliographic reference: SIAM 11, 26/01/2001 - OECD SIDS).

REPRODUCTIVE TOXICITY

It does not meet the classification criteria for this hazard class.

In a 90-day, oral, (two-generation) study with male and female rats (1.2% citric acid administration) no adverse effects on reproductive parameters or any teratogenicity attributable to citric acid were observed.

No teratogenic or other adverse effects were observed in three short-term reproduction studies in rats at dietary dosage of 5% citric acid (approximately 2.5 g/kg/ day) before, during and after mating (NOEL = 2500 mg/kg/day), or 295 mg/kg) or 295 mg/kg/day (unspecified route) during 6-15 days of pregnancy.

Bibliographical reference: SIAM 11, 26/01/2001 - OECD SID

Tested substance: Citric Acid Anhydrous

SPECIFIC TARGET ORGAN TOXICITY (STOT) - SINGLE EXPOSURE

May irritate the respiratory tract.

Effects observed following a single exposure:

Test on guinea pigs exposed for 30 minutes to a concentration of citric acid equal to 81 mg / m³ (aerosolized solution of 6%). Cough has been observed.

Test on guinea pigs exposed to 75 mg citric acid/ml as an aerosol for 3 minutes. Cough has been observed.

10 male and 10 female rats were orally administered 2 g to 16 g/kg over 5 days. The NOEL value found is 4000 mg / kg / d and the LD50 is 5600 mg/kg/d (Bibliographic reference: SIAM 11, 26/01/2001 - OECD SIDS).

Tested substance: Citric Acid Anhydrous

SPECIFIC TARGET ORGAN TOXICITY (STOT) - REPEATED EXPOSURE

It does not meet the classification criteria for this hazard class.

A 2-year repeat dose study in rats (oral administration of 5% or 3% citric acid; approximately 2 or 1.2 g/kg/day) showed a slight increase in growth in the dose group higher, but no major organ tissue abnormalities.

The lowest dosage results in a NOAEL of 1200 mg/kg/day. Similarly, NOAELs of 1500 mg/kg/day (rabbit) and 1400 mg/kg/day (dog) were determined.

Bibliographical reference: SIAM 11, 26/01/2001 - OECD SIDS

Tested substance: Citric Acid Anhydrous

ASPIRATION HAZARD

It does not meet the classification criteria for this hazard class.

No aspiration hazard data are available.

11.2. Information on other hazards

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Based on available data, the substance is not included in the main European lists of potential or suspected endocrine disruptor substances with effects on humans' health as currently assessed.

SECTION 12. Ecological information

Use according to good working practices, avoiding dispersal of the product in the environment. Notify the competent authorities if the product has reached watercourses or if it has contaminated the soil or vegetation.

12.1. Toxicity

EC50 - Crustaceans	1535 mg/l/48h Daphnia magna (Z. Wasser Abwasser Forsch . 15(1): 1-6)
LC50 - Fishing	440-760 mg/l/96h Leuciscus idus (equivalent or comparable to OECD 203)
Chronic NOEC Algae / Aquatic plants	425 mg/l/8d Scenedesmus quadricauda ; public . Bringmann G and Kuhn R 1980

Tested substance: Citric Acid Anhydrous

12.2. Persistence and degradability

Fast degradable, 97% in 28 days (OECD 301 B)
Tested substance: Citric Acid Anhydrous

12.3. Bioaccumulative potential

Partition coefficient n-octanol/water -1.72 20°C; Verschueren: Handbook of Environmental Data of Organic Chemicals, 3
BCF 3.2 l/kg calculated value SRC BCFBAF v3.20

Tested substance: Citric Acid Anhydrous

12.4. Mobility in soil

Due to the high solubility in water, the substance is unlikely to be adsorbed on soil or sediments.

12.5. Results of PBT and vPvB assessment

The substance has no properties in terms of persistence, bioaccumulation and toxicity (PBT) and is not very persistent and very bioaccumulative (vPvB).

12.6. Endocrine disrupting properties

Based on available data, the substance is not included in the main European lists of potential or suspected endocrine disruptor substances with effects on the environment such as currently assessed.

12.7. Other adverse effects

Information not available

SECTION 13. Disposal considerations

13.1. Waste treatment methods

Reuse if possible. Product residues are to be considered as special hazardous waste. The danger of waste that this product partially contains, must become assessed on the basis of the applicable legal provisions. (See Annex D - Part IV of Legislative Decree No. 152/2006 and later amendments and adjustments).

Disposal must be entrusted to an authorized waste management company, in compliance with national and possibly local legislation. The legal responsibility for disposal lies with the producer/holder of the waste.

Different EWC codes (European Waste Code) could be applied to this substance according to the specific circumstances that generated the waste, any alterations and contaminations.

The product as it is, out of specification in the original packaging, or decanted into a suitable container for disposal as waste, or the product in

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specification but no longer usable (for example following an accidental spill), is to be classified with a code CER compatible with the description of use indicated in section 1.2.

The suitable final destination of the waste will be assessed by the manufacturer on the basis of the chemical-physical properties of the waste, compatible with the authorized plant to which it will be sent for recovery, treatment or definitive disposal according to the procedures established by current regulations.

Disposal by discharge into waste water is not permitted.

For dangerous substances registered according to EC Regulation 1907/2006 (REACH) for which a chemical safety report has been drawn up, refer to the specific information contained in the exposure scenarios attached to this SDS.

CONTAMINATED PACKAGING

Contaminated packaging must be sent, suitably labelled, for recovery or disposal in accordance with national regulations for waste management and must become classified with the following EWC code:

15 01 10*: packaging containing residues of or contaminated by hazardous substances.

SECTION 14. Transport information

The product is not to be considered as dangerous according to the applicable regulations for the transport of dangerous goods by road (ADR), rail (RID), sea (IMDG code) and air (IATA).

14.1. UN number

not applicable

14.2. Right one shipping name in accordance with the UN model regulations

not applicable

14.3. Transport hazard class (n)

not applicable

14.4. Packaging group

not applicable

14.5. Environmental hazards

not applicable

14.6. Special precautions for the user

not applicable

14.7. Bulk maritime transport in accordance with IMO instruments

Information non relevant

SECTION 15. Regulatory information

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

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Seveso category - Directive 2012/18/EU: None

Restrictions related to the product or substances in Annex XVII Regulation (EC) 1907/2006

Point 75.
Substances falling within one or more of the following points:
 (a) *substances classified as any of the following in Part 3 of Annex VI to Regulation (EC) No 1272/2008:*
 — *carcinogen category 1A, 1B or 2, or germ cell mutagen category 1A, 1B or 2, but excluding any such substances classified due to effects only following exposure by inhalation*
 — *reproductive toxicant category 1A, 1B or 2 but excluding any such substances classified due to effects only following exposure by inhalation*
 — *skin sensitiser category 1, 1A or 1B*
 — *skin corrosive category 1, 1A, 1B or 1C or skin irritant category 2*
 — *serious eye damage category 1 or eye irritant category 2*
 (b) *substances listed in Annex II to Regulation (EC) No 1223/2009 of the European Parliament and of the Council (*22)*
 (c) *substances listed in Annex IV to Regulation (EC) No 1223/2009 for which a condition is specified in at least one of the columns g, h and i of the table in that Annex*
 (d) *substances listed in Appendix 13 to this Annex.*

The ancillary requirements in paragraphs 7 and 8 of column 2 of this entry apply to all mixtures for use for tattooing purposes, whether or not they contain a substance falling within points (a) to (d) of this column of this entry.

Regulation (EU) 2019/1148 - placing on the market to take and the use of precursors for explosives

not applicable

Substances on the Candidate List (Art. 59 REACH)

Based on the data available, the product does not contain SVHC substances in percentages > 0.1%.

Authorization requirement substances (Annex XIV REACH)

No

Substances subject to the procedure export notification Regulation (EU) 649/2012:

No

Substances subject to the Rotterdam Convention:

No

Substances subject to the Stockholm Convention:

No

Health checks

Workers exposed to this chemical agent dangerous to health must be subjected to health surveillance carried out according to the provisions of art. 41 of Legislative Decree 81 of 9 April 2008 unless the risk to the worker's health and safety has been assessed as irrelevant, in accordance with the provisions of art. 224 paragraph 2.

15.2. Chemical safety assessment

A Chemical Safety Assessment has been carried out for the substance CITRIC ACID.

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SECTION 16. Other information

Training for workers:

The training of workers must include content, updating and duration according to the risk profiles assigned to the working sectors to which they belong, in accordance with the provisions of Legislative Decree 81/2008.

Text of the hazard statements (H) mentioned in SECTIONS 2-3 of the information sheet:

Flam. Liq. 2	Flammable liquid, category 2
Eye Irrit. 2 STOT SE 3	Eye irritation, category 2 Specific target organ toxicity - one-off exposure, category 3
H225	Highly flammable liquid and vapor.
H319	Causes serious eye irritation.
H336	May cause drowsiness or dizziness cause.
EUH066	Repeated exposure may cause skin dryness or cracking.

LEGEND:

- ADR: Agreement regarding the international transport of dangerous goods by road
- CAS: Chemical Abstract Service Number
- EC: Identification number in ESIS (European Information system for chemical substances)
- CLP: Regulation (EC) 1272/2008
- DNEL: Derivative dose without effect
- EC50: Concentration that gives effect to 50% of those tested population
- EmS: Emergency Schedule (disaster plan)
- GHS: Worldwide harmonized system for the classification and chemical labelling substances
- IATA DGR: Regulations on the transport of dangerous goods of the international aviation organization
- IC50: Concentration of immobilization of 50% of the tested population
- IMDG: International Code for the Carriage of Dangerous substances by sea
- IMO: International Maritime Organization
- INDEX: Identification number in Annex VI of CLP
- LC50: Lethal concentration 50%
- LD50: Lethal dose 50%
- OEL: Limit value for professional exposure
- PBT: Persistent, bioaccumulating and toxic according to REACH
- PEC: Predicted concentration in the environment
- PEL: Predicted exposure level
- PNEC: Predicted zero effect concentration
- REACH: Regulation (EC) 1907/2006
- RID: Rules regarding the international rail transport of dangerous goods
- ATE: Acute Toxicity Estimate
- TLV: Maximum accepted concentration
- TLV CEILING: Concentration at no single moment of professional exposure is allowed exceeded
- TWA: Time-weighted average limit value
- TWA SET: Limit value for short-term exposure
- FOX: Volatile organic dust
- vPvB: Very persistent and very bioaccumulative according to REACH
- WGK: Hazard class for water (Germany).

GENERAL BIBLIOGRAPHY:

1. Regulation (EC) 1907/2006 of the European Parliament (REACH)
2. Regulation (EC) 1272/2008 of the European Parliament (CLP)
3. Regulation (EU) 2020/878 (Annex II REACH Regulation)
4. Regulation (EC) 790/2009 of the European Parliament (I Atp. CLP)
5. Regulation (EU) 286/2011 of the European Parliament (II Atp. CLP)
6. Regulation (EU) 618/2012 of the European Parliament (III Atp. CLP)
7. Regulation (EU) 487/2013 of the European Parliament (IV Atp. CLP)
8. Regulation (EU) 944/2013 of the European Parliament (V Atp. CLP)
9. Regulation (EU) 605/2014 of the European Parliament (VI Atp. CLP)
10. Regulation (EU) 2015/1221 of the European Parliament (VII Atp. CLP)

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11. Regulation (EU) 2016/918 of the European Parliament (VIII Atp. CLP)
 12. Regulation (EU) 2016/1179 (IX Atp. CLP)
 13. Regulation (EU) 2017/776
 14. Regulation (EU) 2018/669 (XI Atp. CLP)
 15. Regulation (EU) 2019/521 (XII Atp. CLP)
 16. Delegate Regulation (EU) 2018/1480 (XIII Atp. CLP)
 17. Regulation (EU) 2019/1148
 18. Delegate Regulation (EU) 2020/217 (XIV Atp. CLP)
 19. Delegate Regulation (EU) 2020/1182 (XV Atp. CLP)
 20. Delegate Regulation (EU) 2021/643 (XVI Atp. CLP)
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- The Merck Index. - 10th Edition
 - Handling Chemical Safety
 - INRS - Fiche Toxicologique (toxicological sheet)
 - Patty - Industrial Hygiene and Toxicology
 - N.I. Sax - Dangerous properties of Industrial Materials-7, 1989 Edition
 - Website IFA GESTIS
 - ECHA agency website
 - Database with SDS models of chemicals substances - Ministry of Health and Istituto Superiore di Sanità

Remark for the recipient of the safety data sheet (SDS):

It is the recipient of this SDS who must ensure that the information contained is read and understood by all people who handle, store, use, or otherwise come into contact in any way with the substance or mixture to which this sheet refers. In particular, the recipient must provide adequate training to the personnel involved in the use of dangerous substances or mixtures. The recipient must ensure the suitability and completeness of the information in relation to the specific use of the substance or mixture.

However, the substance or mixture to which this SDS refers must not be used for purposes other than those specified in section 1. No liability is assumed for improper use. Since the use of the product does not fall under the direct control of the Supplier, the user is obliged to observe, under his own responsibility, the laws and provisions in force regarding national and Community hygiene and safety.

The information contained in this SDS is provided in good faith and is based on the current state of scientific and technical knowledge, at the indicated revision date, available from the Supplier indicated in section 1 of this sheet. The SDS should not be interpreted as a guarantee of any specific property of the substance or mixture. The information relates only to the substance or mixture specifically designated in section 1 and may not be valid for the substance or mixture used in combination with any other materials or in any process not specified in the text.

Changes from the previous one revision

Changes have been made to the following sections:

01 / 02 / 03 / 04 / 05 / 06 / 07 / 08 / 09 / 10 / 11 / 12 / 13 / 14 / 15 / 16.