



SAFETY DATA SHEET

POTASSIUM CITRATE GRANULAR

1. PRODUCT INFORMATION AND COMPANY IDENTIFICATION

Product Name: Potassium Citrate Granular
INCI Name: Citric Acid Tripotassium Salt
CAS Number: 6100-05-6
Recommended Use: Used in the cheese and beverage industry, as well as for the production of jam and juices.
Company: Chemistry Connection
253 Sturgis Road
Conway, AR 72034
(501) 470-9689

Emergency Phone Number
Emergency: Chemtrec: 800-424-9300

2. HAZARD IDENTIFICATION

Classification of the substance or mixture

Classification in accordance to Regulation (EC) No. 1272/2008 (CLP/GHS)

Product name	GHS Classification
Citric Acid Tripotassium Salt	Not classified

Classification according to Directive 67/548/EEC (DSD) or 1999/45/EC

Product name	EU Classification
Citric Acid Tripotassium Salt	Not classified

Label elements

Labeling in accordance with Regulation 1272/2008 (CLP)

Hazard pictograms: Not required

Signal word: Not required

Hazard statements: Not classified

Precautionary Statements: Not classified

Other hazard

N/A

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance/preparation:

Product/ Ingredient name	Identifiers	%
Citric Acid Tripotassium Salt	CAS number: 6100-05-6 EC number: 212-755-5 (anhydrous)	100

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

**Occupational exposure limits, if available, are listed in section 8.
See section 16 for the full text of the H-statements and R-phrases declared above.**

4. FIRST AID MEASURES

Description of first aid measures

- Eyes contact: In case of contact with eyes rinse opened eyes under running water for at least 15 minutes and seek medical advice.
- Skin contact: In case of contact with skin wash off immediately with mild soap and plenty of water for at least 15 minutes, and seek medical advice.
- Inhalation: Remove the casualty into fresh air and keep him calm. Apply artificial respiration if necessary and get medical attention immediately.
- Ingestion: If large quantities of this material are swallowed, call a physician immediately. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If victim is conscious give water to drink.

Most important symptoms and effects, both acute and delayed

N/A

Indication of any immediate medical attention and special treatment needed

Notes to physician: No specific antidote, contact Poisons Information Center. All treatments should be based on observed signs and symptoms of distress in the patient. Consideration should be given to the possibility that overexposure to materials other than this product may have occurred.

Special treatments: No specific treatment

5. FIRE FIGHTING MEASURES

Extinguishing media

Suitable: Dry chemical, carbon dioxide, water spray or alcohol-resistant foam.

Not suitable: N/A

Special hazards arising from the substance or mixture

Under fire emits potassium oxides, irritating and toxic fumes.

Advice for firefighters

Special protective equipment for fire fighters: Fire fighters should wear full protective clothing and self-contained breathing apparatus in positive pressure mode.

Remark: Move containers from fire area if possible to do so without risk.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Wear protective clothing. Avoid contact with skin eyes and inhalation of vapors. Remove all sources of ignition. Ventilate area of spill.

Environmental precautions

Do not let this chemical enter the environment. Keep away from drains, surface and ground water.

Methods and materials for containment and cleaning up

Mark danger area. Pick up and place in a suitable container for reclamation or disposal, using a method that does not generate dust. In case of dust production: keep upwind. Clean contaminated surfaces with an excess of water.

Reference to other sections

See Sections 1 for emergency contact information

7. HANDLING AND STORAGE

Precautions for safe handling

Handling: Avoid contact with eyes, skin and clothing. Do not breathe dust. Avoid raising dust. Wash thoroughly after handling.

Hygiene Measures: Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also section 8 for additional information measures.

Conditions for safe storage, including any incompatibilities

Storage: Keep containers tightly closed, in dry, cool and well-ventilated place. Keep away from heat, sparks and open flame. Do not store together with strong acids and strong oxidizing agents. Protect from moisture.

Specific end use(s): N/A

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Occupational exposure limit values: N/A

Deraived effects levels:

Recommended occupational and consumer exposure limit values (following from the preformed CSA): N/A

Exposure controls

Enginnering Measures

Use process enclosures, local exhaust ventilation, or others engineering controls to keep airborne levels below recommend exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

Person Protective measures

Respiratory protection: Dust respirator. Be sure to use an approved/certified or equivalent equipment. Wear appropriate respirator when ventilation is inadequate.

Hand protection: Wear protective disposable gloves to prevent skin exposure.

Eye protection: Wear protective safety glasses.

Skin protection: Wear appropriate long-sleeved clothing to minimize skin contact.

Environmental exposure controls: Not available

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Appearance: White crystals

Odour: Practically odorless

Odour threshold: N/A

pH: 8-9.5

Melting point/Freezing point: 230°C

Initial boiling point/boiling range: N/A

Flash point: Not relevant

Evaporation rate: N/A

Flammability: Non flammable
Upper/lower flammability or explosive limits: N/A
Vapor pressure: Negligible (Tri potassium citrate)
Vapor density (air=1): N/A
Relative Density: 1.98 at 20°C (Tri potassium citrate)
Solubility(ies): In water: 154 gr/100 ml at 25°C; In ethanol: insoluble.
Partition coefficient Octanol/Water: N/A
Auto-ignition temperature: N/A
Decomposition temperature: 230°C
Viscosity: Not relevant
Explosive properties: Not explosive
Oxidizing properties: Not oxidizing

Other information:

Molecular weight: 324.42 gr/mol
Taste: Saline taste

10. STABILITY AND REACTIVITY

Reactivity

No specific test data related to reactivity available for this product or its ingredients

Chemical stability

Unstable on exposure to moisture.

Possibility of hazardous reactions

Under normal conditions of storage and use, hazardous reactions will not occur.

Conditions to avoid

Keep away from heat, sparks and open flame. Protect against moisture.

Incompatible materials

Strong acids and strong oxidizing agents.

Hazardous Decomposition products:

N/A

11. TOXICOLOGICAL INFORMATION

Information on toxicological effects

Acute toxicity: N/A

Skin corrosion/irritation: N/A

Serious eye damage/irritation: N/A

Respiratory or skin sensitization: N/A

Germ cell mutagenicity:

Citric acid has been tested in a number of bacterial assays, all of which gave negative results. There is information from a lower reliability study that citric acid and sodium dihydrogen citrate do not cause chromosome aberrations in vitro: this result does not agree with a recently published study. Evidence for genetic toxicity has been described in a recent publication of results from an in vitro. An in vivo chromosome aberration study does not support the conclusion of the recently reported in vitro studies in mammalian cells, and an in vivo rodent dominant lethal assay also showed no evidence of chromosome damage, so it is considered that the in vitro results do not reflect a potential for genetic toxicity. Although effects have been observed in some in Citric acid is negative in in vivo genotoxicity testing, vitro studies.

Moreover, it has been used as a food additive over a long period. In addition, citrate plays a central role in cellular metabolism, so it is considered that classification for mutagenicity is not required. Information available in the public domain on tests carried out on other salts of sodium, calcium, potassium and magnesium indicates that the metal ions are not expected to contribute to the genetic toxicity of their corresponding salts. Therefore, information from citric acid may be read-across to the other citrate salts in this category, and information may be read-across between the citrate salts, and classification of the citrate salts in the category for mutagenicity is not required.

It is not expected that sodium, calcium, potassium or magnesium counter ions will contribute significantly to the genetic toxicity of their corresponding salts. Therefore, information from citric acid may be read-across to the other citrate salts in this category, and information may be read-across between the citrate salts, and classification of the citrate salts in the category for mutagenicity is not required.

Carcinogenicity:

Citric acid: In a rat feeding study, animals dosed with 5% citric acid in the diet did show an excess of tumours in comparison with control animals when tested over a period of 2 years. However, there was some evidence that high doses of citrate salts potentiated the incidence of tumours produced by co-administration of known bladder carcinogens. Where citric acid or citrate salts were administered alone during these studies, no dose-related tumours were noted. It is not expected that sodium, calcium, potassium or magnesium counter ions will contribute significantly to the genetic toxicity of their corresponding salts. Therefore, it is possible to reliably read-across from citric acid to the other citrate salts in this category.

Reproductive toxicity:

Citric acid: various studies on rats, mice and guinea pigs using a number of different conditions and protocols: prior to mating, during pregnancy and also a two-generation study were

summarized in the OECD report. In some the doses were defined and in others the regimen was ad libitum feeding of a defined concentration of citric acid in the diet, with or without measurement of food uptake. No adverse effects on females or fetuses were reported except slight dental attrition of the females in some of the studies. The NOEL values reported were often meaningless as it was the only dose used, and that gave no adverse effects. In the same

report described above, Wright and Hughes (1976c) showed the same dose (5%) of citric acid in the diet of female mice and rats had no effect on the reproductive performance as measured by pregnancy rate, number of live births, still births and pup survival rate.

It is not expected that sodium, calcium, potassium or magnesium counter ions will contribute significantly to the genetic toxicity of their corresponding salts. Therefore, it is possible to reliably read-across from citric acid to the other citrate salts in this category.

Specific target organ toxicity (single exposure): N/A

Specific target organ toxicity (repeated exposure): N/A

Aspiration hazard: N/A

Other effects: Prolonged or repeated exposure may cause affection/discoloration of the teeth, irritation of the eye tissue, inflammation/damage of the eye tissue and tingling/irritation of the skin.

12. ECOLOGICAL INFORMATION

Toxicity: N/A

Persistence and Degradability: biodegradable in water.

Bioaccumulative potential: N/A

Mobility in soil

Soil/water partition coefficient (Koc) : N/A

Results of PBT and vPvB assessment

Not available

Other adverse effects None

13. DISPOSAL CONSIDERATIONS

Methods of disposal: Waste must be disposed of in accordance with federal, state and local environmental control regulations. Remove to an authorized incinerator equipped with an afterburner and a flue gas scrubber. Obtain the consent of pollution control authorities before discharging to wastewater treatment plants.

Hazardous waste: Waste material code (Flanders): 213

14. TRANSPORT INFORMATION

Un number:

ADR/RID: -

IMDG: -

IATA: -

Proper shipping name:

ADR/RID: Not regulated

IMDG: Not regulated

IATA: Not regulated

Transport hazard class(es)

ADR/RID: - IMDG: - IATA: -

Packing group

ADR/RID: - IMDG: - IATA: -

Environmental hazard

Marine Pollutant: No

Special precautions for user

Not available

Transport to bulk according to Annex II of MARPOL 79/78 and the IBC Code

Not available

15. REGULATORY INFORMATION

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

EU Directives 67/548/EEC and 1999/45/EC (including amendments)

EU Regulation(EC) No.1907/2006 (REACH), No 1272/2008 (CLP)

Chemical safety assessment

In accordance with REACH article 14, a chemical safety report has been carried out for citrates.

16. OTHER INFORMATION

All statements, technical information and recommendations contained herein are based on tests and data which Chemistry Connection believes to be currently reliable, but this accuracy or completeness thereof is not guaranteed and no warranty of any kind is made with respect thereto. This information is not intended as a license to operate under or a recommendation to practice or infringe any patent of this company or others covering any process, composition of matter or use. Since we shall have no control of the use of the product described here in, we assume no Liability for loss or damage incurred from the proper or improper use of such product.