

Section 1: Identification

Common Name/Trade Name	CALCIUM CITRATE TETRAHYDRATE USP	
Supplier Information	Letco Medical, LLC 1316 Commerce Drive NW Decatur, AL 35601 1 (800) 239-5288 +1 (734) 843-4693	IN CASE OF EMERGENCY: Chemtrec 1 (800) 424-9300 (24 hours) NSW Poisons Information Centre: 131 126 (24 hours)
Distributor Name	Bella Corp Trading Pty Ltd 6/34 Dominions Road, Ashmore QLD 4214, Australia Telephone: 07 5597 4169 Email: bellacorp@bellacorp.com.au	
Product Synonym(s)	Tricalcium Citrate, Tricalcium-di-(2-hydroxypropane-1,2,3-tricarboxylate) tetrahydrate	
Relevant Use(s) of Product	Manufacture or Compounding of Substances	

Section 2: Hazards Identification

Classification of Substance or Mixture	Not a hazardous substance or mixture.
Signal Word	None
Hazard Statement(s)	N/A
Pictogram(s)	N/A
Precautionary Statement(s)	N/A
Hazards Not Otherwise Classified	No data available
Ingredient(s) with Unknown Toxicity	No data available

Section 3: Composition/Information on Ingredients

Chemical Name	Tricalcium-di-(2-hydroxypropane-1,2,3-tricarboxylate) tetrahydrate
Common Name	Calcium citrate tetrahydrate
CAS Number	5785-44-4
Impurities and/or Stabilizing Additives	No data available

Section 4: First Aid Measures

General Advice	Notes to physician: Treatment: Treat symptomatically
If Inhaled	Move person into fresh air.
In Case of Skin Contact	Immediately flush skin with large amounts of water.
In Case of Eye Contact	If easy to do, remove contact lens, if worn. Immediately flush eye(s) with plenty of water.
If Swallowed	Clean mouth with water and drink afterwards plenty of water.
Most Important Symptoms and Effects	No data available.

Section 5: Fire Fighting Measures

Suitable Extinguishing Media	Suitable extinguishing media: Water spray Dry powder Foam Carbon dioxide (CO2) Further information: Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. In the event of fire and/or explosion do not breathe fumes.
Special Hazards Arising From the Substance/Mixture	Specific hazards during firefighting: Do not use a solid water stream as it may scatter and spread fire. Exposure to decomposition products may be a hazard to health. Hazardous decomposition products formed under fire conditions.
Special PPE and/or Precautions for Firefighters	Wear self-contained breathing apparatus for firefighting if necessary. Wear fire-resistant or flame-retardant clothing.

Section 6: Accidental Release Measures

Personal Precautions, Protective Equipment and Emergency Procedures	Avoid dust formation. Avoid breathing dust. Ensure adequate ventilation, especially in confined areas. Refer to protective measures listed in sections 7 and 8.
Methods and Materials Used for Containment	Prevent further leakage or spillage if safe to do so.
Cleanup Procedures	Use mechanical handling equipment. Keep in suitable, closed containers for disposal. Clean contaminated surface thoroughly. Sections 13 and 15 of this SDS provide information regarding certain local or national requirements.

Section 7: Handling and Storage

Precautions for Safe Handling	Risk of dust explosion. Avoid creating dust. May form combustible dust concentrations in air (during processing). Do not breathe dust. Avoid contact with skin and eyes. Wear personal protective equipment.
Conditions for Safe Storage	Keep containers tightly closed in a dry, cool and well-ventilated place. Take measures to prevent the build-up of electrostatic charge. Further information on storage conditions: Do not store at temperatures above 30°C/86°F. Advice on common storage: Never allow product to get in contact with water during storage. Other data: 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.
Appropriate Engineering Controls	Provide adequate ventilation. Avoid contact with skin, eyes and clothing. Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and immediately after handling the product. Remove contaminated clothing and protective equipment before entering eating areas.
PPE - Eye/Face Protection	Safety glasses
PPE - Skin Protection	Choose gloves to protect hands against chemicals depending on the concentration and quantity of the hazardous substance and specific to place of work. For special applications, we recommend clarifying the resistance to chemicals of the aforementioned protective gloves with the glove manufacturer.
PPE - Body Protection	Choose body protection according to the amount and concentration of the dangerous substance at the workplace.
PPE - Respiratory Protection	In the case of dust or aerosol formation use respirator with an approved filter. Use NIOSH-approved respiratory protection.

Section 9: Physical and Chemical Properties

Appearance	Powder, colourless
Upper/Lower Flammability or Explosive Limits	No data available
Odor	odourless
Vapor Pressure	No data available
Odor Threshold	No data available
Vapor Density	No data available
pH	5.0-6.5, 2.5%
Relative Density	1.8 (20°C)
Melting Point/Freezing Point	No data available
Solubility	Water solubility 1 - 10 g/l (25°C) insoluble Solvent: Ethanol
Initial Boiling Point and Boiling Range	No data available
Flash Point	No data available
Evaporation Rate	No data available
Flammability (Solid, Gas)	No data available
Partition Coefficient	log Pow: -1.8 - -0.2 Calculation
Auto-Ignition Temperature	Not applicable
Decomposition Temperature	No data available
Viscosity	No data available

Section 10: Stability and Reactivity

Reactivity	No decomposition if stored and applied as directed.
Chemical Stability	Stable under normal conditions.
Possibility of Hazardous Reactions	None known.
Conditions to Avoid	Avoid dust formation
Incompatible Materials	No data available
Hazardous Decomposition Products	Build-up of dangerous/toxic fumes possible in cases of fire/high temperature.

Section 11: Toxicological Information

Acute Toxicity - LD50 Oral	LD50 Oral Mouse: 5,400 mg/kg Method: OECD Test Guideline 401 Test substance: Non-neutralised product LD50 Oral Rat: 11,700 mg/kg Method: OECD Test Guideline 401 Test substance: Non-neutralised product.
Acute Toxicity - Inhalation	No data available
Acute Toxicity - Dermal	LD50 Dermal Rat, male and female: 2,000 mg/kg Test substance: Non-neutralised product.
Acute Toxicity - Eye	Species: Rabbit Result: No eye irritation Method: OECD Test Guideline 405 Remarks: Information given is based on data obtained from similar substances.
Skin Corrosion/Irritation	No data available
Serious Eye Damage/Irritation	No data available
Respiratory or Skin Sensitization	Species: Guinea pig Result: Did not cause sensitisation on laboratory animals. Method: OECD Test Guideline 406 Remarks: Information given is based on data obtained from similar substances.
Germ Cell Mutagenicity	Genotoxicity in vitro: Type: Ames test. Test species: Salmonella typhimurium Concentration: 0.0 - 10 mg/plate Result: negative Method: Mutagenicity (Salmonella typhimurium - reverse mutation assay) Genotoxicity in vivo: Type: in vivo assay Test species: Rat (male) Application Route: Oral Method: OECD Test Guideline 475 Test substance: Non-neutralised product Result: negative Germ cell mutagenicity- Assessment: In vitro tests did not show mutagenic effects
Carcinogenicity IARC	Carcinogenicity - Assessment: Not classifiable as a human carcinogen. No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
Carcinogenicity ACGIH	Carcinogenicity - Assessment: Not classifiable as a human carcinogen. No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.
Carcinogenicity NTP	Carcinogenicity - Assessment: Not classifiable as a human carcinogen. No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
Carcinogenicity OSHA	Carcinogenicity - Assessment: Not classifiable as a human carcinogen. No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.
Reproductive Toxicity	Reproductive toxicity - Assessment: No toxicity to reproduction
Specific Target Organ Toxicity - Single Exposure	No data available
Specific Target Organ Toxicity - Repeated Exposure	Repeated dose toxicity: 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 Test substance: Non-neutralised product
Aspiration Hazard	No aspiration toxicity classification

Section 12: Ecological Information

Toxicity	Toxicity to fish: LC50 (Oncorhynchus tshawytscha (chinook salmon)): > 10 mg/l Exposure time: 24 h Test Method: semi-static test Remarks: Information given is based on data obtained from similar substances. LC50 (Leuciscus idus (Golden orfe)): 440 mg/l Exposure time: 48 h Test Method: static test. Test substance: Non-neutralised product Toxicity to daphnia and other aquatic invertebrates: EC50 (Dreissena polymorpha): > 50 mg/l Exposure time: 48 h Test Method: static test LC50 (Daphnia magna (Water flea)): 1,535 mg/l Exposure time: 24 h Test Method: static test. Test substance: Non-neutralised product Method: No information available. Toxicity to algae: NOEC (Scenedesmus quadricauda (Green algae)): 425 mg/l Exposure time: 8 d Test Type: static test. Test substance: Non-neutralised product. Method: No information available. Toxicity to bacteria: TT (Pseudomonas putida): > 10,000 mg/l Exposure time: 16 h Test substance: Non-neutralised product
Persistence and Degradability	Biodegradation: 97 % Testing period: 28 d Method: OECD Test Guideline 301B Test substance: Non-neutralised product Remarks: Readily biodegradable Biodegradation: 100 % Remarks: Information given is based on data obtained from similar substances. Physico-chemical removability: Remarks: Readily biodegradable
Bio-accumulative Potential	Partition coefficient: noctanol/ water: log Pow: -1.8 - -0.2 Remarks: Calculation Bioaccumulation: Remarks: The product is miscible in water and readily biodegradable in both water and soil. Accumulation is not expected.
Mobility in Soil	No data available
Other Adverse Effects	Results of PBT and vPvB assessment: This substance is not considered to be persistent, bioaccumulating and toxic (PBT). Additional ecological information: This product has no known ecotoxicological effects.

Section 13: Disposal Considerations

Waste Treatment Methods Product	Where possible recycling is preferred to disposal or incineration. Can be landfilled or incinerated, when in compliance with local regulations.
Waste Treatment Methods Packaging	Empty containers should be taken to an approved waste handling site for recycling or disposal. Dispose of as unused product.
Special Precautions Landfill or Incinerations	No data available
Other Information	No data available

Section 14: Transport Information

UN Number	Not dangerous goods
UN Proper Shipping Name	N/A
Transport Hazard Class(es)	N/A
Packaging Group	N/A
Environmental Hazards	N/A

Section 15: Regulatory Information

SARA 311/312 Hazards: No SARA Hazards SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302. SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313. California Prop 65: This product does not contain any chemicals known to the State of California to cause cancer, birth defects, or any other reproductive harm. The components of this product are reported in the following inventories: REACH On the inventory, or in compliance with the inventory EINECS On the inventory, or in compliance with the inventory TSCA On TSCA Inventory DSL All components of this product are on the Canadian DSL Inventories AICS (Australia), DSL (Canada), IECSC (China), ENCS (Japan), ISHL (Japan), KECI (Korea), NZIo C (New Zealand), PICCS (Philippines), TSCA (USA)

Section 16: Other Information

Additional Information	N/A
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