

Material Safety Data Sheets (MSDS)

Citric Acid monohydrate

Identification of Product

Chemical Code: CHE-C17

Chemical Name: Citric Acid monohydrate

Chemical Grade:

Chemical Formula: $C_6H_8O_7 \cdot H_2O$

Chemical Weight: 210,14 g/mol

CAS No: 5949-29-1

Chemical Synonyms: 2-Hydroxypropane-1,2,3-Tricarboxylic Acid monohydrate,
Citrate.

Hazards Identification

REACH No: 01-2119457026-42-XXXX

Signal Word: Warning

Supplemental Hazard Information:

Additional Hazard Information: This substance contains no components considered to be either persistent, bio-accumulative and toxic (PBT), or very persistent and very bio-accumulative (vPvB) at levels of 0.1% or higher.



Hazards statements

H319 - Causes serious eye irritation.

Precautionary statements

P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Composition of Chemical

Chemical Formula: $C_6H_8O_7 \cdot H_2O$

EC No 1272/2008: 01-2119457026-42-XXXX

First Aid Measures

General Advice: Consult a physician. Show this safety data sheet to the doctor in attendance.

If: Inhaled: If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

If: Skin Contact: Wash off with soap and plenty of water. Consult a physician.

If: Eye Contact: Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

If: Swallowed: Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

Important Symptoms: The most important known symptoms and effects are described in the labeling section.

Immediate Medical Attention: No Data Available

Firefighting Measures

Extinguishing Media: Use Water spray, Alcohol-resistant foam, Dry chemical or Carbon Dioxide.

Hazards Arising: Carbon Oxides

Advice for Firefighters: Wear self contained breathing apparatus for fire fighting if necessary.

Info for Firefighting: No Data Available

Accidental Release Measures

Personal Precautions: Use personal protective equipment.

Avoid dust formation.

Avoid breathing vapours, mist or gas.

Ensure adequate ventilation.

Avoid breathing dust.

Environmental Precautions: Do not let product enter drains.

Method for Containment: Pick up and arrange disposal without creating dust.

Sweep up and shovel.

Keep in suitable, closed containers for disposal.

Handling and Storage

Personal Precautions: Avoid contact with skin and eyes.

Avoid formation of dust and aerosols.

Provide appropriate exhaust ventilation at places where dust is formed.

Environmental Precautions: Store in cool place.

Keep container tightly closed in a dry and well-ventilated place.

Exposure Controls | Personal Protection

Derived No Effect Level (DNEL)

Workers | Application Area | Exposure Routes | Health Effect | Value

No Data Available

Consumers | Application Area | Exposure Routes | Health Effect | Value

No Data Available

Predicted No Effect Concentration (PNEC)

No Data Available

Engineering Controls: Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

Eye/Face Protection: Safety glasses with side-shields conforming to EN166. Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin Protection: Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching gloves outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands. The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

Full contact -

Material: Nitrile rubber. Minimum layer thickness: 0,11 mm.

Break through time: 480 min. Material tested: Dermatril®.

Splash contact -

Material: Nitrile rubber. Minimum layer thickness: 0,11 mm.

Break through time: 480 min. Material tested: Dermatril®.

Data source: KCL GmbH, D-36124. Test method: EN374.

If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approve gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

Body Protection: Impervious clothing. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory Protection: For nuisance exposures use type P95 (US) or type P1 (EU EN 143) particle respirator. For higher level protection use type OV/AG/P99 (US) or type ABEK-P2 (EU EN 143) respirator cartridges. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Physical and Chemical Properties

Appearance: Colourless, White or translucent crystals or powder.

Odour: No Data Available

Odour Threshold: No Data Available

pH: 1,8 (50 g/l; 20 °C).

Melting Point: No Data Available

Boiling Point: No Data Available

Flash Point: 173,9 °C (closed cup)

Evaporation: No Data Available

Flammability: No Data Available

Upper/Lower Flammability or Explosive Limits: No Data Available

Vapour pressure: No Data Available

Vapour density: 7,26 - (Air = 1.0)

Relative density: No Data Available

Water solubility: Slightly soluble

Partition Coefficient: No Data Available

Auto-ignition Temperature: No Data Available

Decomposition Temperature: No Data Available

Viscosity: No Data Available

Explosive properties: No Data Available

Oxidizing properties: No Data Available

Other Safety Info: Bulk density: 900 kg/m³ at 20 °C.

Relative vapour density: 7,26 - (Air = 1.0).

Stability and Reactivity

Reactivity: No Data Available

Chemical Stability: Stable under recommended storage conditions.

Possibility of hazardous reactions: No Data Available

Conditions to Avoid: No Data Available

Incompatible Materials: Oxidizing agents, Bases, Reducing agents, Nitrates.

Hazardous Decomposition Products: Hazardous decomposition products formed under fire conditions - Carbon Oxides

Toxicological Information

Acute Toxicity: LD₅₀ Oral - Mouse - male and female -
5.400 mg/kg - (OECD Test Guideline 401) - Remarks: (Anhydrous substance).

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

Skin Corrosion/Irritation: Rabbit -
Result: No skin irritation - 4 h - (OECD Test Guideline 404) - Remarks: (Anhydrous substance)

Serious Eye damage | Eye Irritation: Rabbit -
Result: Causes serious eye irritation.
(OECD Test Guideline 405)
Remarks: (anhydrous substance)

Cell Mutagenicity: Ames test:

Salmonella typhimurium - Result: negative (Anhydrous substance).

Mutagenicity (mammal cell test): micronucleus:

Human lymphocytes - Result: positive - (Anhydrous substance) - OECD Test Guideline 475.

Rat - male - Bone marrow - Result: negative - (Anhydrous substance)

Carcinogenicity: IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

Reproductive toxicity: No Data Available

Specific Target Organ Toxicity - Single Exposure: Acute inhalation toxicity -

Possible damages: Irritation symptoms in the respiratory tract.

Specific Target Organ Toxicity - Repeated Exposure: No Data Available

Aspiration Hazard: No Data Available

Ecological Information

Ecological Toxicity: Toxicity to fish:

Static test LC50 - Leuciscus idus melanotus - 440 mg/l - 48 h - (OECD Test Guideline 203) - Remarks: (Anhydrous substance).

Toxicity to daphnia and other aquatic invertebrates:

Static test LC50 - Daphnia magna (Water flea) - 1.535 mg/l - 24 h - Remarks: (Anhydrous substance)(ECHA)

Ecological Persistence and degradability: Biochemical Oxygen Demand (BOD):

481 mg/g - Remarks: (External MSDS).

Chemical Oxygen Demand (COD):

685 mg/g - Remarks: (External MSDS).

Theoretical oxygen demand:

686 mg/g - Remarks: (Lit.)

Bioaccumulative Potential: No Data Available

Mobility in Soil: No Data Available

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

Other Adverse Effect: Harmful effect due to pH shift.

Discharge into the environment must be avoided.

Disposal Considerations

Waste Treatment Methods: Product -

Offer surplus and non-recyclable solutions to a licensed disposal company. Dissolve or mix the material with a combustible solvent

and burn in a chemical incinerator equipped with an afterburner and scrubber. Waste material must be disposed of in accordance with the Directive on waste 2008/98/EC as well as other national and local regulations. Leave chemicals in original containers. No mixing with other waste. Handle uncleaned containers like the product itself.

Contaminated packaging - Dispose of as unused product.

Transport Information

UN Number: ADR/RID: -

IMDG: -

IATA: -

UN Shipping Hazard: ADR/RID: Not dangerous goods

IMDG: Not dangerous goods

IATA: Not dangerous goods

Transport Hazard Class: ADR/RID: -

IMDG: -

IATA: -

Packaging Group: ADR/RID: -

IMDG: -

IATA: -

Environmental Hazards: ADR/RID: no

IMDG Marine pollutant: no

IATA: no

Special Precautions: No Data Available

Regulatory Information

Safety, Health and environmental regulations: This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

Chemical Safety Assessment: For this product a chemical safety assessment was not carried out.

Additional Info: Vomiting, Diarrhoea, Damage to tooth enamel, Dermatitis.

Other dangerous properties can not be excluded.

Handle in accordance with good industrial hygiene and safety practice.

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

RTECS: GE7810000.

Disclaimer

The information stated above is considered to be correct, but does not claim to be inclusive and shall only be used as a guideline. The information provided by this document is confirmed by our continuous updating of knowledge and adheres to the products appropriate safety precautions. It does not represent any guarantee of the product's properties. RLS Chemicals and its Associates shall not be held accountable for any damage's consequent of handling the above product.
