1. Identification

Product Name: Sodium Citrate Dihydrate
Cat No.: S279-3; S279-10; S279-10LC; S279-50; S279-50KB; S279-275LB; S279-500; S279-500LC;
CAS No: 6132-04-3
Synonyms: 2-Hydroxy-1,2,3-Propanetricarboxylic Acid Trisodium Salt.
Recommended Use: Laboratory chemicals.
Uses advised against: Food, drug, pesticide or biocidal product use.

Details of the supplier of the safety data sheet

Company: Fisher Scientific Company
One Reagent Lane
Fair Lawn, NJ 07410
Tel: (201) 796-7100

Emergency Telephone Number
CHEMTREC®, Inside the USA: 800-424-9300
CHEMTREC®, Outside the USA: 001-703-527-3887

2. Hazard(s) identification

Classification
This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Combustible dust: Yes

Label Elements

Signal Word: Warning

Hazard Statements
May form combustible dust concentrations in air

Precautionary Statements
**Storage**
Store in a well-ventilated place. Keep container tightly closed

**Hazards not otherwise classified (HNOC)**
None identified

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### 3. Composition/Information on Ingredients

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS No</th>
<th>Weight %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Citrate, sodium, dihydrate</td>
<td>6132-04-3</td>
<td>&gt;95</td>
</tr>
<tr>
<td>Sodium citrate</td>
<td>68-04-2</td>
<td>-</td>
</tr>
</tbody>
</table>

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### 4. First-aid measures

**Eye Contact**
Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention if symptoms occur.

**Skin Contact**
Wash off immediately with plenty of water for at least 15 minutes. If skin irritation persists, call a physician.

**Inhalation**
Remove to fresh air. Get medical attention immediately if symptoms occur. If not breathing, give artificial respiration.

**Ingestion**
Do NOT induce vomiting. Get medical attention immediately if symptoms occur.

**Most important symptoms and effects**
No information available.

**Notes to Physician**
Treat symptomatically

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### 5. Fire-fighting measures

**Suitable Extinguishing Media**
Water spray, carbon dioxide (CO2), dry chemical, alcohol-resistant foam.

**Unsuitable Extinguishing Media**
No information available

**Flash Point**
No information available

**Method**
No information available

**Autoignition Temperature**
500 °C / 932 °F

**Explosion Limits**
- **Upper** No data available
- **Lower** No data available

**Sensitivity to Mechanical Impact**
No information available

**Sensitivity to Static Discharge**
No information available

**Specific Hazards Arising from the Chemical**
Thermal decomposition can lead to release of irritating gases and vapors. Dust can form an explosive mixture with air. Fine dust dispersed in air may ignite.

**Hazardous Combustion Products**
Carbon monoxide (CO), Carbon dioxide (CO2), Sodium oxides.

**Protective Equipment and Precautions for Firefighters**
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

**NFPA**
### 6. Accidental release measures

<table>
<thead>
<tr>
<th>Personal Precautions</th>
<th>Ensure adequate ventilation. Avoid dust formation. Avoid contact with skin and eyes. Use personal protective equipment as required.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Environmental Precautions</td>
<td>No special environmental precautions required. See Section 12 for additional Ecological Information.</td>
</tr>
</tbody>
</table>

**Methods for Containment and Clean Up**
Sweep up and shovel into suitable containers for disposal. Avoid dust formation.

### 7. Handling and storage

| Handling | Ensure adequate ventilation. Avoid contact with skin, eyes or clothing. Avoid ingestion and inhalation. Avoid dust formation. |

### 8. Exposure controls / personal protection

**Exposure Guidelines**
This product does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

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

**Personal Protective Equipment**

| Eye/face Protection | Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA’s eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166. |
| Skin and body protection | Wear appropriate protective gloves and clothing to prevent skin exposure. |
| Respiratory Protection | No protective equipment is needed under normal use conditions. |
| Recommended Filter type: | Particle filter. |
| Hygiene Measures | Handle in accordance with good industrial hygiene and safety practice. |

### 9. Physical and chemical properties

| Physical State | Solid |
| Appearance | White |
| Odor | Odorless |
| Odor Threshold | No information available |
| pH | 8.4 @ 20°C  5% aq. solution |
| Melting Point/Range | >300 °C / 572 °F |
| Boiling Point/Range | No information available |
| Flash Point | No information available |
| Evaporation Rate | Not applicable |
| Flammability (solid,gas) | No information available |
| Flammability or explosive limits | Upper: No data available |
| | Lower: No data available |
| Vapor Pressure | No information available |
Sodium Citrate Dihydrate

Vapor Density: Not applicable
Specific Gravity: No information available
Solubility: Soluble in water
Partition coefficient; n-octanol/water: No data available
Autoignition Temperature: 500 °C / 932 °F
Decomposition Temperature: > 230°C
Viscosity: Not applicable
Molecular Formula: C6 H5 Na3 O7 . 2 H2 O
Molecular Weight: 294.09

10. Stability and reactivity

Reactive Hazard: None known, based on information available
Stability: Stable under normal conditions.
Incompatible Materials: Strong oxidizing agents, Strong reducing agents, Acids, Bases
Hazardous Decomposition Products: Carbon monoxide (CO), Carbon dioxide (CO₂), Sodium oxides
Hazardous Polymerization: Hazardous polymerization does not occur.
Hazardous Reactions: None under normal processing.

11. Toxicological information

Acute Toxicity

<table>
<thead>
<tr>
<th>Component</th>
<th>LD50 Oral</th>
<th>LD50 Dermal</th>
<th>LC50 Inhalation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Citrate, sodium, dihydrate</td>
<td>LD50 = 5400 mg/kg (Mouse) (OECD 401)</td>
<td>LD50 = &gt; 2000 mg/kg (Rat) (OECD 402)</td>
<td>Not listed</td>
</tr>
<tr>
<td>Sodium citrate</td>
<td>5400 mg/kg (Mouse)</td>
<td>Not listed</td>
<td>Not listed</td>
</tr>
</tbody>
</table>

Toxicologically Synergistic Products: No information available

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Irritation: May cause skin, eye, and respiratory tract irritation
Sensitization: No information available
Carcinogenicity: The table below indicates whether each agency has listed any ingredient as a carcinogen.

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS No</th>
<th>IARC</th>
<th>NTP</th>
<th>ACGIH</th>
<th>OSHA</th>
<th>Mexico</th>
</tr>
</thead>
<tbody>
<tr>
<td>Citrate, sodium, dihydrate</td>
<td>6132-04-3</td>
<td>Not listed</td>
<td>Not listed</td>
<td>Not listed</td>
<td>Not listed</td>
<td>Not listed</td>
</tr>
<tr>
<td>Sodium citrate</td>
<td>68-04-2</td>
<td>Not listed</td>
<td>Not listed</td>
<td>Not listed</td>
<td>Not listed</td>
<td>Not listed</td>
</tr>
</tbody>
</table>

Mutagenic Effects: No information available

Reproductive Effects: No information available.
Developmental Effects: No information available.
Teratogenicity: No information available.
STOT - single exposure: None known
STOT - repeated exposure: None known
Aspiration hazard: No information available
Symptoms / effects, both acute and delayed: No information available
Endocrine Disruptor Information: No information available
Other Adverse Effects: The toxicological properties have not been fully investigated.

12. Ecological information

Ecotoxicity

<table>
<thead>
<tr>
<th>Component</th>
<th>Freshwater Algae</th>
<th>Freshwater Fish</th>
<th>Microtox</th>
<th>Water Flea</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium citrate</td>
<td>Not listed</td>
<td>LC50: 18000 - 32000 mg/L, 96h (Poecilia reticulata)</td>
<td>EC50: 1800 - 3200 mg/L, 8h</td>
<td>EC50: 5600 - 10000 mg/L, 48h (Daphnia magna)</td>
</tr>
</tbody>
</table>

Persistence and Degradability: Soluble in water. Persistence is unlikely based on information available.
Bioaccumulation/ Accumulation: No information available.
Mobility: Will likely be mobile in the environment due to its water solubility.

13. Disposal considerations

Waste Disposal Methods: Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.

14. Transport information

DOT: Not regulated
TDG: Not regulated
IATA: Not regulated
IMDG/IMO: Not regulated

15. Regulatory information

United States of America Inventory

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS No</th>
<th>TSCA</th>
<th>TSCA Inventory notification - Active-Inactive</th>
<th>TSCA - EPA Regulatory Flags</th>
</tr>
</thead>
<tbody>
<tr>
<td>Citrate, sodium, dihydrate</td>
<td>6132-04-3</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Sodium citrate</td>
<td>68-04-2</td>
<td>X</td>
<td>ACTIVE</td>
<td></td>
</tr>
</tbody>
</table>

Legend:
TSCA: US EPA (TSCA) - Toxic Substances Control Act, (40 CFR Part 710)
X - Listed
'-' - Not Listed

TSCA - Per 40 CFR 751, Regulation of Certain Chemical Substances & Mixtures, Under TSCA Section 6(h) (PBT): Not applicable
TSCA 12(b) - Notices of Export: Not applicable

International Inventories
Canada (DSL/NDSL), Europe (EINECS/ELINCS/NLP), Philippines (PICCS), Japan (ENCS), Japan (ISHL), Australia (AICS), China (IECSC), Korea (KECL).

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS No</th>
<th>DSL</th>
<th>NDSL</th>
<th>EINECS</th>
<th>PICCS</th>
<th>ENCS</th>
<th>ISHL</th>
<th>AICS</th>
<th>IECSC</th>
<th>KECL</th>
</tr>
</thead>
</table>

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Sodium Citrate Dihydrate

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS No</th>
<th>OECD HPV</th>
<th>Persistent Organic Pollutant</th>
<th>Ozone Depletion Potential</th>
<th>Restriction of Hazardous Substances (RoHS)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Citrate, sodium, dihydrate</td>
<td>6132-04-3</td>
<td>Not applicable</td>
<td>Not applicable</td>
<td>Not applicable</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Sodium citrate</td>
<td>68-04-2</td>
<td>Listed</td>
<td>Not applicable</td>
<td>Not applicable</td>
<td>Not applicable</td>
</tr>
</tbody>
</table>

Contains component(s) that meet a 'definition' of per & poly fluoroalkyl substance (PFAS)?
Not applicable
16. Other information

Prepared By
Regulatory Affairs
Thermo Fisher Scientific
Email: EMSDS.RA@thermofisher.com

Creation Date
09-Dec-2009
Revision Date
13-Oct-2023
Print Date
13-Oct-2023
Revision Summary
This document has been updated to comply with the US OSHA HazCom 2012 Standard replacing the current legislation under 29 CFR 1910.1200 to align with the Globally Harmonized System of Classification and Labeling of Chemicals (GHS).

Disclaimer
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.

End of SDS