

## Scientific Documentation

### Calcium Chloride, Dihydrate, USP, EP, JP (Pyrogen Free), bioCERTIFIED (TM)

Not appropriate for regulatory submission.

Please visit [www.spectrumchemical.com](http://www.spectrumchemical.com) or contact Tech Services for the most up-to-date information contained in this information package.

Spectrum Chemical Mfg Corp  
769 Jersey Avenue  
New Brunswick, NJ 08901  
Phone 732.214.1300



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# Specification for Calcium Chloride, Dihydrate, USP, EP, JP (Pyrogen Free), bioCERTIFIED (TM) (C9000)

Item Number	C9000
Item	Calcium Chloride, Dihydrate, USP, EP, JP (Pyrogen Free), bioCERTIFIED (TM)
CAS Number	10035-04-8
Molecular Formula	
Molecular Weight	
MDL Number	
Synonyms	

Test	Specification	
	Min	Max
ASSAY (USP)	99.0	107.0 %
ASSAY (EP)	97.0	103.0 %
ASSAY (JP)	96.7	103.3 %
pH of a 5% Solution (USP)	4.5	9.2
Iron, Aluminum and Phosphate (USP)		TO PASS TEST
ACIDITY OR ALKALINITY (EP)		TO PASS TEST
IRON (EP)		10 ppm
ELEMENTAL IMPURITIES		AS REPORTED
HEAVY METALS (JP)		10 ppm
MAGNESIUM AND ALKALI METALS (EP)		0.5 %
MAGNESIUM AND ALKALI SALTS (USP)		1.0 %
Appearance of Solution (EP)		TO PASS TEST
Sulfates (JP)		0.024 %
SULFATES (EP)		300 ppm
Hypochlorite (JP)		TO PASS TEST
Barium (EP)		TO PASS TEST
Arsenic (JP)		2 ppm
Aluminium (EP)		TO PASS TEST

Test	Specification	
	Min	Max
Aluminum (USP)		1 ppm
MICROBIAL LIMITS:		
BACTERIAL ENDOTOXINS		5 IU/g
TAMC		1000 CFU/g
TYMC		100 CFU/g
IDENTIFICATION		TO PASS TEST
RETEST DATE		
DATE OF MANUFACTURE		
RESIDUAL SOLVENTS		AS REPORTED

***Spectrum Chemical Mfg Corp***

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**Corporate Headquarters:**    **West Coast Facility:**  
769 Jersey Ave.                      14422 S. San Pedro St.  
New Brunswick, NJ 08901    Gardena, CA 90248  
732.214.1300                              310.516.8000

# SAFETY DATA SHEET

# spectrum®



Revision date 21-July-2022

Revision Number 1

## 1. Identification

### Product identifier

**Product Name** CALCIUM CHLORIDE, DIHYDRATE, USP, EP, JP (PYROGEN FREE), bioCERTIFIED™

### Other means of identification

**Product Code(s)** C9000

**Synonyms** None

### Recommended use of the chemical and restrictions on use

**Recommended use** No information available

**Restrictions on use** No information available

### Details of the supplier of the safety data sheet

#### Supplier Address

Spectrum Chemical Mfg. Corp.  
14422 South San Pedro St.  
Gardena, CA 90248  
(310) 516-8000

### Emergency telephone number

**Emergency Telephone** Chemtrec 1-800-424-9300

## 2. Hazard(s) identification

### Classification

Acute toxicity - Oral	Category 4
Serious eye damage/eye irritation	Category 2A

### Hazards not otherwise classified (HNOC)

Not applicable

### Label elements

#### Warning

#### Hazard statements

Harmful if swallowed  
Causes serious eye irritation



**Appearance** Crystalline or Crystalline powder or granules

**Physical state** Solid

**Odor** No information available

#### **Precautionary Statements - Prevention**

Wash face, hands and any exposed skin thoroughly after handling  
Do not eat, drink or smoke when using this product  
Wear eye protection/ face protection

#### **Precautionary Statements - Response**

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing  
If eye irritation persists: Get medical advice/attention  
IF SWALLOWED: Call a POISON CENTER or doctor if you feel unwell  
Rinse mouth

#### **Precautionary Statements - Disposal**

Dispose of contents/container to an approved waste disposal plant

#### **Unknown acute toxicity**

#### **Other information**

No information available.

### **3. Composition/information on ingredients**

#### **Substance**

Chemical name	CAS No	Weight-%	Trade secret
Calcium Chloride, Dihydrate	10035-04-8	100	*

\*The exact percentage (concentration) of composition has been withheld as a trade secret.

### **4. First-aid measures**

#### **Description of first aid measures**

<b>General advice</b>	Show this safety data sheet to the doctor in attendance.
<b>Inhalation</b>	Remove to fresh air.
<b>Eye contact</b>	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Keep eye wide open while rinsing. Do not rub affected area. Get medical attention if irritation develops and persists.
<b>Skin contact</b>	Wash skin with soap and water.
<b>Ingestion</b>	Do NOT induce vomiting. Clean mouth with water and drink afterwards plenty of water. Never give anything by mouth to an unconscious person. Call a physician.
<b>Self-protection of the first aider</b>	Avoid contact with skin, eyes or clothing. Wear personal protective clothing (see section 8).

#### **Most important symptoms and effects, both acute and delayed**

**Symptoms** May cause redness and tearing of the eyes. Burning sensation.

**Indication of any immediate medical attention and special treatment needed**

**Note to physicians** Treat symptomatically.

## **5. Fire-fighting measures**

**Suitable Extinguishing Media** Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

**Large Fire** CAUTION: Use of water spray when fighting fire may be inefficient.

**Unsuitable extinguishing media** Do not scatter spilled material with high pressure water streams.

**Specific hazards arising from the chemical** No information available.

**Explosion data**

**Sensitivity to mechanical impact** none.

**Sensitivity to static discharge** none.

**Special protective equipment for fire-fighters** Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

## **6. Accidental release measures**

**Personal precautions, protective equipment and emergency procedures**

**Personal precautions** Avoid contact with skin, eyes or clothing. Use personal protective equipment as required.

**Other information** Refer to protective measures listed in Sections 7 and 8.

**Methods and material for containment and cleaning up**

**Methods for containment** Prevent further leakage or spillage if safe to do so.

**Methods for cleaning up** Pick up and transfer to properly labeled containers.

## **7. Handling and storage**

**Precautions for safe handling**

**Advice on safe handling** Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. Do not eat, drink or smoke when using this product.

**Conditions for safe storage, including any incompatibilities**

**Storage Conditions** Hygroscopic. It absorbs moisture from the air. Protect from moisture. Keep containers tightly closed in a dry, cool and well-ventilated place. Keep out of the reach of children.

## **8. Exposure controls/personal protection**

**Control parameters**

**Exposure Limits** The following ingredients are the only ingredients of the product above the cut-off level (or level that contributes to the hazard classification of the mixture) which have an exposure

limit applicable in the region for which this safety data sheet is intended or other recommended limit. At this time, the other relevant constituents have no known exposure limits from the sources listed here.

### Appropriate engineering controls

**Engineering controls**                      Showers  
 Eyewash stations  
 Ventilation systems.

### Individual protection measures, such as personal protective equipment

**Eye/face protection**                      If splashes are likely to occur, wear safety glasses with side-shields.

**Hand protection**                            Wear suitable gloves.

**Skin and body protection**                Wear suitable protective clothing.

**Respiratory protection**                  No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

**General hygiene considerations**      Avoid contact with skin, eyes or clothing. Wear suitable gloves and eye/face protection. Do not eat, drink or smoke when using this product.

## **9. Physical and chemical properties**

### Information on basic physical and chemical properties

**Physical state**                                Solid  
**Appearance**                                Crystalline or Crystalline powder or granules  
**Color**    White to Off-White  
**Odor**    No information available  
**Odor threshold**                                No information available

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
<b>pH</b>	no data available	None known
<b>Melting point / freezing point</b>	175.5 °C / 347.9 °F	None known
<b>Boiling point / boiling range</b>	no data available	None known
<b>Flash point</b>	no data available	None known
<b>Evaporation rate</b>	no data available	None known
<b>Flammability (solid, gas)</b>	no data available	None known
<b>Flammability Limit in Air</b>		None known
<b>Upper flammability or explosive limits</b>	No data available	
<b>Lower flammability or explosive limits</b>	No data available	
<b>Vapor pressure</b>	No data available	None known
<b>Vapor density</b>	no data available	None known
<b>Relative density</b>	1.850	None known
<b>Water solubility</b>	Easily soluble in water	None known
<b>Solubility(ies)</b>	Freely soluble in alcohol	None known
<b>Partition coefficient</b>	No data available	None known
<b>Autoignition temperature</b>	no data available	None known
<b>Decomposition temperature</b>		None known
<b>Kinematic viscosity</b>	no data available	None known
<b>Dynamic viscosity</b>	No data available	None known

### Other information

**Explosive properties**                        No information available  
**Oxidizing properties**                        No information available  
**Softening point**                                No information available  
**Molecular weight**                            147.01  
**VOC Content (%)**                                No information available

Liquid Density No information available  
Bulk density No information available

## 10. Stability and reactivity

Reactivity No information available.  
Chemical stability Stable under recommended storage conditions.  
Possibility of hazardous reactions None under normal processing.  
Conditions to avoid None known based on information supplied.  
Incompatible materials None known based on information supplied.  
Hazardous decomposition products None known based on information supplied.

## 11. Toxicological information

### Information on likely routes of exposure

#### Product Information

**Inhalation** Specific test data for the substance or mixture is not available. May cause irritation of respiratory tract.  
**Eye contact** Specific test data for the substance or mixture is not available. Causes serious eye irritation. (based on components). May cause redness, itching, and pain.  
**Skin contact** Specific test data for the substance or mixture is not available. May cause irritation. Prolonged contact may cause redness and irritation.  
**Ingestion** Specific test data for the substance or mixture is not available. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. Harmful if swallowed. (based on components).

### Symptoms related to the physical, chemical and toxicological characteristics

**Symptoms** May cause redness and tearing of the eyes.

### Acute toxicity

**Numerical measures of toxicity**  
No information available

### **Unknown acute toxicity**

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

**Skin corrosion/irritation** May cause skin irritation.  
**Serious eye damage/eye irritation** Classification based on data available for ingredients. Causes serious eye irritation.  
**Respiratory or skin sensitization** No information available.  
**Germ cell mutagenicity** No information available.  
**Reproductive toxicity** No information available.  
**STOT - single exposure** No information available.  
**STOT - repeated exposure** No information available.  
**Aspiration hazard** No information available.  
**Other adverse effects** No information available.



Interactive effects No information available.

## 12. Ecological information

**Ecotoxicity** The environmental impact of this product has not been fully investigated.

**Persistence and degradability** No information available.  
**Bioaccumulation** Inherently biodegradable.

**Other adverse effects** No information available.

## 13. Disposal considerations

### Waste treatment methods

**Waste from residues/unused products** Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.

**Contaminated packaging** Do not reuse empty containers.

## 14. Transport information

**DOT** not regulated

**TDG** not regulated

**MEX** not regulated

**ICAO (air)** not regulated

**IATA** not regulated

**IMDG** not regulated

**RID** not regulated

**ADR** not regulated

**ADN** not regulated

## 15. Regulatory information

### International Inventories

**TSCA** Complies

**DSL/NDSL** Does not Comply  
**EINECS/ELINCS** Does not Comply  
**ENCS** This product complies with ENCS:  
**IECSC** This product complies with China:  
**KECL** Does not Comply  
**PICCS** Complies  
**AICS** All the constituents of this material are listed on the Australian Inventory of Chemical Substances (AICS).

Legend:

**TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory  
**DSL/NDSL** - Canadian Domestic Substances List/Non-Domestic Substances List  
**EINECS/ELINCS** - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances  
**ENCS** - Japan Existing and New Chemical Substances  
**IECSC** - China Inventory of Existing Chemical Substances  
**KECL** - Korean Existing and Evaluated Chemical Substances  
**PICCS** - Philippines Inventory of Chemicals and Chemical Substances

### US Federal Regulations

#### **SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

#### **SARA 311/312 Hazard Categories**

Should this product meet EPCRA 311/312 Tier reporting criteria at 40 CFR 370, refer to Section 2 of this SDS for appropriate classifications.

#### **CWA (Clean Water Act)**

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

#### **CERCLA**

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

### US State Regulations

#### **California Proposition 65**

This product does not contain any Proposition 65 chemicals.

#### **U.S. State Right-to-Know Regulations**

This product does not contain any substances regulated under applicable state right-to-know regulations

### U.S. EPA Label Information

**EPA Pesticide Registration Number** Not applicable

## **16. Other information**

#### **NFPA**

**Health hazards** 2

**Flammability** 0

**Instability** 0

**Physical and chemical properties** -

#### **HMIS**

**Health hazards** 2

**Flammability** 0

**Physical hazards** 0

**Personal protection** X

#### **Key or legend to abbreviations and acronyms used in the safety data sheet**

##### **Legend Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**

TWA TWA (time-weighted average)

STEL

STEL (Short Term Exposure Limit)

Ceiling Maximum limit value

**Key literature references and sources for data used to compile the SDS**

Agency for Toxic Substances and Disease Registry (ATSDR)  
U.S. Environmental Protection Agency ChemView Database  
European Food Safety Authority (EFSA)  
EPA (Environmental Protection Agency)  
Acute Exposure Guideline Level(s) (AELG(s))  
U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act  
U.S. Environmental Protection Agency High Production Volume Chemicals  
Food Research Journal  
Hazardous Substance Database  
International Uniform Chemical Information Database (IUCLID)  
Japan GHS Classification  
Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)  
NIOSH (National Institute for Occupational Safety and Health)  
National Library of Medicine's ChemID Plus (NLM CIP)  
National Library of Medicine's PubMed database (NLM PUBMED)  
National Toxicology Program (NTP)  
New Zealand's Chemical Classification and Information Database (CCID)  
Organization for Economic Co-operation and Development Environment, Health, and Safety Publications  
Organization for Economic Co-operation and Development High Production Volume Chemicals Program  
Organization for Economic Co-operation and Development Screening Information Data Set  
World Health Organization

**Revision date** 21-July-2022  
**Revision Note** No information available.

**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 Safety Data Sheet**



**Certification of Compliance with current Good Manufacturing Practices**

Dear Valued Customer:

Spectrum Chemical Mfg Corp certifies that the following product(s) is produced, processed, packaged and held in compliance with current Good Manufacturing Practices (cGMP) in accordance with the applicable parts of 21 CFR, parts 210 and 211 of the Code of Federal Regulations.

Catalog Number	Product Name
C9000	Calcium Chloride, Dihydrate, USP, EP, JP (Pyrogen Free), bioCERTIFIED™

Spectrum is an FDA registered and inspected Drug Establishment. Our United States Food and Drug Administration (USFDA) Registration numbers are as follows:

Spectrum-Gardena, CA: 2020632  
Spectrum-New Brunswick, NJ: 2246824

Thank you for your interest in Spectrum products. If we may be of further assistance, please feel free to contact the Quality Assurance department at 310-516-8000 or via email at [qualityassurance@spectrumchemical.com](mailto:qualityassurance@spectrumchemical.com)

Sincerely,

Oralia Chavez  
Quality Assurance Specialist

## **C9000, Calcium Chloride, Dihydrate, USP, EP, JP (Pyrogen Free), bioCERTIFIED™**

### **Source Statement**

The above mentioned catalog item is manufactured by chemical synthesis. No animal or plant derived products are used in the manufacturing process.

### **BSE/TSE Statement**

The above mentioned catalog item does not contain nor is manufactured using any animal derived products and is therefore, BSE/TSE free.

### **Allergen Statement**

The above mentioned catalog item does not contain any of the following:

- Milk
- Egg
- Fish
- Shellfish
- Tree Nuts
- Wheat
- Peanuts
- Soy
- Cereals containing Gluten
- Celery
- Mustard
- Sesame Seed
- Corn
- Latex
- Sulfites > 10 ppm

### **GMO Statement**

The above mentioned catalog item is manufactured without the use of genetically modified organisms and is therefore GMO free.

### **Melamine Statement**

The above mentioned catalog does not use or add melamine to the manufacturing process and is considered melamine-free.

### **Nitrosamine Statement**

Based on knowledge of the manufacturing process, nitrosamine impurities are not known or suspected to be present in this material.

## Animal Testing Statement

The above mentioned catalog item has not been tested on animals.

## Organic Compliance Statement

The above mentioned catalog item has not been produced using GMOs, irradiation, ethylene oxide (EtO) or sewage sludge.

## Shelf Life Statement

The above-mentioned catalog item is typically assigned a shelf life of 48 months from the date of manufacture. The actual assigned shelf life for any specific lot should be referenced on the Certificate of Analysis.

## Other Chemicals Statement

Spectrum does not have any reason to suspect the above mentioned catalog item contains any of the following chemicals. This product does not come into contact with these chemicals during packaging or storage:

- Aflatoxins
- Antibiotics
- Bisphenol A (BPA)
- CMR Substances
- Parabens
- Pesticides
- Phthalates
- Preservatives


## Label Information

The Spectrum label presents technical and safety information in an easily understood format. Our technical specialists stay abreast of the latest requirements of the Globally Harmonized System for Classification and Labelling of Chemicals (GHS), as well as the Occupational Safety and Health Administration (OSHA), the Food and Drug Administration (FDA) and other government regulatory agencies in order to ensure compliance, accuracy and concise hazard communication. Below you will find a typical label example for this catalog item.

**WARNING**  
**• Harmful if swallowed • Causes serious eye irritation.**  
 • Do not eat, drink or smoke when using this product • Wear eye protection, face protection • Wash face, hands and any exposed skin thoroughly after handling.  
**FIRST AID:** IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical attention. IF SWALLOWED: Call a POISON CENTER or physician if you feel unwell. Rinse mouth.

**KEEP FROM CHILDREN**

**WARNING:**  
 Cancer and Reproductive Harm-  
[www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov)




**C9000                                      SIZ SY**

# Calcium Chloride

Dihydrate, USP, EP,  
 JP (Pyrogen Free)

bioCERTIFIED™  
 CAS 10035-04-8



**CAUTION:** For manufacturing, processing or repacking. Further processing and testing required for use in parenteral applications.  
**Read and understand the label and Safety Data Sheet (SDS) prior to use.**

**Chemical Emergency: (800)424-9300**

[www.SpectrumChemical.com](http://www.SpectrumChemical.com)

Not sterile.

Assay (USP) .....	99.0-107.0%
Assay (EP) .....	97.0-103.0%
Assay (JP) .....	96.7-103.3%
pH of a 5% Solution (USP) .....	4.5-9.2
<b>MAXIMUM LIMITS</b>	
Iron, Aluminum and Phosphate (USP) .....	To pass test
Acidity or Alkalinity(EP) .....	To pass test
Iron (EP) .....	10 ppm
Elemental Impurities .....	As reported
Heavy Metals (JP) .....	10 ppm
Magnesium and Alkali Metals (EP) .....	0.5%
Magnesium and Alkali Salts (USP) .....	1.0%
Appearance of Solution (EP) .....	To pass test
Sulfates (JP) .....	0.024%
Sulfates (EP) .....	300 ppm
Hypochlorite (JP) .....	To pass test
Barium (EP) .....	To pass test
Iron (EP) .....	10 ppm
Arsenic (JP) .....	2 ppm
Aluminium (EP) .....	To pass test
Aluminum (USP) .....	1 ppm
Residual Solvents .....	To pass test
Microbial Limits:	
Bacterial Endotoxins .....	5 IU/g
TAMC .....	1000 CFU/g
TYMC .....	100 CFU/g

G 1/L8GHS      ?      Lot No. XQ####

***Spectrum Chemical Mfg Corp***

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