

Product Name	Tri-Sodium Citrate Dihydrate
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Section 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product identification:

Product Description: Tri-Sodium Citrate Dihydrate

Synonyms: Citric acid trisodium salt dihydrate

CAS-No: 6132-04-3

EC-No.: 200-675-3

Molecular Formula: $C_6H_5Na_3O_7 \cdot 2H_2O$

REACH Registration No: A registration number is not available for this substance as the substance or its use are exempted from registration according to Article 2 REACH Regulation (EC) No 1907/2006, the annual tonnage does not require a registration or the registration is envisaged for a later registration deadline.

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

Recommended Use: Laboratory chemicals, used as a pharma excipient

1.3. Details of the supplier of the safety data sheet:

- Company** **Finar Limited**
184-186/P, Chacharwadi Vasna,
Sarkhej-Bavla Highway,
Ta.: Sanand, Dist.: Ahmedabad-382110, Gujarat, India.
Web: www.finarchemicals.com
- E-Mail Address** safety.finar@actylis.com; info.finar@actylis.com

1.4. Emergency Telephone Number:

- For Emergency contact on: +91 - 2717 - 616 717

SECTION 2: HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture:

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This substance is not classified as dangerous according to European Union legislation.

2.2. Label Elements:

Labeling Regulation (EC) No 1272/2008

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

2.3. Other Hazards:

None Known

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1. Substances: Tri-Sodium Citrate Dihydrate

3.2. Mixtures:

Component	CAS-No	EC-No.	Weight %
Tri-Sodium Citrate Dihydrate	6132-04-3	200-675-3	100%

SECTION 4: FIRST AID MEASURES

4.1. Description of first aid measures:

- **General advice**

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

- **If inhaled**

Fresh air.

- **In case of skin contact**

Take off immediately all contaminated clothing. Rinse skin with water/ shower.

- **In case of eye contact**

Rinse out with plenty of water. Remove contact lenses.

- **If swallowed**

Make victim drink water (two glasses at most). Consult doctor if feeling unwell.

4.2. Most important symptoms and effects, both acute and delayed:

Irritation and corrosion, Bloody vomiting

4.3. Indication of any immediate medical attention and special treatment needed:

No data available

SECTION 5: FIREFIGHTING MEASURES

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5.1. Extinguishing media:

Suitable Extinguishing Media Use water , alcohol-resistant foam, dry chemical or carbon dioxide.

Unsuitable extinguishing media: For this substance/mixture no limitations of extinguishing agents are given.

5.2. Special hazards arising from the substance or mixture:

Combustible.

Risk of dust explosion.

Development of hazardous combustion gases or vapours possible in the event of fire.

5.3. Advice for firefighters:

Special protective equipment for firefighters

In the event of fire, wear self-contained breathing apparatus.

5.4 Further Information:

Prevent fire extinguishing water from contaminating surface water or the ground water system.

Suppress (knock down) gases/vapours/mists with a water spray jet.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures:

Advice for non-emergency personnel: Avoid inhalation of dusts. Evacuate the danger area, observe emergency procedures, consult an expert.

Advice for emergency responders: For personal protection see section 8.

6.2. Environmental precautions:

Do not let product enter drains.

6.3. Methods and material for containment and cleaning up:

Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up dry. Dispose of properly. Clean up affected area. Avoid generation of dusts.

6.4. Reference to other sections:

For disposal see Sections 13.

SECTION 7: HANDLING AND STORAGE

7.1. Precautions for safe handling:

Ensure adequate ventilation. Avoid contact with skin, eyes or clothing.

Avoid ingestion and inhalation. Avoid dust formation.

7.2. Conditions for safe storage, including any incompatibilities:

Keep containers tightly closed in a dry, cool and well-ventilated place.

7.3. Specific end use(s):

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Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters:

Contains no substances with occupational exposure limit values.

8.2. Exposure Controls:

- **Appropriate Engineering Controls:**

Ensure adequate ventilation, especially in confined areas. Ensure that eyewash stations and safety showers are close to the workstation location.

- **Personal Protective Equipment:**

Protective clothing needs to be selected specifically for the workplace, depending on concentrations and quantities of the hazardous substances handled. The chemical resistance of the protective equipment should be enquired at the respective supplier.

- **Eye & Face Protection-**

Safety Goggles

- **Respiratory Protection-**

No protective equipment is needed under normal use conditions.

- **Environmental Exposure Controls-**

Do not let product enter drains.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties:

- **Physical State:** Solid
- **Appearance:** White
- **Odor:** Odorless
- **pH:** 7.0 – 9.0 at 50g/l 25°C
- **Melting Point:** 300°C
- **Auto-Ignition Temperature:** 345 °C
- **Vapor Pressure:** No data available
- **Vapor Density:** No data available
- **Volatility:** No data available
- **Bulk Density:** ca. 600 kg/m³

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- **Odor Threshold:** No data available
- **Viscosity, dynamic:** at 20°C Not applicable
- **Water/Oil Dist. Co eff.:** No data available
- **Ionicity (in Water):** No data available
- **Partition Coefficient n-octanol/water:** No data available
- **Relative Density:** No data available
- **Boiling Point/Range:** No data available
- **Decomposition Temperature:** >230°C
- **Flash Point:** No data available
- **Density:** 1.65 g/cm³ at 20°C
- **Molecular Weight:** 294.09 g/mol
- **Solubility:** 720 g/l at 25°C

9.2. Other information:

Molecular Formula: C₆H₅Na₃O₇ · 2H₂O

SECTION 10: STABILITY AND REACTIVITY

10.1. Reactivity:

Risk of dust explosion.

10.2. Chemical stability:

The product is chemically stable under standard ambient conditions (room temperature).

10.3. Possibility of hazardous reactions:

Violent reactions possible with:

Strong Oxidizing agents

10.4. Conditions to avoid:

Strong heating (decomposition).

10.5. Incompatible materials:

No data available

10.6. Hazardous decomposition products:

In the event of fire: See section 5.

SECTION 11: TOXICOLOGICAL INFORMATION

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11.1 Information on toxicological effects:

Acute Oral toxicity

LD50 Rat: >8000 mg/kg

(anhydrous substance) (IUCLID)

Symptoms: Ingestion causes burns of the upper digestive and respiratory tracts.

Acute inhalation toxicity

No data available

Acute dermal toxicity

No data available

Skin corrosion/irritation

Skin – Rabbit

Result: No Irritation

OECD Test Guideline 404

(anhydrous substance)

Serious eye damage/eye irritation

Rabbit

Result: slight irritation

OECD Test Guideline 405

(anhydrous substance)

Respiratory or skin sensitization

Sensitisation test: Guinea pig

Result: negative

(anhydrous substance) (IUCLID)

Germ cell mutagenicity

Genotoxicity in vitro

Ames test

Result: negative

(anhydrous substance) (IUCLID)

Carcinogenicity

No data available

Reproductive toxicity

No data available

Teratogenicity

No data available

Specific target organ toxicity - single exposure

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No data available

Specific target organ toxicity - repeated exposure

No data available

Aspiration hazard

No data available

11.2 Additional Information:

After uptake:

Bloody vomiting, disturbed electrolyte balance.

However, when the product is handled appropriately, hazardous effects are unlikely to occur.

Handle in accordance with good industrial hygiene and safety practice.

SECTION 12: ECOLOGICAL INFORMATION

12.1. Toxicity:

Toxicity to fish

LC50 *Poecilia reticulata* (guppy): > 18,000 - 32,000 mg/l; 96 h

(anhydrous substance) (IUCLID)

Toxicity to daphnia and other aquatic invertebrates

EC50 *Daphnia magna* (Water flea): 5,600 - 10,000 mg/l; 48 h

(anhydrous substance) (IUCLID)

Toxicity to algae

IC50 *Chlorella vulgaris* (Fresh water algae): > 18,000 - 32,000 mg/l; 96 h

OECD Test Guideline 201

(anhydrous substance)

Toxicity to bacteria

Toxicity to bacteria EC50 *Pseudomonas fluorescens*: > 1,800 - 3,200 mg/l; 8 h

(anhydrous substance) (IUCLID)

12.2 Persistence and degradability:

Biodegradability

98 %; 3 d

(External MSDS)

Readily biodegradable

12.3 Bioaccumulate potential:

No data available

12.4 Mobility in soil:

No data available

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12.5 Results of PBT and vPvB assessment:

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted.

12.6 Other adverse effects:

Discharge into the environment must be avoided.

SECTION 13: Disposal considerations**13.1 Waste treatment methods:**

Waste material must be disposed of in accordance with the national and local regulations.

Leave chemicals in original containers. No mixing with other waste.

Handle uncleaned containers like the product itself.

SECTION 14: Transport information

	Land transport (ADR/RID)	Air transport (IATA)	Sea transport (IMDG)
14.1 UN number	Not classified as dangerous in the meaning of transport regulations.		
14.2 Proper shipping name	Not classified as dangerous in the meaning of transport regulations.		
14.3 Class	Not classified as dangerous in the meaning of transport regulations.		
14.4 Packing group	Not classified as dangerous in the meaning of transport regulations.		
14.5 Environmentally hazardous	Not classified as dangerous in the meaning of transport regulations.		
14.6 Special precautions for user	Not classified as dangerous in the meaning of transport regulations.		
14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code			
No Data Available			

SECTION 15: Regulatory information**15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture:**

National legislation

Storage class 10-13

15.2 Chemical safety assessment:

For this product a chemical safety assessment was not carried out.

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SECTION 16: Other information

Training advice

Provide adequate information, instruction and training for operators.

References: Not available

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