



SAFETY DATA SHEET

100%

CITRIC ACID ANHYDROUS

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. PRODUCT IDENTIFIER

Product name: Citric Acid Anhydrous
Product No.: CITRIC
CAS-No.: 77-92-9
EC No.: 201-069-1
REACH No.: 01-2119457026-42
Synonym: 2-Hydroxy-1,2,3-propanetricarboxylic acid
Chemical Formula: $C_6H_8O_7$

1.2. RELEVANT IDENTIFIED USES OF THE SUBSTANCE OR MIXTURE AND USES ADVISED AGAINST

Recommended use: Detergents and cleaning products,
Agricultural applications,
Personal care products,
Paper industry,
Construction products,
Polymers and plastics,
Oil industry,
Textile industry,
Paints and coatings,
Photography products,
Laboratory reagents,
Water treatment,
Treatment of metal surfaces,
Medical devices.



1.3. DETAILS OF THE SUPPLIER OF THE SAFETY DATA SHEET

HD Chemicals LTD
UNIT 9 Scott Business Park
PL2 2PB Plymouth UK

Contact Person responsible for SDS: Mr Peter Konefal, e-mail: contact@hdchemicals.co.uk

SECTION 2: HAZARDS IDENTIFICATION

2.1. CLASSIFICATION OF THE SUBSTANCE OR MIXTURE

Classification 67/548/EEC: Xi; R36, R37, R38

Classification – EC 1272/2008: Serious Eye Damage/Irritation; Category 2A (H319)

2.2. LABEL ELEMENTS



SIGNAL WORDS

Warning

RISK PHRASES

R36 Irritating to eyes
R37 Irritating to respiratory system
R38 Irritating to skin

HAZARD PHRASES

H319 Causes serious eye irritation

PROTECTION PHRASES

P264 Wash exposed skin thoroughly after handling



P280	Wear protective gloves/protective clothing/eye protection/face protection
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P337+P313	If eye irritation persists get medical advice/attention

SAFETY PHRASES

S26	In case of contact with eyes, rinse immediately with plenty of water and seek medical advice
S37/39	Wear suitable gloves and eye/face protection

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS**67/548/EEC/1999/45/EC****Composition information – main constituents**

Substance name	Mol. Formula	REACH	Typical conc. (%w/w)	EINECS No.	CAS-No.	Classification
Citric Acid Anhydrous	C ₆ H ₈ O ₇	01-2119457026-42	100%	201-069-1	77-92-9	Xi; R36, R37, R38

EC 1272/2008**Composition information – main constituents**

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SECTION 4: FIRST AID MEASURES**4.1. DESCRIPTION OF FIRST AID MEASURES**

First-aid measures general: If you feel unwell, seek medical advice.

Inhalation: Move patient to fresh air. If symptoms persist consult a doctor.



- Ingestion:** Rinse out mouth and then drink plenty of water. Do not induce vomiting. Call for medical help immediately.
- Skin contact:** Remove contaminated clothing immediately and wash skin with soap and water. Get medical attention if any discomfort continues.
- Eye contact:** Rinse opened eye for several minutes under running water. Seek medical attention.

4.2. MOST IMPORTANT SYMPTOMS AND EFFECTS, BOTH ACUTE AND DELAYED

- Inhalation:** Harmful if inhalation. There may be shortness of breath with a burning sensation in the throat. Exposure may cause coughing or wheezing.
- Ingestion:** Harmful if swallowed. Corrosive burns may appear around the lips. There may be bleeding from the mouth or nose.
- Skin contact:** Causes irritation to skin and dermatitis.
- Eye contact:** Corneal burns may occur. May cause permanent damage.

4.3. INDICATION OF ANY IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT NEEDED

Treat symptomatically

SECTION 5: FIREFIGHTING MEASURES

5.1. EXTINGUISHING MEDIA

- Suitable extinguishing media: Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Water spray, carbon dioxide (CO₂), dry chemical, foam.
- Unsuitable extinguishing media: Do not use water jet.

5.2. SPECIAL HAZARDS ARISING FROM THE SUBSTANCE OR MIXTURE

In case of fire, toxic fumes or vapours may be formed of the following substances: Carbon dioxide (CO₂), carbon monoxide (CO).

5.3. ADVICE FOR FIRE-FIGHTERS

Wear protective clothing to prevent contact with skin and eyes. Wear self-contained respiratory protective device.



SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES

Wear suitable protective equipment. Avoid breathing vapours, mist or gas. Avoid formation of dust. Ensure adequate ventilation of the working area. Avoid contact with skin, eyes and clothing.

6.2. ENVIRONMENTAL PRECAUTIONS

Avoid release to the environment. Do not allow to enter sewers/ surface or ground water. Do not allow to enter into soil/subsoil. No special measures required. Prevent further leakage or spillage if safe to do so.

6.3. METHODS AND MATERIAL FOR CONTAINMENT AND CLEANING UP

Avoid dust formation. Remove spillage with vacuum cleaner. If not possible, collect spillage with shovel or broom. Flush contaminated area with plenty of water. Collect and place in suitable waste disposal containers and seal securely. Ensure adequate ventilation.

SECTION 7: HANDLING AND STORAGE

7.1. PRECAUTIONS FOR SAFE HANDLING

Handle in accordance with good industrial hygiene and safety practice. Avoid formation of dust. Do not inhale dust/smoke/mist. Ensure adequate ventilation of the working area. Do not handle in a confined space. Wear personal protective equipment. Avoid contact with eyes and skin. Do not eat or drink during the process, washing hands afterwards with suitable cleaning products.

For precautions see section 2.2.

7.2. CONDITIONS FOR SAFE STORAGE, INCLUDING ANY INCOMPATIBILITIES

Keep in a cool, dry, well ventilated area. Store only in the original, tightly closed containers.

7.3. SPECIFIC END USE(S)

See section 1.2.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. CONTROL PARAMETERS/EXPOSURE GUIDELINES

Occupational Exposure Limit Values (Citric Acid Anhydrous):

CAS NO	Exposure limit	Value	Name of Agent
77-92-9	TWA – 8 Hrs	4 mg/m ³	Citric Acid
77-92-9	STEL – 15 Min	10 mg/m ³	Citric Acid

Engineering controls:

Ensure adequate ventilation, especially in confined areas. Ensure that eyewash stations and safety showers are close to the workstation location. Wash hands before breaks and at the end of the working day. Keep away from foodstuffs, beverages and feed.



EYE PROTECTION



FACE SHIELD



RESPIRATOR



PROTECTION WEAR



HAND PROTECTION

Protective equipment:

Use protective goggles (European standard - EN 166), gloves (European standard - EN 374) and protective clothes to prevent skin, body and eyes exposure.

Respiratory equipment:

When workers are facing concentrations above the exposure limit they must use appropriate certified respirators. To protect the wearer, respiratory protective equipment must be the correct fit and be used and maintained properly.

Skin and body protection:

Wear appropriate protective gloves and clothing to prevent skin exposure. The glove material has to be impermeable and resistant to the product. Rubber, PVC or neoprene gloves recommended. The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.



Eye/Face protection: Wear appropriate tightly fitting safety goggles or chemical safety goggles as described by EN166 (EU Standard). Ensure eye bath is to hand.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. INFORMATION ON BASIC PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Solid
Colour:	White
Odour:	Odourless
Initial boiling point (°C):	No data available
Melting point (°C):	153°C
Freezing point:	No data available
Relative density:	1.665 g/cm ³
Specific gravity / density:	Not available
Vapour density:	Not available
Vapour pressure:	Not available
Flash point (°C):	Not available
Molecular mass:	192,124 g/mol
Auto-ignition temperature:	Not applicable
Oxidizing properties:	Not available
Decomposition temperature:	Not available
Molecular formula:	C ₆ H ₈ O ₇

SECTION 10: STABILITY AND REACTIVITY

10.1. REACTIVITY

No decomposition if stored and applied as directed.

10.2. CHEMICAL STABILITY

Citric Acid Anhydrous is stable under normal temperature conditions and under recommended usage and storage.



10.3. POSSIBILITY OF HAZARDOUS REACTIONS

Reacts with alkali (lyes).

10.4. CONDITIONS TO AVOID

Keep away from heat and direct sunlight. Protect from moisture. Avoid generation and spreading of dust.

10.5. INCOMPATIBLE MATERIALS

Avoid strong oxidants, strong alkalis and strong acids. Avoid sodium nitrite and potassium nitrite.

10.6. HAZARDOUS DECOMPOSITION

Oxides of carbon. Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapours.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1. INFORMATION ON TOXICOLOGICAL EFFECTS

TOXIC DOSE

LD50 Oral – Mouse – 5400 mg/kg
LD50 Oral – Rat – 3000 mg/kg
LD50 Dermal – Rat – > 2000 mg/kg

Inhalation: Harmful if inhalation. There may be shortness of breath with a burning sensation in the throat. Exposure may cause coughing or wheezing.

Ingestion: Harmful if swallowed. Corrosive burns may appear around the lips. There may be bleeding from the mouth or nose.

Skin contact: Causes irritation to skin and dermatitis.

Eye contact: Corneal burns may occur. May cause permanent damage.

SECTION 12: ECOLOGICAL INFORMATION

12.1. TOXICITY

Aquatic Toxicity:

Toxicity to freshwater fish: LC50: 440-706 mg/l, 96h (Leuciscus idus)



Toxicity to water flea: EC50: 1535 mg/l, 24h (Daphnia magna)

12.2. PERSISTENCE AND DEGRADABILITY

Citric Acid Anhydrous is readily biodegradable.

12.3. BIOACCUMULATIVE POTENTIAL

The product does not contain any substances expected to be bioaccumulating.

12.4. MOBILITY

The product is soluble in water.

12.5. RESULTS OF PBT AND vPvB ASSESSMENT

This product does not contain any substances classified as PBT or vPvB.

12.6. OTHER ADVERSE EFFECTS

No data available.

SECTION 13: DISPOSAL CONSIDERATIONS

Waste disposal recommendations: Disposal of citric acid anhydrous should be in accordance with local and national legislation. Processing, use or contamination of this product may change the waste management options. Should not be released into the environment. Dispose of container and unused contents in accordance with applicable member state and local requirements.

Uncleaned packaging: Disposal must be made according to official regulations.

SECTION 14: TRANSPORT INFORMATION

IMDG

UN number	N/A
UN proper shipping name	N/A
Transport hazard class(es)	N/A
Packing group	N/A

ADR/RID

UN number	N/A
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UN proper shipping name	N/A
Transport hazard class(es)	N/A
Packing group	N/A

IATA

UN number	N/A
UN proper shipping name	N/A
Transport hazard class(es)	N/A
Packing group	N/A

SECTION 15: REGULATORY INFORMATION**15.1. SAFETY, HEALTH AND ENVIRONMENTAL REGULATIONS/LEGISLATION SPECIFIC FOR THE SUBSTANCE OR MIXTURE**

National regulations: The Chemicals (Hazard Information and Packaging for Supply) Regulations 2009 (SI 2009 No. 716). Control of Substances Hazardous to Health Regulations 2002 (as amended).

EU legislation: Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) (as amended).
Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures (as amended).

Guidance: CHIP for everyone HSG228.
Workplace Exposure Limits EH40.
Safety Data Sheets for Substances and Preparations.

15.2 CHEMICAL SAFETY ASSESSMENT

Chemical safety Assessment has been carried out for this substance.

SECTION 16: OTHER INFORMATION**General information**

The information contained in this safety data sheet is provided in accordance with the requirements of the regulations. The product should not be used for purposes other than those shown in section 1 without first referring to the supplier and obtaining written handling instruction. As the specific



conditions of use of the product are outside the suppliers control, the user is responsible for ensuring that the requirements of relevant legislation are complied with.

Revision Comments

This information is provided in a revised format to that previously produced.

Revision Date: 01/10/2018

Revision: 01

Safety Data Sheet Status Approved.

Date printed 01/10/2018

Signature Initials P.K.

DISCLAIMER:

If this product is re-distributed and re-formulated for sale, details of its hazards and recommended methods for safe handling must be passed to customers. Customers are urged to ensure that the product is entirely suitable for their own purpose. It is the customer's responsibility to ensure that a suitable and sufficient assessment of the risks created by a work activity using this product is undertaken before this product is used.

NOTE:

The information contained in this Safety Data Sheet does not constitute the users own assessment of workplace risk as required by other Health & Safety Legislation (e.g. the Health and Safety at Work Act,1974;the control of Substances Hazardous to Health Regulations,1988). The data given here is based on current knowledge and experience. The purpose of this data sheet is to describe the products in terms of their safety requirements. The data does not signify any warranty with regard to the product's properties.