

## Material Safety Data Sheet

### Citric acid anhydrous

#### SECTION 1.1 – PRODUCT IDENTIFICATION

**Product Name** : Citric acid  
**Molecular Formula** :  $C_6H_8O_7$   
**Molecular Weight** : 192.12 g/mol  
**CAS No.** : 77-92-9

#### SECTION: 1.2 COMPANY IDENTIFICATION

**Company Name:** Indenta Chemicals (India) Pvt. Ltd.

**Address:** 117, The Summit Business Bay, Opp Cinemax, Off. Sir M.V. Road, Near WEH Metro Station, Andheri (E), Mumbai 400 093, India

**Telephone #:** +91-22-26849600

**Fax #:** +91-22-26849060

#### SECTION 2: COMPOSITION / INFORMATION ON INGREDIENTS

| Name                  | CAS #   | % by Weight |
|-----------------------|---------|-------------|
| Citric acid anhydrous | 77-92-9 | 100         |

#### SECTION 3: HAZARD IDENTIFICATION

##### 3.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008

Eye irritation (Category 2), H319

Specific target organ toxicity - single exposure (Category 3), Respiratory system, H335

For the full text of the H-Statements mentioned in this Section, see Section 16.

##### 3.2 Label elements



Pictogram

Signal Word

Danger

Hazard statement(s)

H319

Causes serious eye irritation.

H335

May cause respiratory irritation.

Precautionary statement(s)

P261

Avoid breathing dust.

P264

Wash skin thoroughly after handling.

P271

Use only outdoors or in a well-ventilated area.

#### Indenta Chemicals (India) Pvt. Ltd.

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 Phone : +91-22-2684 9600 | Fax : +91-22-2684 9060 | Email: indenta@indenta.com | Website : www.indenta.com

Unit 1: Plot No. 1405, GIDC Sarigam, Dist. Valsad, Gujarat – 396155

Unit 2: Building No. 73, Gala No. 7, Indian Corporation Compound, Village Gundavli, Mankoli Naka, Bhiwandi, Thane - 421302

|                                |  |
|--------------------------------|--|
| P280                           | Wear eye protection/ face protection.  |
| 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. |
| Supplemental Hazard Statements | none   |

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

|                                |         |
|--------------------------------|---------|
| Pictogram                      |         |
| Signal Word                    | Warning |
| Hazard statement(s)            | none    |
| Precautionary statement(s)     | none    |
| Supplemental Hazard Statements | none    |

**3.3 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.

**SECTION 4: FIRST AID MEASURES****4.1 Description of first-aid measures.****General advice**

Show this material safety data sheet to the doctor in attendance

**If inhaled**

After inhalation: fresh air. Call in physician

**In case of skin contact**

In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower. Consult a physician.

**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 3.2) and/or in section 11

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

No data available

**SECTION 5: FIRE AND EXPLOSION DATA****5.1 Extinguishing media****Suitable extinguishing media**

MSDS– Citric acid anhydrous

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

Carbon oxides

Potassium oxides

Not combustible.

Development of hazardous combustion gases or vapours possible in the event of fire.

#### 5.3 Advice for firefighters

In the event of fire, wear self-contained breathing apparatus.

#### 5.4 Further information

Prevent fire extinguishing water from contaminating surface water or the ground water system.

### SECTION 6: ACCIDENTAL RELEASE MEASURES

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

Advice for non-emergency personnel: Avoid inhalation of dusts. Avoid substance contact.

Ensure adequate ventilation. Evacuate the danger area, observe emergency procedures, and consult an expert.

For personal protection see section 8.

#### 6.2 Environmental precautions

Do not let product enter drains.

#### 6.3 Methods and materials for containment and 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 see section 13.

### SECTION 7: HANDLING AND STORAGE

#### 7.1 Precautions for safe handling

##### Advice on safe handling

For precautions see section 2.2.

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

##### Storage conditions

Tightly closed. Dry.

##### Storage class

Storage class (TRGS 510): 11: Combustible Solids

### SECTION 8: EXPOSURE CONTROL / PERSONAL PROTECTION

#### 8.1 Control parameters

Ingredients with workplace control parameters

Remarks No data available

##### Predicted No Effect Concentration (PNEC)

| Compartment            | Value     |
|------------------------|-----------|
| Fresh water            | 0.44mg/l  |
| Sea Water              | 0.044mg/l |
| Sewage treatment plant | 1000mg/l  |
| Fresh Water sediment   | 34.6mg/kg |

|              |           |
|--------------|-----------|
| Sea sediment | 3.46mg/kg |
| Soil         | 33.1mg/kg |

## 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

#### Skin protection

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 EN374 please contact the supplier of CE-approved gloves

Full contact

Material: Nitrile rubber

Minimum layer thickness: 0,11 mm

Break through time: 480 min

Material tested: KCL 741 Dermatrill® L

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 EN374 please contact the supplier of CE-approved gloves

Splash contact

Material: Nitrile rubber

Minimum layer thickness: 0,11 mm

Break through time: 480 min

Material tested: KCL Dermatrill® L

#### 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 P3

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.

#### Control of environmental exposure

Do not let product enter drains.

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

### 9.1 Information on basic physical and chemical properties

- |  |                                       |
|--|---------------------------------------|
| a) Physical state                          | crystalline                           |
| b) Color                                   | white or colourless                   |
| c) Odor                                    | odourless                             |
| d) Melting                                 | Melting point/range: 153-159°C – lit. |
| Point/freezing point                       |                                       |
| e) Initial boiling point and boiling range | 200 °C at 1.013 hPa – (decomposition) |

|   |  |
|---|--|
| f) Flammability (solid, gas)                    | No data available  |
| g) Upper/lower Flammability or Explosive limits | No data available  |
| h) Flash point                                  | Not applicable   |
| i) Autoignition Temperature                     | No data available  |
| j) Decomposition Temperature                    | No data available  |
| k) PH   | ca.1.7 at at 100g/l at 20°C  |
| l) Viscosity                                    | Viscosity, kinematic: No data available<br>Viscosity, dynamic: No data available |
| m) Water solubility                             | 1.330 g/l at 20 °C   |
| n) Partition coefficient: n-octanol/water       | log Pow: -1,72 at 20 °C - Bioaccumulation is not expected.                       |
| o) Vapor pressure                               | < 0,1 hPa at 25 °C   |
| p) Density                                      | 1.67 g/cm <sup>3</sup> at 20 °C  |
| Relative density                                | 1.67 at 20 °C  |
| q) Relative vapour density                      |  |
| r) Particle characteristics                     | No data available  |
| s) Explosive properties                         | No data available  |
| t) Oxidizing properties                         | none   |
| <b>Other safety information</b>                 |  |
| Dissociation constant 3,13 at 25 °C             |  |

## 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

Violent reactions possible with:

Metals

Oxidizing agents

Bases

Reducing agents

### 10.4 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

## 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, Diarrhea, Damage to tooth enamel., Dermatitis

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

**SECTION 12: ECOLOGICAL INFORMATION****12.1 Toxicity**

|                      |   |
|----------------------|---|
| Toxicity to fish     | LC50 - Leuciscus idus (Golden orfe) - 440 - 760 mg/l - 96 h<br>Remarks: (IUCLID)                              |
| Toxicity to algae    | static test NOEC - Scenedesmus quadricauda (Green algae) - 425 mg/l - 8 h<br>Remarks: (ECHA)<br>(citric acid) |
| Toxicity to bacteria | Remarks: (maximum permissible toxic concentration) (Lit.)<br>(citric acid)                                    |

**12.2 Persistence and degradability**

|                                 |   |
|---------------------------------|---|
| Biodegradability                | aerobic - Exposure time 28 d<br>Result: 97 % - Readily biodegradable.<br>(OECD Test Guideline 301B) |
| Biochemical Oxygen Demand (BOD) | 526 mg/g<br>Remarks: (IUCLID)   |
| Chemical Oxygen Demand (COD)    | 728 mg/g<br>Remarks: (IUCLID)   |

**12.3 Bioaccumulative potential**

No data available

**12.4 Mobility in soil**

No data available

**12.5 Results of PBT and vPvB 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 Other adverse effects**

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

## SECTION 13: DISPOSAL CONSIDERATION

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### 13.1 Waste treatment methods

#### Product

See [www.retrologistik.com](http://www.retrologistik.com) for processes regarding the return of chemicals and containers, or contact us there if you have further questions.

## SECTION 14: TRANSPORT INFORMATION

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### 14.1 UN number

ADR/RID: - NA

IMDG: - NA

IATA: - NA

### 14.2 UN proper shipping name

ADR/RID: Not dangerous goods

IMDG: Not dangerous goods

IATA: Not dangerous goods

### 14.3 Transport hazard class(es)

ADR/RID: - NA

IMDG: - NA

IATA: - NA

### 14.4 Packaging group

ADR/RID: - NA

IMDG: - NA

IATA: - NA

### 14.5 Environmental hazards

ADR/RID: no

IMDG Marine pollutant:

No IATA: a

### 14.6 Special precautions for user

#### Further information

Not classified as dangerous in the meaning of transport regulations.

## SECTION 15: OTHER REGULATORY INFORMATION

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

This material safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006.

#### Authorisations and/or restrictions on use

#### Other regulations

Take note of Dir 94/33/EC on the protection of young people at work.

### 15.2 Chemical Safety Assessment

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

## SECTION 16: ADDITIONAL INFORMATION

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This information is provided for documentation purposes only.

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