

Trisodium Citrate Dihydrate

Version 1.0 Revision Date:
CA / EN 28.10.2022

SDS Number:
100000000010

Date of last issue: -
Date of first issue: 28.10.2022

SECTION 1. IDENTIFICATION

Product name : Trisodium Citrate Dihydrate

Substance name : Trisodium citrate dihydrate

Molecular formula : $C_6H_5O_7Na_3 \cdot 2H_2O$

Chemical identity : Trisodium 2-hydroxypropane-1,2,3-tricarboxylate dihydrate

CAS-No. : 6132-04-3

Chemical nature : Solid

Other means of identification : No data available

Manufacturer or supplier's details

Details of the supplier of the safety data sheet

Company : Jungbunzlauer Austria AG
Werk Pernhofen
Wulzeshofen 2064
Austria
www.jungbunzlauer.com

Telephone : +43 2527 200-0

Telefax : +43 2527 200-80

E-mail address : msds@jungbunzlauer.com

Responsible/issuing person

Initial Supplier Identifier
Données relatives au fournisseur

Univar Solutions Canada Ltd.

64 Arrow Road
North York, ON M9M 2L9
Telephone: 1-866-686-4827

Emergency telephone number

National Chemical Emergency Centre (NCEC)
+1 202 464 2554

Recommended use of the chemical and restrictions on use

Recommended use : Formulation of preparations
Industrial use
Manufacture of chemical products
Chemical intermediate
Washing and cleaning products
Cosmetics, personal care products
Manufacture of pulp, paper and paper products
Polymer preparations and compounds
Plastic articles
Extraction of crude petroleum
Coatings and paints, thinners, paint removers
Water treatment chemicals
Laboratory chemicals
Manufacture of basic pharmaceutical products
Food/ feedstuff additives

Restrictions on use : None known.

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SECTION 2. HAZARDS IDENTIFICATION**GHS classification in accordance with the Hazardous Products Regulations**

Not a hazardous substance or mixture.

GHS label elements

Not a hazardous substance or mixture.

Hazards Not Otherwise Classified

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture	: Pure substance
Chemical nature	: Solid
Substance name	: Trisodium citrate dihydrate
CAS-No.	: 6132-04-3

SECTION 4. FIRST AID MEASURES

General advice	: Do not leave the victim unattended.
If inhaled	: If breathed in, move person into fresh air. If unconscious, place in recovery position and seek medical advice. If symptoms persist, call a physician.
In case of skin contact	: Wash off immediately with soap and plenty of water.
In case of eye contact	: Remove contact lenses. Protect unharmed eye. If eye irritation persists, consult a specialist.
If swallowed	: Keep respiratory tract clear. Do not give milk or alcoholic beverages. Never give anything by mouth to an unconscious person. If symptoms persist, call a physician.
Most important symptoms and effects, both acute and delayed	: None known.
Notes to physician	: Treat symptomatically.

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SECTION 5. FIREFIGHTING MEASURES

- Suitable extinguishing media : Water spray
Dry powder
Carbon dioxide (CO₂)
Foam
- Unsuitable extinguishing media : High volume water jet
- Specific hazards during firefighting : Exposure to decomposition products may be a hazard to health.
- Hazardous combustion products : Carbon monoxide, carbon dioxide and unburned hydrocarbons (smoke).
- Further information : Standard procedure for chemical fires.
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
- Special protective equipment for firefighters : Wear self-contained breathing apparatus for firefighting if necessary.

SECTION 6. ACCIDENTAL RELEASE MEASURES

- Personal precautions, protective equipment and emergency procedures : Avoid dust formation.
Avoid breathing dust.
Use personal protective equipment.
- Environmental precautions : If the product contaminates rivers and lakes or drains inform respective authorities.
- Methods and materials for containment and cleaning up : Pick up and arrange disposal without creating dust.
Sweep up and shovel.
Keep in suitable, closed containers for disposal.

SECTION 7. HANDLING AND STORAGE

- Advice on protection against fire and explosion : Provide appropriate exhaust ventilation at places where dust is formed.
- Advice on safe handling : Avoid creating dust.

For personal protection see section 8.
Smoking, eating and drinking should be prohibited in the application area.
- Conditions for safe storage : Keep container tightly closed in a dry and well-ventilated place.

Electrical installations / working materials must comply with the technological safety standards.

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Materials to avoid : No materials to be especially mentioned.

Further information on storage stability : Keep in a dry place.
No decomposition if stored and applied as directed.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION**Components with workplace control parameters**

Contains no substances with occupational exposure limit values.

Engineering measures : Provide adequate ventilation.

Personal protective equipment

Respiratory protection : No personal respiratory protective equipment normally required.

In the case of dust or aerosol formation use respirator with an approved filter.

Hand protection
Remarks : Wear suitable gloves.

Eye protection : Safety glasses

Skin and body protection : Protective suit

Hygiene measures : General industrial hygiene practice.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : crystalline

Colour : white

Odour : odourless

Odour Threshold : Not relevant

pH : 7.5 - 9.0 (25 °C)
Concentration: 5 %

Melting point/freezing point : > 150 °C
Decomposition

Boiling point/boiling range : Decomposes below the boiling point.

Flash point : Not applicable

Flammability (solid, gas) : does not ignite

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Upper explosion limit / Upper flammability limit	:	No data available
Lower explosion limit / Lower flammability limit	:	No data available
Vapour pressure	:	Not applicable
Relative vapour density	:	Not applicable
Relative density	:	1.86 (20 °C)
Density	:	No data available
Solubility(ies) Water solubility	:	400 - 700 g/l (20 - 25 °C)
Partition coefficient: n-octanol/water	:	log Pow: -1.8 - -0.2 Calculation
Auto-ignition temperature	:	Not applicable
Decomposition temperature	:	Decomposes before melting.
Viscosity Viscosity, kinematic	:	Not applicable
Explosive properties	:	Not explosive
Oxidizing properties	:	No oxidising effect.
Molecular weight	:	294.1 g/mol
Particle size	:	ca. 0.2 - 1.25 mm

SECTION 10. STABILITY AND REACTIVITY

Reactivity	:	No decomposition if stored and applied as directed.
Chemical stability	:	No decomposition if stored and applied as directed.
Possibility of hazardous reactions	:	Stable under recommended storage conditions. No hazards to be specially mentioned.
Conditions to avoid	:	No data available
Incompatible materials	:	Not applicable
Hazardous decomposition products	:	Build-up of dangerous/toxic fumes possible in cases of fire/high temperature. Carbon monoxide, carbon dioxide and unburned hydrocarbons (smoke).

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SECTION 11. TOXICOLOGICAL INFORMATION**Acute toxicity**

Not classified based on available information.

Non-hazardous ingredients:**Trisodium Citrate Dihydrate:**

Acute oral toxicity : LD50 Oral (Mouse): 5,400 mg/kg
Method: OECD Test Guideline 401
Test substance: Non neutralised product
Assessment: The substance or mixture has no acute oral toxicity

Acute inhalation toxicity : No data available

Acute dermal toxicity : LD50 Dermal (Rat): > 2,000 mg/kg
Test substance: Non neutralised product
Assessment: The substance or mixture has no acute dermal toxicity

Skin corrosion/irritation

Not classified based on available information.

Non-hazardous ingredients:**Trisodium Citrate Dihydrate:**

Species : Rabbit
Method : OECD Test Guideline 404
Result : No skin irritation

Serious eye damage/eye irritation

Not classified based on available information.

Non-hazardous ingredients:**Trisodium Citrate Dihydrate:**

Species : Rabbit
Result : No eye irritation
Method : OECD Test Guideline 405

Respiratory or skin sensitisation**Skin sensitisation**

Not classified based on available information.

Respiratory sensitisation

Not classified based on available information.

Non-hazardous ingredients:**Trisodium Citrate Dihydrate:**

Test Type : Maximisation Test

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Species : Guinea pig
Method : OECD Test Guideline 406
Result : Does not cause skin sensitisation.
Remarks : No human information is available.

Germ cell mutagenicity

Not classified based on available information.

Non-hazardous ingredients:**Trisodium Citrate Dihydrate:**

Genotoxicity in vitro : Test Type: Ames test
Test system: Salmonella typhimurium
Concentration: 0 - 10 mg/plate
Method: Mutagenicity (Salmonella typhimurium - reverse mutation assay)
Result: negative
Remarks: Information given is based on data obtained from similar substances.

Genotoxicity in vivo : Test Type: Chromosomal aberration
Species: Rat
Cell type: Bone marrow
Application Route: Oral
Dose: 0,3 mg/kg bw
Method: OECD Test Guideline 475
Result: negative
Test substance: Non neutralised product
Remarks: Not classified

Carcinogenicity

Not classified based on available information.

Non-hazardous ingredients:**Trisodium Citrate Dihydrate:**

Carcinogenicity - : Not classifiable as a human carcinogen.
Assessment

Reproductive toxicity

Not classified based on available information.

Non-hazardous ingredients:**Trisodium Citrate Dihydrate:**

Reproductive toxicity - : No toxicity to reproduction
Assessment

STOT - single exposure

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Non-hazardous ingredients:**Trisodium Citrate Dihydrate:**

Remarks : No data available

STOT - repeated exposure

Not classified based on available information.

Non-hazardous ingredients:**Trisodium Citrate Dihydrate:**

Remarks : No data available

Repeated dose toxicity**Non-hazardous ingredients:****Trisodium Citrate Dihydrate:**

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

Aspiration toxicity

Not classified based on available information.

Non-hazardous ingredients:**Trisodium Citrate Dihydrate:**

No aspiration toxicity classification

Further information**Product:**

Remarks : No data available

SECTION 12. ECOLOGICAL INFORMATION**Ecotoxicity****Non-hazardous ingredients:****Trisodium Citrate Dihydrate:**

Toxicity to fish : LC50 (Leuciscus idus (Golden orfe)): 440 mg/l
Exposure time: 48 h
Test Type: static test
Test substance: Non neutralised product
Method: OECD Test Guideline 203

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Toxicity to daphnia and other aquatic invertebrates : LC50 (Daphnia magna (Water flea)): 1,535 mg/l
Exposure time: 24 h
Test Type: static test
Test substance: Non neutralised product
Method: OECD Test Guideline 202

Toxicity to algae/aquatic plants : NOEC (Scenedesmus quadricauda (Green algae)): 425 mg/l
Exposure time: 8 d
Test Type: static test
Test substance: Non neutralised product

Toxicity to microorganisms : TT (Pseudomonas putida): > 10,000 mg/l
Exposure time: 16 h
Test substance: Non neutralised product

Persistence and degradability**Components:****Trisodium Citrate Dihydrate:**

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

Biodegradation: 100 %
Testing period: 19 d
Method: OECD Test Guideline 301E
Test substance: Non neutralised product
Remarks: Readily biodegradable.

Physico-chemical removability : Readily biodegradable.

Bioaccumulative potential**Components:****Trisodium Citrate Dihydrate:**

Bioaccumulation : Remarks: 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

Mobility in soil**Components:****Trisodium Citrate Dihydrate:**

Stability in soil : Remarks: Readily biodegradable.

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Other adverse effects**Product:**

Additional ecological : No data available
information

SECTION 13. DISPOSAL CONSIDERATIONS**Disposal methods**

Waste from residues : In accordance with local and national regulations.
Where possible recycling is preferred to disposal or incineration.

Contaminated packaging : Empty containers should be taken to an approved waste handling site for recycling or disposal.

SECTION 14. TRANSPORT INFORMATION**International Regulations****IATA-DGR**

Not regulated as a dangerous good

IMDG-Code

Not regulated as a dangerous good

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

National Regulations**TDG**

Not regulated as a dangerous good

Special precautions for user

Not applicable

SECTION 15. REGULATORY INFORMATION**The components of this product are reported in the following inventories:**

TCSI	: On the inventory, or in compliance with the inventory
TSCA	: All substances listed as active on the TSCA inventory
AIIC	: On the inventory, or in compliance with the inventory
DSL	: All components of this product are on the Canadian DSL
ENCS	: On the inventory, or in compliance with the inventory
ISHL	: On the inventory, or in compliance with the inventory
KECI	: 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
NZIoC	: On the inventory, or in compliance with the inventory

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Canadian lists

Canadian National Pollutant Release Inventory (NPRI): No component is listed on NPRI.

No substances are subject to a Significant New Activity Notification.

SECTION 16. OTHER INFORMATION**Full text of other abbreviations**

AIIC - Australian Inventory of Industrial Chemicals; ANTT - National Agency for Transport by Land of Brazil; ASTM - American Society for the Testing of Materials; bw - Body weight; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); 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; ERG - Emergency Response Guide; 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; Nch - Chilean Norm; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NOM - Official Mexican Norm; NTP - National Toxicology Program; 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; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TDG - Transportation of Dangerous Goods; TEI - Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative; WHMIS - Workplace Hazardous Materials Information System

Items where relevant changes have been made to the previous version are highlighted in the body of this document by two vertical lines, red letters and grey shading.

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