

Tripotassium Citrate

Version 3.1 Revision Date: 15.02.2018 SDS Number: 100000000052 Date of last issue: 30.05.2017
REG_EU_ Date of first issue: 02.12.2010
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SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Trade name : Tripotassium Citrate
Substance name : Tripotassium Citrate
Molecular formula : C₆H₅O₇K₃*H₂O
Chemical identity : Tripotassium-2-hydroxypropane-1,2,3-tricarboxylate monohydrate
CAS-No. : 6100-05-6
EC-No. : 212-755-5
REACH No. : 01-2119457580-38-0000

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

Use of the Substance/Mixture : Food/ feedstuff additives, Pharmaceutical substance, pH-regulating agents, Industrial use
Recommended restrictions on use : None known.

1.3 Details of the supplier of the safety data sheet

Company : Jungbunzlauer Ladenburg GmbH
Lage Brink 23
7317BD Apeldoorn
labshop@labshop.nl

Telephone : 055-5215016

1.4 Emergency telephone number

Telephone : 112

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)

Not a hazardous substance or mixture according to Regulation (EC) No. 1272/2008.

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2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

The product does not need to be labelled in accordance with EC directives or respective national laws.

2.3 Other hazards

None known.

SECTION 3: Composition/information on ingredients

3.1 Substances

Substance name : Tripotassium Citrate
CAS-No. : 6100-05-6
EC-No. : 212-755-5
Chemical nature : Solid
REACH Registration Number : 01-2119457580-38-0000

SECTION 4: First aid measures

4.1 Description of first aid measures

General advice : Get medical advice/ attention if you feel unwell.
Show this safety data sheet to the doctor in attendance.
If inhaled : If breathed in, move person into fresh air.
In case of skin contact : Immediately flush skin with large amounts of water.
In case of eye contact : In the case of contact with eyes, rinse immediately with plenty
of water and seek medical advice.
If easy to do, remove contact lens, if worn.
If swallowed : Clean mouth with water and drink afterwards plenty of water.

4.2 Most important symptoms and effects, both acute and delayed

Symptoms : No information available.
Risks : None known.

4.3 Indication of any immediate medical attention and special treatment needed

Treatment : Treat symptomatically.

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SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media : Water spray
Dry powder
Foam
Carbon dioxide (CO₂)

Unsuitable extinguishing media : High volume water jet

5.2 Special hazards arising from the substance or mixture

Specific hazards during fire-fighting : Do not use a solid water stream as it may scatter and spread fire.
Hazardous decomposition products formed under fire conditions.

Hazardous combustion products : Carbon dioxide (CO₂)
Carbon monoxide

5.3 Advice for firefighters

Special protective equipment for firefighters : Wear self-contained breathing apparatus for firefighting if necessary. Use personal protective equipment.

Further information : Standard procedure for chemical fires.
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
In the event of fire and/or explosion do not breathe fumes.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions : Avoid contact with skin and eyes.
Avoid breathing dust.
Ensure adequate ventilation, especially in confined areas.

6.2 Environmental precautions

Environmental precautions : No special environmental precautions required.
Prevent further leakage or spillage if safe to do so.

6.3 Methods and material for containment and cleaning up

Methods for cleaning up : Use mechanical handling equipment.
Keep in suitable, closed containers for disposal.
Clean contaminated surface thoroughly.

6.4 Reference to other sections

For personal protection see section 8.

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For disposal considerations see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

- Advice on safe handling : Avoid creating dust.
For personal protection see section 8.
- Advice on protection against fire and explosion : Normal measures for preventive fire protection.
- Hygiene measures : Handle in accordance with good industrial hygiene and safety practice.
Avoid contact with skin, eyes and clothing.
Wash hands before breaks and immediately after handling the product.
- Dust explosion class : Not applicable

7.2 Conditions for safe storage, including any incompatibilities

- Requirements for storage areas and containers : Keep container tightly closed in a dry and well-ventilated place.
- Advice on common storage : Never allow product to get in contact with water during storage.
- Other data : No decomposition if stored and applied as directed.

7.3 Specific end use(s)

- Specific use(s) : none
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SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Contains no substances with occupational exposure limit values.

8.2 Exposure controls

Engineering measures

Provide adequate ventilation.

Personal protective equipment

Eye protection : Safety glasses

Hand protection

- Remarks : Choose gloves to protect hands against chemicals depending on the concentration and quantity of the hazardous substance and specific to place of work.
For special applications, we recommend clarifying the resistance to chemicals of the aforementioned protective

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gloves with the glove manufacturer.

- Skin and body protection : Choose body protection according to the amount and concentration of the dangerous substance at the work place.
- Respiratory protection : In the case of dust or aerosol formation use respirator with an approved filter.
Half mask with a particle filter P2 (EN 143)
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SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

- Appearance : Crystalline powder
- Colour : white
- Odour : odourless
- Odour Threshold : Not relevant
- pH : 7,5 - 9,0
Concentration: 5 %
- Melting point/range : > 230 °C
Decomposition
- Boiling point/boiling range : Decomposition: Decomposes below the boiling point.
- Flash point : Not applicable
- Evaporation rate : Not applicable
- Flammability (solid, gas) : The product is not flammable.
- Upper explosion limit : Not applicable
- Lower explosion limit : Not applicable
- Vapour pressure : Not applicable
- Relative vapour density : Not applicable
- Relative density : 1,98 (20 °C)
- Density : No data available
- Bulk density : 950 - 1.200 kg/m³
- Solubility(ies)
Water solubility : 606 g/l (25 °C)

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Solubility in other solvents : Solvent: Ethanol
insoluble
(25 °C)

Partition coefficient: n-
octanol/water : log Pow: -1,8 - -0,2

Ignition temperature : Not applicable

Decomposition temperature : No data available

Viscosity
Viscosity, dynamic : Not applicable

Viscosity, kinematic : Not applicable

Explosive properties : Not applicable

Oxidizing properties : No oxidising effect.

9.2 Other information

Molecular weight : 324,4 g/mol

Dust explosion class : Not applicable

SECTION 10: Stability and reactivity

10.1 Reactivity

No decomposition if stored and applied as directed.

10.2 Chemical stability

Stable under normal conditions.

10.3 Possibility of hazardous reactions

Hazardous reactions : No dangerous reaction known under conditions of normal use.

10.4 Conditions to avoid

Conditions to avoid : Avoid moisture.

10.5 Incompatible materials

Materials to avoid : No data available

10.6 Hazardous decomposition products

Build-up of dangerous/toxic fumes possible in cases of fire/high temperature.
Carbon dioxide (CO₂)
Carbon monoxide

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SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Components:

Tripotassium citrate:

Acute oral toxicity : LD50 Oral (Mouse): 5.400 mg/kg body weight
Method: OECD Test Guideline 401
Test substance: Non neutralised product

Acute inhalation toxicity : No data available

Acute dermal toxicity : LD50 Dermal (Rat, male and female): > 2.000 mg/kg body weight
Test substance: Non neutralised product

Skin corrosion/irritation

Components:

Tripotassium citrate:

Species: Rabbit
Result: No skin irritation
Information given is based on data obtained from similar substances.

Serious eye damage/eye irritation

Components:

Tripotassium citrate:

Species: Rabbit
Method: OECD Test Guideline 405
Result: No eye irritation
Information given is based on data obtained from similar substances.

Respiratory or skin sensitisation

Components:

Tripotassium citrate:

Species: Guinea pig
Method: OECD Test Guideline 406
Result: Did not cause sensitisation on laboratory animals.
Information given is based on data obtained from similar substances.

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Germ cell mutagenicity

Components:

Tripotassium citrate:

- Genotoxicity in vitro : Test Type: Ames test
Species: Salmonella typhimurium
Concentration: 0.0 - 10 mg/plate
Method: Mutagenicity (Salmonella typhimurium - reverse mutation assay)
Result: negative
- Genotoxicity in vivo : Test Type: in vivo assay
Species: Rat (male)
Application Route: Oral
Method: OECD Test Guideline 475
Result: negative
Test substance: Non neutralised product
- Germ cell mutagenicity- Assessment : In vitro tests did not show mutagenic effects

Carcinogenicity

Components:

Tripotassium citrate:

- Carcinogenicity - Assessment : Not classifiable as a human carcinogen.

Reproductive toxicity

Components:

Tripotassium citrate:

- Reproductive toxicity - Assessment : No toxicity to reproduction

STOT - single exposure

Components:

Tripotassium citrate:

No data available

STOT - repeated exposure

Components:

Tripotassium citrate:

No data available

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Repeated dose toxicity

Components:

Tripotassium citrate:

Species: Rat
NOAEL: 8.000 mg/kg
LOAEL: 16.000 mg/kg
Application Route: Oral
Exposure time: 10 d
Dose: 2, 4, 8, 16 g/kg bw/day
Test substance: Non neutralised product

Aspiration toxicity

Components:

Tripotassium citrate:

No aspiration toxicity classification

SECTION 12: Ecological information

12.1 Toxicity

Components:

Tripotassium citrate:

Toxicity to fish : LC50 (Oncorhynchus tshawytscha (chinook salmon)): > 10 mg/l
Exposure time: 24 h
Test Type: semi-static test
Information given is based on data obtained from similar substances.

LC50 (Leuciscus idus (Golden orfe)): 440 mg/l
Exposure time: 48 h
Test Type: static test
Test substance: Non neutralised product

Toxicity to daphnia and other aquatic invertebrates : EC50 (Dreissena polymorpha): > 50 mg/l
Exposure time: 48 h
Test Type: static test
Information given is based on data obtained from similar substances.

Toxicity to algae : NOEC (Scenedesmus quadricauda (Green algae)): 425 mg/l
Exposure time: 8 d
Test Type: static test
Test substance: Non neutralised product
Method: No information available.

Toxicity to microorganisms : TT (Pseudomonas putida): > 10.000 mg/l

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Exposure time: 16 h
Test substance: Non neutralised product

12.2 Persistence and degradability

Components:

Tripotassium citrate:

Biodegradability : Biodegradation: 97 %
Exposure time: 28 d
Method: OECD Test Guideline 301B
Test substance: Non neutralised product
Readily biodegradable.

Biodegradation: 100 %
Information given is based on data obtained from similar substances.

Physico-chemical removability : Readily biodegradable.

12.3 Bioaccumulative potential

Product:

Partition coefficient: n-octanol/water : log Pow: -1,8 - -0,2

Components:

Tripotassium citrate:

Bioaccumulation : The product is miscible in water and readily biodegradable in both water and soil. Accumulation is not expected.

Partition coefficient: n-octanol/water : log Pow: -1,8 - -0,2

12.4 Mobility in soil

No data available

12.5 Results of PBT and vPvB assessment

Components:

Tripotassium citrate:

Assessment : This substance is not considered to be persistent, bioaccumulating and toxic (PBT).
: This substance is not considered to be very persistent and very bioaccumulating (vPvB).

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12.6 Other adverse effects

Components:

Tripotassium citrate:

Additional ecological information : This product has no known ecotoxicological effects.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

- Product : In accordance with local and national regulations. Where possible recycling is preferred to disposal or incineration. According to the European Waste Catalogue, Waste Codes are not product specific, but application specific. Waste codes should be assigned by the user based on the application for which the product was used.
- Contaminated packaging : Empty containers should be taken to an approved waste handling site for recycling or disposal. Dispose of as unused product.
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SECTION 14: Transport information

14.1 UN number

Not regulated as a dangerous good

14.2 UN proper shipping name

Not regulated as a dangerous good

14.3 Transport hazard class(es)

Not regulated as a dangerous good

14.4 Packing group

Not regulated as a dangerous good

14.5 Environmental hazards

Not regulated as a dangerous good

14.6 Special precautions for user

Not applicable

14.7 Transport in bulk according to Annex II of Marpol and the IBC Code

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

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

The components of this product are reported in the following inventories:

EINECS : On the inventory, or in compliance with the inventory

TSCA : On TSCA Inventory

AICS : On the inventory, or in compliance with the inventory

DSL : All components of this product are on the Canadian DSL

NZIoC : On the inventory, or in compliance with the inventory

KECI : On the inventory, or in compliance with the inventory

ENCS : On the inventory, or in compliance with the inventory

PICCS : On the inventory, or in compliance with the inventory

IECSC : On the inventory, or in compliance with the inventory

REACH : Notification number: 01-2119457580-38

15.2 Chemical safety assessment

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

SECTION 16: Other information

Full text of other abbreviations

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - European Agreement concerning the International Carriage of Dangerous Goods by Road; AICS - Australian Inventory of Chemical Substances; ASTM - American Society for the Testing of Materials; bw - Body weight; CLP - Classification Labelling Packaging Regula-

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according to Regulation (EC) No. 1907/2006

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tion; 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 Harmonized 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 Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; 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 - Organization 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; 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 provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.