

PRODUCT TECHNICAL DOSSIER

CALCIUM GLUCONATE

Product Code:

P0307

Raw Material Full Name:

Calcium Gluconate

Raw Material Full Botanical/Chemical/Latin/Trade Name/Synonyms:

Calcium Gluconate

This material is Food Grade:

Yes

Vegan / Vegetarian Status:

✓

Limit/Range/Specification:

98.5%-102.0%

CAS Number:

299-28-5

EC/EINECS Number:

206-075-8

Molecular Formula for the raw material:

$C_{12}H_{22}CaO_{14} \cdot H_2O$

Average Molecular weight:

448.39

Solubility in Alcohol:

Insoluble in alcohol

pH:

6.4-8.3

Loss on Drying:

Max 2.0%



Reducing Substances:

Max 1.0%

Chloride:

Max 0.07%

Sulphate:

Max 0.05%

Country of Origin:

China

Country of Origin of the Manufacture:

China

Base Source/Start Material:

Gluconic Acid Fermented from Dextrose (Corn) & Calcium Carbonate 100%

Material is:

100%

Shelf Life from Date of Manufacture:

Min 2 Years

Storage Conditions:

Store in a cool and dry location

Appearance (Fine/Crystals/Crystalline/Hygroscopic):

Crystalline/Granular Powder

Colour:

White to off white

Flavour/Taste:

Characteristic

Odour:

Characteristic

Microbiological Test

Total Viable Count:

Max 1,000cfu/g

Yeast & Moulds:

Max 200cfu/g

E.Coli:

Absent

Salmonella:

Absent

Heavy Metals

Lead (Pb):

Max 3ppm

Cadmium (Cd):

Max 1ppm

Mercury (Hg):

Max 0.1ppm

Arsenic (As):

Max 2ppm

Pharmacopeia Standard Used:

USP

There are no nuts in this recipe; however we cannot guarantee that the raw materials entering the site are nut free.

Please note that surveillance testing may mean that not all the parameters stated on this specification are tested for every batch.



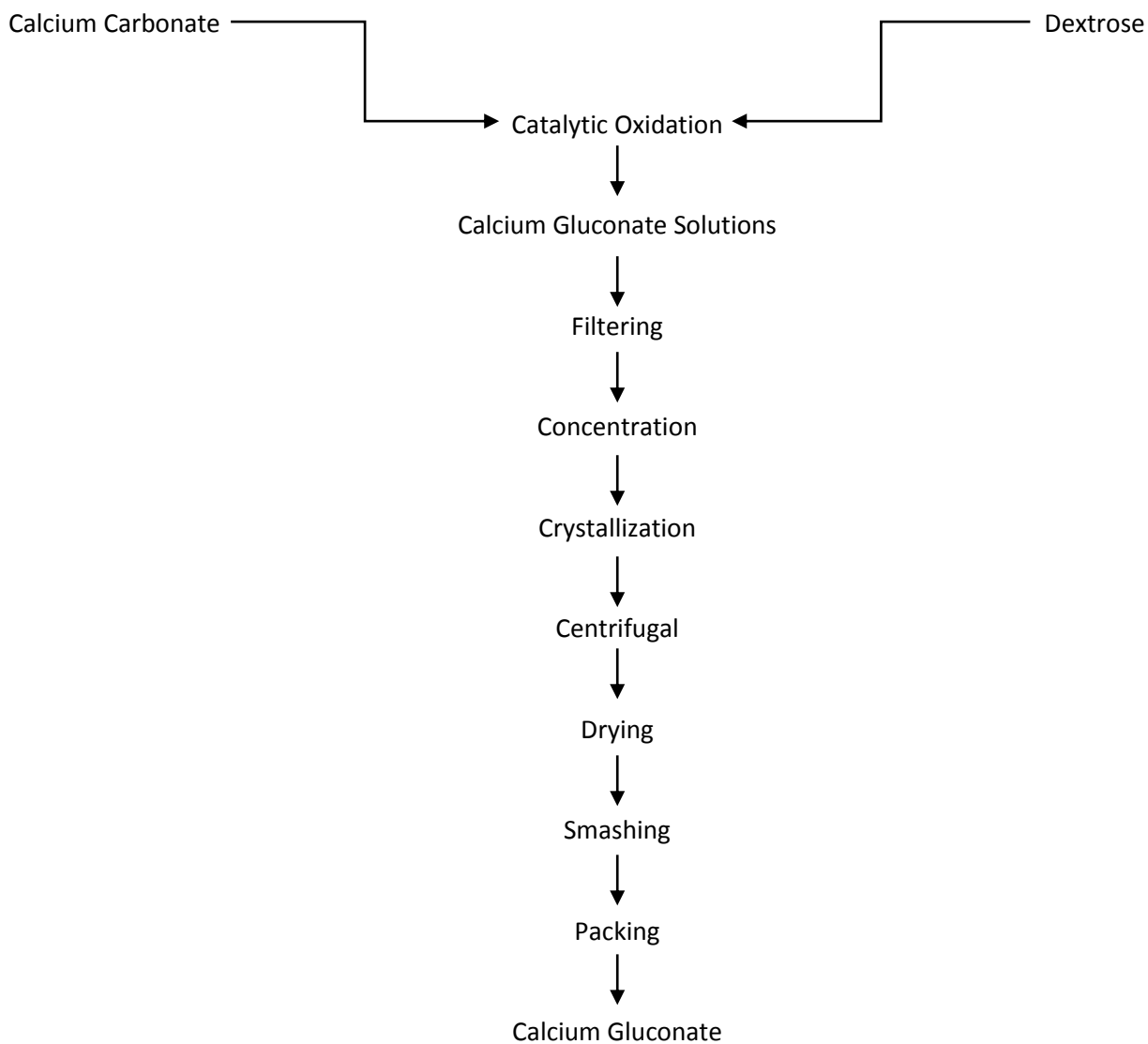
| ALLERGENS | Product Contains YES/NO | Listed Item on Site at Manufacturer YES/NO | If YES, Please Comment |
|---|-------------------------|--|------------------------|
| Peanuts and Peanut Derivatives (There are no nuts in this recipe, however CCL cannot guarantee that the raw materials entering the site are nut free.) | NO | NO | |
| Other Nut and Nut Derivatives <i>Almond (Amygdalus communis L.), Hazelnut (Corylus avellana), Walnut (Juglans regia), Cashew (Anacardium occidentale), Pecan nut (Carya illinoensis (Wangenh.) K. Koch), Brazil nut (Bertholletia excelsa), Pistachio nut (Pistacia vera), Macadamia nut and Queensland nut (Macadamia ternifolia)</i> (There are no nuts in this recipe, however CCL cannot guarantee that the raw materials entering the site are nut free.) | NO | NO | |
| Sesame Seeds and Sesame Seed Derivatives | NO | NO | |
| Other Seeds and Seed Derivatives (Poppy Seeds, Cotton Seeds, Sunflower Seeds) | NO | NO | |
| Milk and Milk Derivatives (including lactose) | NO | NO | |
| Egg and Egg Derivatives | NO | NO | |
| Cereals and Derivatives containing OR POTENTIALLY CONTAMINATED WITH Gluten (<i>wheat, wheatgrass, faro, freekeh, spelt, kamut, rye, oats, barley, barley grass</i>) | NO | NO | |
| Soya and Soya Derivatives | NO | NO | |
| Lupin and Lupin Derivatives | NO | NO | |
| Mustard and Mustard Derivatives | NO | NO | |
| Celery or Celery Derivatives (including Celeriac) | NO | NO | |
| Fish and Fish Derivatives | NO | NO | |
| Molluscs and their Derivatives | NO | NO | |
| Crustaceans and their Derivatives | NO | NO | |
| Sulphur Dioxide and Sulphites (E220, E228) at levels > 10mg/kg or 10mg/litre | NO | NO | |



| ADDITIVES / CONTAMINANTS / DIETARY REQUIREMENTS | Product Contains YES/NO | Listed Item on Site at Manufacturer YES/NO | If YES, Please Comment |
|--|-------------------------|--|------------------------|
| Additives | NO | NO | |
| Antioxidants | NO | NO | |
| Ethylene Oxide | NO | NO | |
| Gelatine | NO | NO | |
| Flavourings (Artificial / Nature Identical / Natural / Smoked) | NO | NO | |
| Maize / Corn and any Derivatives | YES | YES | Source Dextrose |
| Legumes / Pulses | NO | NO | |
| Rice and Rice Derivatives | NO | NO | |
| Added Salt | NO | NO | |
| Added Sugar / artificial or natural sweeteners | NO | NO | |
| Aspartame | NO | NO | |
| BHA / BHT (E320 / E321) | NO | NO | |
| Caffeine | NO | NO | |
| Colours (Artificial / Nature Identical / Natural / Smoked) | NO | NO | |
| Dextrose | YES | YES | Source Dextrose |
| Dioxins | NO | NO | |
| MSG (Added and Naturally Occurring E621) or Glutamates (E620 to E625) | NO | NO | |
| Nucleotides (E627, E630, E631, E635) | NO | NO | |
| Polyols (sugar alcohols) | NO | NO | |
| Benzoates (E210 / E219) | NO | NO | |
| Sorbic Acid (E200, E203) | NO | NO | |
| Any other Preservatives | NO | NO | |
| Ethanol | NO | NO | |
| Honey | NO | NO | |
| Lactose | NO | NO | |
| Yeast and Yeast Derivatives | NO | NO | |
| All Animal Products (Beef, Pork, Poultry or other) and Derivatives (which may include growth/yield hormones, antibiotics etc.) | NO | NO | |
| Bovine Products or Derivatives (which may include growth/yield hormones, antibiotics etc.) | NO | NO | |



PRODUCTION FLOW CHART



CONFIRMATION OF BSE/TSE STATUS

This is to certify that this product complies with all relevant current UK and EU Legislative requirements in regard to Transmissible Spongiform Encephalopathies (TSE) and Bovine Spongiform Encephalopathy (BSE) for human food, and so is free of TSE/BSE.

This is also to certify that, during the course of their manufacture, the above-mentioned product did not come into contact with any materials, which could be derived from TSE/BSE risk materials.

CONFIRMATION OF GM STATUS

This is to certify that this product is not manufactured from GM raw materials and is therefore not subject to labelling under regulations 1829/2003/EC and 1830/2003/EC.

CONFIRMATION OF NON IRRADIATION STATUS

This is to certify that this product, whole or in part, has not been subjected to Ionising Radiation as per European Directives 1999/3/EC.

CONFIRMATION OF NANDROLONE STATUS

This is to certify that this product, whole or in part, has not come into contact with Nandrolone or any of its precursors in any way.

CONFIRMATION OF IOC PRODUCT STATUS

This is to certify that this product, whole or in part, has not come into contact with any product/s, which is banned by the IOC (International Olympics Committee) and or WADA.

CONFIRMATION OF ANIMAL TESTING STATUS

This is to certify that all the products sold by Cambridge Commodities have not been tested on animals in any part of its manufacture in accordance with regulation 86/609/EEC.

CONFIRMATION OF PESTICIDES STATUS

This is to certify that the above-mentioned product complies with the regulation (EC) No.396/2005 of 23rd February 2005 and commission Regulation (EU) No. 559/2011 of 7th June 2011 amending annexes II and III of the above Regulation.

CONFIRMATION OF NANOPARTICLE STATUS

This is to certify that unless otherwise stated, the above-mentioned product is free of nanoparticles. Commission Recommendation 2011/696/EU, defines as follows: "'Nanomaterial' means a natural, incidental or manufactured material containing particles, in an unbound state or as an aggregate or as an agglomerate and where, for 50 % or more of the particles in the number size distribution, one or more external dimensions is in the size range 1 nm - 100 nm".



MATERIAL SAFETY DATA SHEET

Section 1 Identification of the Substance/Mixture and of the Company/Undertaking

Product name: Calcium Gluconate
Product Code: P0307
Company: Cambridge Commodities Limited
Lancaster Way, Ely, Cambridgeshire, CB6 3NX
Tel: 01353 667258. Email: qa@c-c-l.com

Section 2 Hazards Identification

Potential Acute Health Effects May be irritating to eyes, respiratory system and skin
In case of contact with eyes, rinse immediately with plenty of water and seek medical advice
Wear suitable protective clothing
Potential Chronic Health Effect Repeated or prolonged exposure is not known to aggravate medical conditions.

Section 3 Composition/Information on Ingredients

| Components | % in Product | CAS Number | Formula | EINECS Number |
|-------------------|--------------|--------------|---|----------------|
| Calcium Gluconate | 100% | 299 – 28 – 5 | C ₁₂ H ₂₂ CaO ₁₄ .H ₂ O | 2060 – 075 – 8 |

Section 4 Emergency and First Aid Measures

Eyes Check for and remove contact lenses. In case of contact, immediately flush eye with plenty of water for at least 15 minutes. Cold water may be used. Get medical attention if irritation occurs.
Skin Wash with soap and water. Cover the irritated skin with an emollient. Get medical attention if irritation develops. Cold water may be used.
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 collar, tie, belt or waistband. Get medical attention if symptoms appear.
Inhalation If inhaled remove to fresh air. If breathing is difficult, give oxygen and seek medical help.

Section 5 Fire-fighting measures

| | |
|--|--|
| Flammability of The Product | May be combustible at high temperature |
| Product of Combustion | These products are carbon oxide (CO,CO ₂). Some metallic oxides. |
| Fire Hazard in presence of Various Substance | Slightly flammable in presence of heat. Non-flammable in presence of shock. |
| Explosion Hazard in Presence of Various Substances | Slightly explosive in presence of open flames and sparks. Non-explosive in presence of shock. |
| Extinguishing Media | Small fire- dry chemical powder. Large fire-foam, water spray, carbon dioxide. Do not use water jet. |
| Special Remarks on Fire Hazards | As 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 presence 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 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 materials Do not ingest. Do not breathe dust. If ingested, seek medical advice immediately and show the container or the label. Keep away from incompatibles such as oxidizing agents. |
| Storage | Keep container tightly closed. Keep container in a cool, well ventilated area. |

Section 8 Exposure Controls/Personal Protection

| | |
|----------------------|--|
| Engineering Controls | Use process enclosure, local exhaust ventilation, or other engineering controls to keep exposure airborne levels below recommended exposure limits. If user operation generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit. |
|----------------------|--|

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success starts with the finest ingredients...

Personal Protection

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

Section 9 Physical and Chemical Properties

| | |
|------------------|---|
| Physical state | Solid |
| Colour | White/ Off White |
| Odour | Characteristic |
| Solubility | Soluble hot water. Partially soluble in cold water. Solubility in cold water: 30 g/l (20 deg.C) Solubility in hot water: 110 g/l/ (80 deg. C) |
| Melting Point | Decomposition temperature 100oC (212oC) |
| Molecular Weight | 448.39 g/mole |

Section 10 Stability and Reactivity

| | |
|---------------------------|---|
| Chemical Stability | Stable under conditions mentioned in section 7 |
| Hazardous Polymerisation | Product will not undergo hazardous polymerisation |
| Incompatibility | Reacts with oxidising agents |
| Conditions of Instability | Excess heat, incompatible materials |

Section 11 Toxicological Information

| | |
|--|--|
| Routes of Entry | Inhalation. Ingestion. |
| Toxicity Data | LD50 (ORAL-RAT): >5000mg/kg |
| Other Toxic Effects on Humans | Slightly hazardous in case of skin contact (irritant), of ingestion, of inhalation. |
| Special Remarks of Toxicity to Animals | Lowest Published Lethal: LDL [Rat]- Route: Oral ; Dose: 10000 mg/kg LDL [Mouse]- Route: Oral; Dose: 10000 mg/kg |
| Special Remarks on other Toxic Effects on Humans | |
| Acute potential Health Effects | Skin: May cause skin irritation. Eyes: May cause eye irritation. Inhalation: May cause respiratory tract irritation. Ingestion: Ingestion of large amounts may cause gastrointestinal tract irritation with nausea. It may affect respiration (dyspnea, cyanosis), and heart (ventricular fibrillation). Other symptoms may include weakness, depression, and prostration. It is expected to be low ingestion hazard. |

Section 12 Ecological Information

| | |
|----------------------------|---|
| Eco-toxicity | No Data Available |
| Products of Biodegradation | Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise. |

Section 13 Disposal Considerations

Waste Disposal Waste must be disposed of in accordance with federal, state and local environmental control regulation.

Section 14 Transport Information

D.O.T. Classification Not D.O.T. controlled material (United States)

Section 15 Regulatory Information

| | |
|------------------------------------|---|
| Federal and State Regulations | No product found |
| Other Classification | WHMIS (Canada)- Not controlled under WHMIS (Canada) DSCL (EEC)- This product is not classified according to the EU regulations. S24/25- Avoid contact with skin and eyes. 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 |
| Protective Equipment | Gloves. Lab coat. Dust respirator. Be sure to use an approved/certified respirator or equivalent. Safety glasses. |
| Reviews, Standards and Regulations | Health & Safety at work act 1974 COSHH Regulations (1994) EH40 Occupational exposure limits |
| US Federal Regulations | Not known |

Section 16 Other Information

This advice is given by Cambridge Commodities Ltd who accepts no legal liability for it. The information contained herein is based on the present state of our knowledge and is intended to describe our products from the point of view of safety requirements. It should not therefore be construed as guaranteeing specific properties.

Individuals working with chemicals should consider all chemicals to be potentially hazardous even if their individual hazards may be uncharacterised or unknown.



This Information provided in this document is subject to change and the batch specific Certificate of Analysis should always be referenced.

To be used as per local legislation.

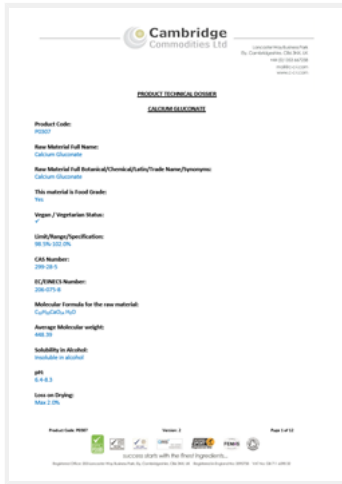
Change History

| Version | Change | Customer Notification required Yes / No |
|---------|--|---|
| 1 | First Issue | N/A |
| 2 | <p>The following has been updated due to the supplier updating their specifications:</p> <ul style="list-style-type: none"> Sieve analysis, Magnesium & Alkali Metals, Phosphate, Oxalate, Bacterial Endotoxins removed. Shelf Life from Date of Manufacture changed from 3 years to Min 2 Years Chloride changed from Max 50ppm to max 0.07% Sulphate changed from Max 50ppm to max 0.05% Yeast & Moulds added Heavy metals added | Yes |

Document Approval

| Originator Job Title | QC Technician | Approver Job Title | QC Technician |
|--|---------------|---|---------------|
|  Jennifer Fordham (Feb 22, 2016) | |  Adam Mulcahy (Feb 22, 2016) | |






P0307 -Calcium Gluconate- Technical Dossier

Adobe Document Cloud Document
History

2/22/16

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