

**SAFETY DATA SHEET**

according to Regulation (EC) No. 1907/2006

Version 6.10  
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GENERIC EU MSDS - NO COUNTRY SPECIFIC DATA - NO OEL DATA

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

**1.1 Product identifiers**

Product name : Citric acid (Anhydrous)  
 Product Number : CA215  
 Brand : Pacific Pelican  
 CAS-No. : 77-92-9

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

Identified uses : Laboratory chemicals, Manufacture of substances

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

Company : Pacific Pelican Inc.  
 5108, 14th St Plano  
 Wylie, TX, 75098  
 Telephone : +14698627650  
 E-mail address : info@pacific-pelican.com

**1.4 Emergency telephone number**

Emergency Phone # : +14698627650

**SECTION 2: Hazards identification**


**2.1 Classification of the substance or mixture**

**Classification (REGULATION (EC) No 1272/2008)**

Eye irritation, Category 2 H319: Causes serious eye irritation.  
 Specific target organ toxicity - single exposure, Category 3, Respiratory system H335: May cause respiratory irritation.

**2.2 Label elements**

**Labelling (REGULATION (EC) No 1272/2008)**

Hazard pictograms : 

Signal word : Warning

Hazard statements : H319 Causes serious eye irritation.  
 H335 May cause respiratory irritation.

Precautionary statements

- Prevention:**  
P261 Avoid breathing dust.  
P264 Wash skin thoroughly after handling.  
P271 Use only outdoors or in a well-ventilated area.  
P280 Wear eye protection/ face protection.
- Response:**  
P304 + P340 + P312 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/ doctor if you feel unwell.  
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

**Reduced Labelling (<= 125 ml)**

Hazard pictograms



Signal word Warning  
Hazard Statements none  
Precautionary Statements none  
Supplemental Hazard Statements none

**2.3 Other hazards**

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

Ecological information: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission

Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Toxicological information: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

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**SECTION 3: Composition/information on ingredients**

**3.1 Components**

Chemical name	CAS-No.	Concentration (% w/w)	M-Factor, SCL, ATE
citric acid	77-92-9	>= 90 - <= 100	

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## SECTION 4: First aid measures

### 4.1 Description of first aid measures

- General advice : Show this safety data sheet to the doctor in attendance.
- If inhaled : After inhalation: fresh air.
- In case of skin contact : In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower.
- In case of eye contact : After eye contact: rinse out with plenty of water. Call in ophthalmologist. Remove contact lenses.
- If swallowed : After swallowing: immediately make victim drink water (two glasses at most). Consult a physician.

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

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

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

No data available

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## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

- Suitable extinguishing media : Water  
Foam  
Carbon dioxide (CO<sub>2</sub>)  
Dry powder
- Unsuitable extinguishing media : For this substance/mixture no limitations of extinguishing agents are given.

### 5.2 Special hazards arising from the substance or mixture

- Specific hazards during fire fighting : Combustible.  
Risk of dust explosion.  
Development of hazardous combustion gases or vapours possible in the event of fire.
- Hazardous combustion products : Carbon oxides

### 5.3 Advice for firefighters

- Special protective equipment for fire-fighters : In the event of fire, wear self-contained breathing apparatus.
- Further information : Prevent fire extinguishing water from contaminating surface water or the ground water system.

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## SECTION 6: Accidental release measures

### 6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions : Advice for non-emergency personnel:  
Avoid inhalation of dusts.  
Avoid substance contact.  
Ensure adequate ventilation.  
Evacuate the danger area, observe emergency procedures, consult an expert.

For personal protection see section 8.

### 6.2 Environmental precautions

Environmental precautions : Do not let product enter drains.

### 6.3 Methods and material for containment and cleaning up

Methods for cleaning up : Cover drains. Collect, bind, and pump off spills.  
Observe possible material restrictions (see sections 7 and 10).  
Take up dry. Dispose of properly. Clean up affected area. Avoid generation of dusts.

### 6.4 Reference to other sections

For disposal considerations see section 13.

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## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

Hygiene measures : Change contaminated clothing. Wash hands after working with substance.

For precautions see section 2.2.

### 7.2 Conditions for safe storage, including any incompatibilities

Further information on storage conditions : Tightly closed. Dry.

Storage class (TRGS 510) : 11, Combustible Solids

Recommended storage temperature : 25 °C

Further information on storage stability : Moisture sensitive.

### 7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

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**SECTION 8: Exposure controls/personal protection****8.1 Control parameters****Occupational Exposure Limits****Derived No Effect Level (DNEL) according to Regulation (EC) No. 1907/2006**

Substance name	End Use	Exposure routes	Potential health effects	Value
Remarks: No data available				

**8.2 Exposure controls****Personal protective equipment**

Eye/face protection : Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).  
Safety glasses

**Hand protection**

Material : Nitrile rubber  
Break through time : 480 min  
Glove thickness : 0,11 mm  
Protective index : Full contact  
Manufacturer : KCL 741 Dermatril® L

Material : Nitrile rubber  
Break through time : 480 min  
Glove thickness : 0,11 mm  
Protective index : Splash contact  
Manufacturer : KCL 741 Dermatril® L

Remarks : This recommendation applies only to the product stated in the safety data sheet, supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN 16523-1 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: [www.kcl.de](http://www.kcl.de)).

Skin and body protection : protective clothing

Respiratory protection : required when dusts are generated.  
Our recommendations on filtering respiratory protection are based on the following standards: DIN EN 143, DIN 14387 and other accompanying standards relating to the used respiratory protection system.

Recommended Filter type : Filter type P2

The entrepreneur has to ensure that maintenance, cleaning and testing of respiratory protective devices are carried out according to the instructions of the producer. These measures have to be properly documented.

**Environmental exposure controls**

Advice : Do not let product enter drains.

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## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

Physical state	: solid
Form	: crystalline
Color	: colourless, or, white
Odor	: odourless
Odor Threshold	: Not applicable
Melting point/ range	: 153 - 159 °C Method: lit.
Boiling point/boiling range	: 200 °C (1.013 hPa) (decomposition)
Flammability	: No data available
Upper explosion limit / Upper flammability limit	: No data available
Lower explosion limit / Lower flammability limit	: No data available
Flash point	: Not applicable
Autoignition temperature	: No data available
Decomposition temperature	: No data available
pH	: ca. 1,7 (20 °C) Concentration: 100 g/l
Viscosity, dynamic	: No data available
Viscosity, kinematic	: No data available
Flow time	: No data available
Solubility(ies) Water solubility	: 1.330 g/l (20 °C)
Partition coefficient: n- octanol/water	: log Pow: -1,72 (20 °C) Method: OECD Test Guideline 117 Bioaccumulation is not expected.
Vapor pressure	: < 0,1 hPa (25 °C)
Relative density	: 1,67 (20 °C)
Density	: 1,67 g/cm <sup>3</sup> (20 °C)
Relative vapour density	: No data available

### 9.2 Other information

Explosives	: Not classified as explosive.
Oxidizing properties	: none
Burning rate	: No data available
Evaporation rate	: No data available
Molecular weight	: 192,12 g/mol

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## SECTION 10: Stability and reactivity

### 10.1 Reactivity

The following applies in general to flammable organic substances and mixtures: in correspondingly fine distribution, when whirled up a dust explosion potential may generally be assumed.

### 10.2 Chemical stability

The product is chemically stable under standard ambient conditions (room temperature) .

### 10.3 Possibility of hazardous reactions

Hazardous reactions : Violent reactions possible with:

Metals  
Oxidizing agents  
Bases  
Reducing agents

### 10.4 Conditions to avoid

Conditions to avoid : no information available

### 10.5 Incompatible materials

No data available

### 10.6 Hazardous decomposition products

In the event of fire: see section 5

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## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

#### Acute toxicity

LD50 Oral - Mouse - male and female - 5.400 mg/kg  
(OECD Test Guideline 401)

Inhalation: No data available

LD50 Dermal - Rat - male and female - > 2.000 mg/kg  
(OECD Test Guideline 402)

#### Skin corrosion/irritation

Skin - Rabbit

Result: No skin irritation - 4 h

(OECD Test Guideline 404)

#### Serious eye damage/eye irritation

Eyes - Rabbit

Result: Irritating to eyes.

(OECD Test Guideline 405)

Remarks: (ECHA)

#### Respiratory or skin sensitization

Prolonged or repeated exposure may cause allergic reactions in certain sensitive individuals.

### **Germ cell mutagenicity**

Test Type: Ames test

Test system: Salmonella typhimurium

Metabolic activation: with and without metabolic activation

Method: OECD Test Guideline 471

Result: negative

Test Type: Mutagenicity (mammal cell test): micronucleus.

Test system: Human lymphocytes

Metabolic activation: without metabolic activation

Method: OECD Test Guideline 487

Result: positive

Test Type: Chromosome aberration test

Species: Rat

Cell type: Bone marrow

Application Route: Oral

Method: OECD Test Guideline 475

Result: negative

Test Type: dominant lethal test

Species: Rat

Application Route: Oral

Method: Regulation (EC) No. 440/2008, Annex, B.22

Result: negative

### **Carcinogenicity**

No data available

### **Reproductive toxicity**

No data available

### **Specific target organ toxicity - single exposure**

Inhalation - May cause respiratory irritation.

### **Specific target organ toxicity - repeated exposure**

No data available

### **Aspiration hazard**

No data available

## **11.2 Additional Information**

### **Endocrine disrupting properties**

#### **Product:**

Assessment

The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

RTECS: GE7350000

Vomiting, Diarrhoea, Damage to tooth enamel., Dermatitis

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

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## SECTION 12: Ecological information

### 12.1 Toxicity

#### Components:

##### **citric acid:**

- Toxicity to fish : LC50 (Leuciscus idus (Golden orfe)): 440 - 760 mg/l  
Exposure time: 96 h  
Remarks: (IUCLID)
- Toxicity to algae/aquatic plants : NOEC (Scenedesmus quadricauda (Green algae)): 425 mg/l  
Exposure time: 8 h  
Test Type: static test  
Remarks: (ECHA)
- Toxicity to microorganisms : EC5 (Pseudomonas putida): > 10.000 mg/l  
Exposure time: 16 h  
Remarks: (maximum permissible toxic concentration) (Lit.)

### 12.2 Persistence and degradability

#### Components:

##### **citric acid:**

- Biodegradability : Test Type: aerobic  
Result: Readily biodegradable.  
Biodegradation: 97 %  
Exposure time: 28 d  
Method: OECD Test Guideline 301B
- Biochemical Oxygen Demand (BOD) : 526 mg/g  
Incubation time: 5 d  
Remarks: (IUCLID)
- Chemical Oxygen Demand (COD) : 728 mg/g  
Remarks: (IUCLID)

### 12.3 Bioaccumulative potential

#### Components:

##### **citric acid:**

- Partition coefficient: n-octanol/water : log Pow: -1,72 (20 °C)  
Method: OECD Test Guideline 117  
Remarks: Bioaccumulation is not expected.

### 12.4 Mobility in soil

No data available

### 12.5 Results of PBT and vPvB assessment

#### Product:

- Assessment : This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

## 12.6 Endocrine disrupting properties

### Product:

Assessment : The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

No data available

## 12.7 Other adverse effects

No data available

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## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

Product : Waste material must be disposed of in accordance with the national and local regulations. Leave chemicals in original containers. No mixing with other waste. Handle uncleaned containers like the product itself.

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## SECTION 14: Transport information

### 14.1 UN number or ID number

**ADR** : Not regulated as a dangerous good

**IMDG** : Not regulated as a dangerous good

**IATA\_P** : Not regulated as a dangerous good

### 14.2 UN proper shipping name

**ADR** : Not regulated as a dangerous good

**IMDG** : Not regulated as a dangerous good

**IATA\_P** : Not regulated as a dangerous good

### 14.3 Transport hazard class(es)

**ADR** : Not regulated as a dangerous good

**IMDG** : Not regulated as a dangerous good

**IATA\_P** : Not regulated as a dangerous good

### 14.4 Packing group

**ADR** : Not regulated as a dangerous good

**IMDG** : Not regulated as a dangerous good

**IATA (Cargo)** : Not regulated as a dangerous good

**IATA\_P (Passenger)** : Not regulated as a dangerous good

#### 14.5 Environmental hazards

Not regulated as a dangerous good

#### 14.6 Special precautions for user

Remarks : Not classified as dangerous in the meaning of transport regulations.

#### 14.7 Maritime transport in bulk according to IMO instruments

Not applicable for product as supplied.

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### SECTION 15: Regulatory information

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

REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles (Annex XVII) : Conditions of restriction for the following entries should be considered:

Number on list 75: If you intend to use this product as tattoo ink, please contact your vendor.

REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 59). : Not applicable

Regulation (EU) No 2024/590 on substances that deplete the ozone layer : Not applicable

Regulation (EU) 2019/1021 on persistent organic pollutants (recast) : Not applicable

REACH - List of substances subject to authorisation (Annex XIV) : Not applicable

Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances. : Not applicable

#### 15.2 Chemical safety assessment

A Chemical Safety Assessment has been carried out for this substance.

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## SECTION 16: Other information

### Full text of other abbreviations

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - Agreement concerning the International Carriage of Dangerous Goods by Road; AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECHA - European Chemicals Agency; EC-Number - European Community number; ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; GHS - Globally Harmonised System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organisation; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardisation; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NZIoC - New Zealand Inventory of Chemicals; OECD - Organisation for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; SVHC - Substance of Very High Concern; TCSI - Taiwan Chemical Substance Inventory; TECI - Thailand Existing Chemicals Inventory; TRGS - Technical Rule for Hazardous Substances; TSCA - Toxic Substances Control Act (United States); UN - United Nations; vPvB - Very Persistent and Very Bioaccumulative

### Further information

The information is believed to be correct but is not exhaustive and will be used solely as a guideline, which is based on current knowledge of the chemical substance or mixture and is applicable to appropriate safety precautions for the product. It does not represent any guarantee of the properties of the product. PACIFIC PELICAN and its Affiliates shall not be held liable for any damage resulting from handling or from contact with the above product. See [www.pacific-pelican.com](http://www.pacific-pelican.com) and/or the reverse side of invoice or packing slip for additional terms and conditions of sale.

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