

MATERIAL SAFETY DATA SHEET**SODIUM CITRATE**

PRODUCT CODE NUMBER(S): 7620-1, 7621-1, 7625-1, CAL 0402

PRODUCT IDENTIFICATION

Chemical Name and Synonyms: *Sodium citrate, dihydrate; Trisodium citrate*
Chemical Family: *Saturated aliphatic carboxylic acid salt*
Chemical Formula: $Na_3C_6H_5O_7 \cdot 2H_2O$
Product Use: *Laboratory reagent*
Manufacturer's Name and Address:
*Caledon Laboratories Ltd.,
40 Armstrong Avenue,
Georgetown, Ontario L7G 4R9*
Telephone No: (905) 877-0101
Fax No: (905) 877-6666
Emergency Telephone No: CANUTEC (613) 996-6666

HAZARDOUS INGREDIENTS OF MATERIALS

<i>Ingredients</i>	<i>%</i>	<i>TLV Units</i>	<i>CAS No.</i>
<i>Sodium citrate</i>	<i>99</i>	<i>Not established</i>	<i>6132-04-3</i>

PHYSICAL DATA

Physical State: *Solid*
Odour and Appearance: *Odorless, colorless to white crystals or free-flowing granules.*
Odour Threshold (ppm): *Not available*
Vapour Pressure (mm Hg): *Not available*
Vapour Density (Air = 1): *Not available*
Evaporation Rate: *Not available*
Boiling Point (degrees C): *Decomposes*
Melting Point (degrees C): *>300°C; 150°C (loses water)*
pH: *7.5 to 9 (5%, aqueous)*
Specific Gravity: *1.9*
Coefficient of Water/Oil distribution: *Not available*

SHIPPING DESCRIPTION

UN: *Not regulated*
T.D.G. Class: *Not regulated*
Pkg. Group: *Not regulated*

REACTIVITY DATA

Chemical Stability: *Stable under normal temperatures and pressures*
Incompatibility with other substances: *May react violently with bases, oxidizing agents, reducing agents. Corrodes aluminum, iron and zinc in the presence of moisture.*
Reactivity: *Avoid excessive heat, ignition sources, generation of dust, incompatible materials.*
Hazardous Decomposition Products: *Thermal decomposition may release caustic fumes of sodium and CO_x*

FIRE AND EXPLOSION DATA

Flammability: *May be combustible if strongly heated. As with most organic compounds, fine dust dispersed in air in the presence of an ignition source is a potential dust explosion hazard.*
Extinguishing Media: *Use extinguishing media appropriate to the surrounding fire. Use water as spray or fog to minimize dust, absorb heat, cool containers, and disperse vapours. Fight fire from upwind, from a safe distance. Firefighters should wear protective equipment and clothing sufficient to prevent inhalation of dust or fumes, and contact with skin and eyes.*
Flash Point (Method Used): *Not applicable. Does not form vapour*

Autoignition Temperature: *Not available*
Upper Flammable Limit (% by volume): *Not available*
Lower Flammable Limit (% by volume): *Not available*
Hazardous Combustion Products: CO_x
Sensitivity to Impact: *None identified*
Sensitivity to Static discharge: *As with most organic powders, mixtures of dust with air may be sensitive under certain conditions, when ignited by an electrostatic or other high-voltage spark, or other ignition source.*

TOXICOLOGICAL PROPERTIES AND HEALTH DATA**Toxicological Data:**

LD₅₀: *Not available*
LC₅₀: *Not available*

Effects of Acute Exposure to Product:

Inhaled: *Essentially non-toxic. May cause mechanical irritation to nose throat and upper respiratory tract.*
In contact with skin: *May cause mechanical irritation.*
In contact with eyes: *May cause mechanical irritation.*
Ingested: *Essentially non-toxic. May irritate gastrointestinal tract. Large doses may cause nausea and vomiting and exert a mild diuretic or laxative effect producing diarrhea. In addition, overdoses with sodium salts may cause hypernoia and convulsing.*

Effects of Chronic Exposure to Product:

Carcinogenicity: *No evaluation by IARC, ACGIH, NTP (US)*
Teratogenicity: *No human or animal information available.*
Reproductive Effects: *No information available*
Mutagenicity: *No information available*
Synergistic Products: *None known*

PREVENTIVE MEASURES

Engineering Controls: *Local exhaust ventilation.*

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Respiratory Protection: Dust mask. NIOSH approved respirator for dusty conditions. Positive-pressure, full face-piece self-contained breathing apparatus for high or unknown concentrations, as in fire or spill conditions.

Eye Protection: Chemical safety glasses

Skin Protection: Rubber or plastic gloves. Other protective body-covering clothing sufficient to limit contact.

Other Personal Protective Equipment: Safety shower and eye-wash fountain in work area.

Leak and Spill Procedure: Cleanup personnel should be trained in the handling of hazardous chemicals, and should wear protective equipment and clothing sufficient to prevent inhalation of dust or fumes and contact with skin and eyes. Gather up in a manner that does not raise dust. Prevent from entering sewers or waterways. Transfer carefully into container and arrange removal by disposal company. Wash site of spillage thoroughly with water and detergent.

Waste Disposal: Follow all federal, provincial and local regulations for disposal.

Handling Procedures and Equipment: Use routine safe handling procedures. Personnel working with this product should be trained in its hazards and its safe use, and should wear appropriate protective clothing and equipment. If dust is present, observe explosion prevention measures, use non-sparking tools, keep away from heat, sparks, and all sources of ignition; avoid the accumulation of static charge, ground and bond equipment and containers. Avoid generating dust. Maintain good housekeeping procedures to avoid accumulation of dust. Avoid contact and inhalation. Use the smallest amount possible for the purpose, in a designated area with appropriate ventilation. Wash thoroughly after handling.

Storage Requirements: Store in suitable, labelled containers, in a cool, dry, well-ventilated area, out of direct sunlight. Keep containers tightly closed when not in use and when empty. Protect from damage. Store away from incompatible materials.

Date Issued: March 10, 1989

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MSDS: 7620-1, 7621-1, 7625-1, CAL 0402

Proposed WHMIS Designation: Not controlled. Not required to be updated every three years (WHMIS 1992, B-40, Section 29,2)

Prepared by: Caledon Laboratories Ltd. (905) 877-0101
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FIRST AID MEASURES

Specific Measures:

Eyes: Flush eyes thoroughly with gently running water, holding eyelids open while flushing, for five to ten (5-10) minutes, or until no trace of chemical remains. Get medical advice if irritation develops.

Skin: Remove contaminated clothing, including watches, rings, belts, and shoes. Flush skin with plenty of running water for five to ten (5-10) minutes. Get medical advice if irritation develops.

Inhalation: Remove to fresh air. Give oxygen and get medical attention for any breathing difficulty.

Ingestion: If the victim is alert and not convulsing, rinse mouth thoroughly with water and give 2 to 4 glasses of water to drink to dilute. If victim feels unwell, or if a large amount has been ingested, get medical attention.

REFERENCES USED

CCINFO disc: MSDS's, May 2007

Budavari: The Merck Index, 12th ed., 1997

Sax, Lewis: Hawley's Condensed Chemical Dictionary, 11th ed., 1987

Suppliers' Material Safety Data Sheets

ADDITIONAL INFORMATION