

# Material Safety Data Sheet: **CALCIUM GLUCONATE**

MSDS Number: C0384

## 1. Product Identification

Synonyms: D-Gluconic acid, calcium salt (2:1); Glucobiogen; Calciofon.

CAS No.: 299-28-5

Molecular Weight: 430.38

Chemical Formula:  $[\text{CH}_2\text{OH}(\text{CHOH})_4\text{COO}]_2\text{Ca}$

Product Codes: 1272

## 2. Composition/Information on Ingredients

Ingredient	CAS No	Percent	Hazardous
Calcium Gluconate	299-28-5	98 - 100%	Yes

## 3. Hazards Identification

Emergency Overview.

As part of good industrial and personal hygiene and safety procedure, avoid all unnecessary exposure to the chemical substance and ensure prompt removal from skin, eyes and clothing.

J.T. Baker SAF-T-DATA(tm) Ratings (Provided here for your convenience)

Health Rating: 1 - Slight

Flammability Rating: 0 - None

Reactivity Rating: 0 - None

Contact Rating: 1 - Slight

Lab Protective Equip: GOGGLES; LAB COAT

Storage Color Code: Orange (General Storage)

Potential Health Effects

Inhalation: Not expected to be a health hazard.

Ingestion: Large oral doses may cause irritation to the gastrointestinal tract.

Skin Contact: Not expected to be a health hazard from skin exposure.

Eye Contact: Not expected to be a health hazard.

Chronic Exposure: No information found.

Aggravation of Pre-existing Conditions: No information found.

## 4. First Aid Measures

Inhalation:

Remove to fresh air. Get medical attention for any breathing difficulty.

Ingestion: If large amounts were swallowed, give water to drink and get medical advice.

Skin Contact: Wash exposed area with soap and water. Get medical advice if irritation develops.

Eye Contact: Wash thoroughly with running water. Get medical advice if irritation develops.

## 5. Fire Fighting Measures

Fire: As with most organic solids, fire is possible at elevated temperatures or by contact with an ignition source. Minimum dust cloud ignition temperature: 550C (1022F)

Explosion: Essentially no hazard as dust (Vendor/Bureau of Mines Relative Rating Scale). No explosion detected up to 200 g/cu. ft. air.

Fire Extinguishing Media:

Water spray, dry chemical, alcohol foam, or carbon dioxide.

Special Information:

In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full facepiece operated in the pressure demand or other positive pressure mode.

## 6. Accidental Release Measures

Ventilate area of leak or spill. Wear appropriate personal protective equipment as specified in Section 8. Spills: Sweep up and containerize for reclamation or disposal. Vacuuming or wet sweeping may be used to avoid dust dispersal. Small amounts of residue may be flushed to sewer with plenty of water.

## 7. Handling and Storage

Keep in a tightly closed container, stored in a cool, dry, ventilated area. Protect against physical damage. Isolate from any source of heat or ignition. Containers of this material may be hazardous when empty since they retain product residues (dust, solids); observe all warnings and precautions listed for the product.

## 8. Exposure Controls/Personal Protection

Airborne Exposure Limits:

- OSHA Permissible Exposure Limit (PEL):

15 mg/m<sup>3</sup> total dust, 5 mg/m<sup>3</sup> respirable fraction for nuisance dusts.

- ACGIH Threshold Limit Value (TLV):

10 mg/m<sup>3</sup> total dust containing no asbestos and < 1% crystalline silica for Particulates Not Otherwise Classified (PNOC).

Ventilation System:

In general, dilution ventilation is a satisfactory health hazard control for this substance. However, if conditions of use create discomfort to the worker, a local exhaust system should be considered.

Personal Respirators (NIOSH Approved):

If the exposure limit is exceeded, a half-face dust/mist respirator may be worn for up to ten times the exposure limit or the maximum use concentration specified by the appropriate regulatory agency or respirator supplier, whichever is lowest. A full-face piece dust/mist respirator may be worn up to 50 times the exposure limit, or the maximum use concentration specified by

the appropriate regulatory agency, or respirator supplier, whichever is lowest. For emergencies or instances where the exposure levels are not known, use a full-facepiece positive-pressure, air-supplied respirator. **WARNING:** Air-purifying respirators do not protect workers in oxygen-deficient atmospheres.

**Skin Protection:**

Wear protective gloves and clean body-covering clothing.

**Eye Protection:**

Use chemical safety goggles. Maintain eye wash fountain and quick-drench facilities in work area.

### 9. Physical and Chemical Properties

Appearance: White, crystalline powder.

Odor: Odorless.

Solubility: 3 g in 100 g of water

Density: No information found.

pH: 6-7

% Volatiles by volume @ 21C (70F): 0

Boiling Point: Not applicable.

Melting Point: ca. 120C (ca. 248F) Loses water with some decomposition

Vapor Density (Air=1): No information found.

Vapor Pressure (mm Hg): No information found.

Evaporation Rate (BuAc=1): No information found.

### 10. Stability and Reactivity

Stability: Stable under ordinary conditions of use and storage.

Hazardous Decomposition Products:

Carbon dioxide and carbon monoxide may form when heated to decomposition.

Hazardous Polymerization: Will not occur.

Incompatibilities:

Strong oxidizing agents.

Conditions to Avoid: Heat, flames, ignition sources and incompatibles.

### 11. Toxicological Information

No LD50/LC50 information found relating to normal routes of occupational exposure.

-----Lists-----

---NTP Carcinogen---

Ingredient	Known	Anticipated	IARC Category
Calcium Gluconate (299-28-5)	No	No	None

### 12. Ecological Information

Environmental Fate: No information found.

Environmental Toxicity: No information found.

### 13. Disposal Considerations

Whatever cannot be saved for recovery or recycling should be managed in an appropriate and approved waste disposal facility.

Processing, use or contamination of this product may change the waste management options. State and local disposal regulations may differ from federal disposal regulations. Dispose of container and unused contents in accordance with federal, state and local requirements.

### 14. Transport Information

Not regulated.

### 15. Regulatory Information

-----Inventory Status - Part 1-----

Ingredient	TSCA	EC	Japan	Australia
Calcium Gluconate (299-28-5)	Yes	Yes	Yes	Yes

-----Inventory Status - Part 2-----

Ingredient	--Canada--	Korea	DSL	NDSL	Phil.
Calcium Gluconate (299-28-5)	Yes	Yes	No	Yes	

-----, State & International Regulations - Part 1-----

Ingredient	-SARA 302- RQ	TPQ	-----SARA 313----- List	Chemical Catg.
Calcium Gluconate (299-28-5)	No	No	No	No

-----, State & International Regulations - Part 2-----

Ingredient	-RCRA- CERCLA	-TSCA- 261.33	8(d)
Calcium Gluconate (299-28-5)	No	No	No

Chemical Weapons Convention: No TSCA 12(b): No CDTA: No  
SARA 311/312: Acute: No Chronic: No Fire: Yes Pressure: No  
Reactivity: No (Pure / Solid)

Australian Hazchem Code: No information found.

Poison Schedule: No information found.

WHMIS:

This MSDS has been prepared according to the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains

all of the information required by the CPR.

## 16. Other Information

NFPA Ratings: Health: 0 Flammability: 1 Reactivity: 0

Label Hazard Warning:

As part of good industrial and personal hygiene and safety procedure, avoid all unnecessary exposure to the chemical substance and ensure prompt removal from skin, eyes and clothing.

Label Precautions: None.

Label First Aid: Not applicable.

Product Use: Laboratory Reagent.

Revision Information:

New 16 section MSDS format, all sections have been revised.

Disclaimer:

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