

## TRI SODIUM CITRATE (DIHYDRATE)

### SECTION 1: CHEMICAL PRODUCT IDENTIFICATION

**Product Name:** TRI SODIUM CITRATE (DIHYDRATE)

**Product Code :** 542

**CAS#:** 6132-04-3

**CI#:** Not available

**Synonym:** Not available

**Chemical Name:** Not available.

**Chemical Formula:**  $C_6H_5Na_3O_7 \cdot 2H_2O$

**Molecular Weight:** 294.1

### SECTION 2: COMPOSITION AND INFORMATION ON INGREDIENTS

**Composition:**

**Name:** TRI SODIUM CITRATE (DIHYDRATE)

**Toxicological Data on Ingredients:** Not applicable.

### SECTION 3: HAZARDS IDENTIFICATION

**Potential Acute Health Effects:** Slightly hazardous in case of skin contact (irritant), of eye contact (irritant), of ingestion, of inhalation.

**Potential Chronic Health Effects:**

**Carcinogenic Effects:** Not available.

**Mutagenic Effects:** Not available.

**Teratogenic Effects:** Not available.

**Developmental Toxicity:** Not available. Repeated or prolonged exposure is not known to aggravate medical condition.

### SECTION 4: FIRST AID MEASURES

**Eye Contact:** Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention.

**Skin Contact:** Wash off immediately with soap and plenty of water. Cover the irritated skin with emollient. Immediate medical attention is required.

**Serious Skin Contact:** Not available.

**Inhalation:** If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

**Serious Inhalation:** Not Available.

**Ingestion:** Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention if symptoms appear.

**Serious Ingestion:** Not available.

### SECTION 5: FIRE AND EXPLOSION DATA

**Flammability of the Product:** May be combustible at high temperature.

**Auto-Ignition Temperature:** Not available.

**Flash Points:** Not available.

**Flammable Limits:** Not available.

**Products of Combustion:** Not available.



**Fire Hazards in Presence of Various Substances:** Slightly flammable to flammable in presence of heat.

**Explosion Hazards in Presence of Various Substances:**

Risks of explosion of the product in presence of mechanical impact: Not available. Slightly explosive in presence of open flames and sparks.

**Fire Fighting Media and Instructions:**

SMALL FIRE: Use DRY chemical powder. LARGE FIRE: Use water spray, fog or foam. Do not use water jet.

**Special Remarks on Fire Hazards:** As with most organic solids, fire is possible at elevated temperatures

**Special Remarks on Explosion Hazards:**

Fine dust dispersed in air in sufficient concentrations, and in the presences of an ignition source is a potential dust explosion hazard.

## SECTION 6: ACCIDENTAL RELEASE MEASURES

**Small Spill:** Use appropriate tools to put the spilled solid in a convenient waste disposal container. Finish cleaning by spreading water on the contaminated surface and dispose of according to local and regional authority requirements

**Large Spill:** Use a shovel to put the material into a convenient waste disposal container. Finish cleaning by spreading water on the contaminated surface and allow to evacuate through the sanitary system.

## SECTION 7: HANDLING AND STORAGE

**Precautions:** Keep away from heat. Keep away from sources of ignition. Empty containers pose a fire risk, evaporate the residue under a fume hood. Ground all equipment containing material. Do not breathe dust. Keep away from incompatibles such as oxidizing agents.

**Storage:** Store in tightly closed container in a cool & dry place.

## SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

**Exposure controls**

**Appropriate engineering controls** Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

**Personal protective equipment**

**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 glove's 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.

**Body Protection** Complete suit protecting against chemicals, 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).

**Control of environmental exposure** Do not let product enter drains.

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

<b>Appearance Form</b>	: White granular crystals or crystalline powder
<b>Colour</b>	: Not available
<b>Odour</b>	: Not available
<b>Odour Threshold</b>	: Not available
<b>pH</b>	: 7.0-9.0
<b>Melting point/freezing point</b>	: Not available
<b>Initial boiling point and boiling range</b>	: Not available
<b>Flash point</b>	: Not available



Evaporation rate	: Not available
Flammability (solid, gas)	: Not available
Upper/lower flammability or explosive limits	: Not available
Vapour pressure	: Not available
Vapour density	: Not available
Relative density	: Not available
Water solubility	: Not available
Partition coefficient	: Not available
Auto-ignition temperature	: Not available

#### SECTION 10: STABILITY AND REACTIVITY DATA

**Stability:** The product is stable.

**Instability Temperature:** Not available.

**Conditions of Instability:** Not available.

**Incompatibility with various substances:** Reactive with oxidizing agents.

**Corrosivity:** Non-corrosive in presence of glass.

**Special Remarks on Reactivity:** Not available.

**Special Remarks on Corrosivity:** Not available.

**Polymerization:** Will not occur.

#### SECTION 11: TOXICOLOGICAL INFORMATION

##### Acute toxicity

LD50 Oral - Mouse - male and female - 5.400 mg/kg

LD50 Dermal - Rat - male and female - > 2.000 mg/kg

##### Skin corrosion/irritation

Skin - Rabbit

Result: No skin irritation - 4 h

##### Serious eye damage/eye irritation

Eyes - Rabbit

Result: No eye irritation - 72 h

##### Respiratory or skin sensitization

Maximization Test

##### Germ cell mutagenicity

Test Type: Ames test

Test system: S. typhimurium

Metabolic activation: with and without metabolic activation

Result: negative

Test Type: Micronucleus test

Test system: Human lymphocytes

Metabolic activation: without metabolic activation

Method: OECD Test Guideline 487

Result: positive

Test Type: dominant lethal test

Species: Rat

Application Route: Oral

Method: Regulation (EC) No. 440/2008, Annex, B.22

Result: negative

Test Type: Chromosome aberration test

Species: Rat

Cell type: Bone marrow

Application Route: Oral



Result: negative

**Carcinogenicity**

No data available

**Reproductive toxicity**

No data available

**Specific target organ toxicity - single exposure**

No data available

**Specific target organ toxicity - repeated exposure**

No data available

**Aspiration hazard**

No data available

**SECTION 12: ECOLOGICAL INFORMATION**

**Toxicity**

Toxicity to fish LC50 - Poecilia reticulata (guppy) - > 18.000 - 32.000 mg/l - 96 h

Toxicity to daphnia EC50 - Daphnia magna (Water flea) - 5.600 - 10.000 mg/l - 48 h  
and other aquatic  
invertebrates

**SECTION 13: 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.

**Contaminated packaging** Dispose of as unused product.

**SECTION 14: TRANSPORT INFORMATION**

**UN number:**

**ADR/RID:**

**IMDG:**

**IATA:**

**UN proper shipping name**

**ADR/RID:** Not dangerous goods

**IMDG:** Not dangerous goods

**IATA:** Not dangerous goods

**Transport hazard class(es):**

**ADR/RID:**

**IMDG:**

**IATA:**

**Packaging group:**

**ADR/RID:**

**IMDG:**

**IATA:**

**Environmental hazards:**

**ADR/RID:** No

**IMDG Marine pollutant:** No

**IATA:** No

**SECTION 15: OTHER REGULATORY INFORMATION**

**Federal and State Regulations:** TSCA 8(b) inventory: TRI SODIUM CITRATE (DIHYDRATE)

**Other Regulations:** Not available.

**Other Classifications:**

**WHMIS (Canada):** Not controlled under WHMIS (Canada).

**DSCL (EEC):**

This product is not classified according to the EU regulations. Not applicable.

**HMIS (U.S.A.):**

**Health Hazard:** 1



**Fire Hazard: 1**

**Reactivity: 0**

**Personal Protection: E**

**National Fire Protection Association (U.S.A.):**

**Health: 1**

**Flammability: 1**

**Reactivity: 0**

**Specific hazard:**

**Protective Equipment:**

Gloves. Lab coat. Dust respirator. Be sure to use an approved/certified respirator or equivalent. Safety glasses.

#### **SECTION 16: OTHER INFORMATION**

**References: Full text of H AND R-Statements.**

Not available.

**Other Special Considerations:** Not available

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