



SAFETY DATA SHEET

Preparation Date: 1/23/2015

Revision Date: 6/26/2018

Revision Number: G2

1. IDENTIFICATION

Product identifier

Product code: C1096
Product Name: CALCIUM CHLORIDE, DIHYDRATE, REAGENT, ACS

Other means of identification

Synonyms: No information available
CAS #: 10035-04-8
RTECS # EV9810000
CI#: Not available

Recommended use of the chemical and restrictions on use

Recommended use: No information available.
Uses advised against No information available

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

Order Online At: <https://www.spectrumchemical.com>
Emergency telephone number Chemtrec 1-800-424-9300
Contact Person: Martin LaBenz (West Coast)
Contact Person: Ibad Tirmiz (East Coast)

2. HAZARDS IDENTIFICATION

Classification

This chemical is considered hazardous according to the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Considered a dangerous substance or mixture according to the Globally Harmonized System (GHS)

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

Label elements

Warning

Hazard statements
Harmful if swallowed
Causes serious eye irritation

Product code: C1096

Product name: CALCIUM
CHLORIDE, DIHYDRATE, REAGENT,
ACS

1 / 12

**Hazards not otherwise classified (HNOC)**

Not Applicable

Other hazards

Exothermic reaction with water
Dissolves in water releasing heat
May be harmful in contact with skin
Causes mild skin irritation

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/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/physician if you feel unwell
Rinse mouth

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

3. COMPOSITION/INFORMATION ON INGREDIENTS

Components	CAS-No.	Weight %
Calcium Chloride, Dihydrate	10035-04-8	100

4. FIRST AID MEASURES**First aid measures****General Advice:**

National Capital Poison Center in the United States can provide assistance if you have a poison emergency and need to talk to a poison specialist. Call 1-800-222-1222. First aider needs to protect himself. Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves.

Skin Contact:

Wash off immediately with soap and plenty of water removing all contaminated clothing and shoes. Get medical attention. If skin irritation persists, call a physician.

Eye Contact:

Flush eyes with water for 15 minutes. Get medical attention.

Inhalation:

Move to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

Ingestion:

Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person. Obtain medical attention.

Most important symptoms and effects, both acute and delayed

Product code: C1096

Product name: CALCIUM
CHLORIDE, DIHYDRATE, REAGENT,
ACS

2 / 12

Symptoms

Irritating to eyes
Irritating to respiratory system
Causes digestive (gastrointestinal) tract irritation
Nausea
Vomiting
Central nervous system effects
Drowsiness
Convulsions
May affect the cardiovascular system
Cardiac arrhythmias

Indication of any immediate medical attention and special treatment needed

Notes to Physician: Treat symptomatically.

Protection of first-aiders

First-Aid Providers: Avoid exposure to blood or body fluids. Wear gloves and other necessary protective clothing. Dispose of contaminated clothing and equipment as bio-hazardous waste.

5. FIRE-FIGHTING MEASURES**Extinguishing Media****Suitable Extinguishing Media:**

The product is not flammable. If it is involved in a fire, extinguish the fire using an agent suitable for the type of surrounding fire.

Unsuitable Extinguishing Media:

No information available.

Specific hazards arising from the chemical**Hazardous Combustion Products:**

No information available.

Specific hazards:

The substance itself does not burn, but may decompose upon heating. This material is an inorganic dust/powder and will not create nor support conditions that would result in a dust explosion or fire. When heated to decomposition it emits toxic fumes. Poisonous gases are produced in fire including chlorine.

Special Protective Actions for Firefighters**Specific Methods:**

No information available.

Special Protective Equipment for Firefighters:

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal Precautions: Ensure adequate ventilation. Avoid contact with skin, eyes and clothing. Use personal protective equipment. Avoid dust formation.

Environmental precautions Prevent further leakage or spillage if safe to do so. Prevent product from entering drains. Prevent from entering into soil, ditches, sewers, waterways, and/or ground water.

Methods and material for containment and cleaning up

Methods for containment Stop leak if you can do it without risk. Cover with plastic sheet to prevent spreading.

Methods for cleaning up Sweep up and shovel into suitable containers for disposal. Avoid creating dust. Clean contaminated surface thoroughly.

7. HANDLING AND STORAGE

Precautions for safe handling

Technical Measures/Precautions:

Provide sufficient air exchange and/or exhaust in work rooms. Avoid dust formation. Keep away from incompatible materials.

Safe Handling Advice

Wear personal protective equipment. Avoid contact with skin, eyes and clothing. Avoid dust formation. Do not ingest. Do not breathe vapors/dust. Keep away from heat and sources of ignition. Handle in accordance with good industrial hygiene and safety practice.

Conditions for safe storage, including any incompatibilities

Technical Measures/Storage Conditions:

Hygroscopic. Protect from moisture. Keep container tightly closed in a dry and well-ventilated place. Store at room temperature in the original container. Store away from incompatible materials.

Incompatible Materials:

Zinc
Metals
Oxidizing agents
Acids

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

National occupational exposure limits

United States

Components	CAS-No.	OSHA	NIOSH	ACGIH	AIHA WEEL
Calcium Chloride, Dihydrate	10035-04-8	None	None	None	None

Canada

Components	CAS-No.	Canada - Alberta	Canada - British	Canada - Ontario	Canada - Quebec
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Product code: C1096

Product name: CALCIUM
CHLORIDE, DIHYDRATE, REAGENT,
ACS

4 / 12

			Columbia		
Calcium Chloride, Dihydrate	10035-04-8	None	None	None	None

Australia and Mexico

Components	CAS-No.	Australia	Mexico
Calcium Chloride, Dihydrate	10035-04-8	None	None

Appropriate engineering controls

Engineering measures to reduce exposure:

Ensure adequate ventilation. Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

Individual protection measures, such as personal protective equipment

Personal Protective Equipment

Eye protection: Goggles

Skin and body protection: Long sleeved clothing
Chemical resistant apron
Gloves

Respiratory protection: Wear respirator with dust filter.

Hygiene measures: Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product. When using, do not eat, drink or smoke.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state:

Solid

Appearance:

Crystalline powder. Crystalline.
Granular.

Color:

White. Off-white.

Odor:

None.

Taste

No information available.

Formula:

CaCl₂·2H₂O

Molecular/Formula weight (g/mole):

147.01

Flammability:

No information available

Flashpoint (°C/°F):

No information available.

Flash Point Tested according to:

Not applicable

Autoignition Temperature (°C/°F):

No information available

Lower Explosion Limit (%):

No information available

Upper Explosion Limit (%):

No information available

Melting point/range(°C/°F):

175.5 °C/347.9 °F

Decomposition temperature(°C/°F):

No information available

Boiling point/range(°C/°F):

No information available

Bulk density:

No information available

Density (g/cm³):

1.850

Specific gravity:

No information available

pH:

No information available

Vapor pressure @ 20°C (kPa):

No information available

Product code: C1096

Product name: CALCIUM
CHLORIDE, DIHYDRATE, REAGENT,
ACS

5 / 12

Evaporation rate:
No information available

Vapor density:
No information available

VOC content (g/L):
No information available

Odor threshold (ppm):
No information available

**Partition coefficient
(n-octanol/water):**
No information available

Viscosity:
No information available

Miscibility:
No information available

Solubility:
Completely soluble in water
Easily soluble in water
Freely soluble in alcohol

10. STABILITY AND REACTIVITY

Reactivity

Reaction with Zinc releases explosive hydrogen gas
Bromine trifluoride rapidly attacks calcium chloride
Violent polymerization occurs when mixed with Methyl Vinyl Ether
May form hydrogen chloride in the presence of sulfuric or phosphoric acids

Chemical stability

Stability: Stable under recommended storage conditions.

Possibility of Hazardous Reactions: Hazardous polymerization does not occur

Conditions to avoid: Heat. Avoid dust formation. Exposure to moisture. Exposure to moist air.
Incompatible materials.

Incompatible Materials: Zinc
Metals
Oxidizing agents
Acids

Hazardous decomposition products: When heated to decomposition it emits toxic fumes. Hydrogen chloride gas.

Other Information

Corrosivity: No information available

Special Remarks on Corrosivity: No information available

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Principal Routes of Exposure:
Ingestion. Inhalation. Skin.

Acute Toxicity

Component Information

Calcium Chloride, Dihydrate

CAS-No. 10035-04-8

LD50/oral/rat = No information available

Product code: C1096

Product name: CALCIUM
CHLORIDE, DIHYDRATE, REAGENT,
ACS

6 / 12

LD50/oral/mouse = No information available
LD50/dermal/rabbit = No information available
LD50/dermal/rat = No information available
LC50/inhalation/rat = No information available
LC50/inhalation/mouse = No information available
Other LD50 or LC50 information = No information available

Product Information

LD50/oral/rat =
VALUE- Acute Tox Oral = No information available

LD50/oral/mouse =
Value - Acute Tox Oral = No information available

LD50/dermal/rabbit
VALUE-Acute Tox Dermal = No information available

LD50/dermal/rat
VALUE -Acute Tox Dermal = No information available

LC50/inhalation/rat
VALUE-Vapor = No information available
VALUE-Gas = No information available
VALUE-Dust/Mist = No information available

LC50/Inhalation/mouse
VALUE-Vapor = No information available
VALUE - Gas = No information available
VALUE - Dust/Mist = No information available

Symptoms

Skin Contact: May cause skin irritation. Mild skin irritation. Contact with dry skin causes mild skin irritation. May cause severe irritation and possible burns if skin is wet.

Eye Contact: Causes serious eye irritation. May cause transient corneal injury.

Inhalation Irritating to respiratory system. May cause severe irritation of the upper respiratory tract with pain, and inflammation.

Ingestion Harmful if swallowed. Causes digestive (gastrointestinal) tract irritation. Ingestion may cause nausea, vomiting. May affect behavior/central nervous system (somnolence, convulsions). May affect the cardiovascular system (cardiac arrhythmias). May affect the cardiovascular system (change in heart rate). May affect blood (changes in serum composition). May affect the blood (changes in white blood cell count). May affect respiration. It may affect the brain.

Aspiration hazard No information available.

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

Chronic Toxicity No information available.

Sensitization: No information available.

Mutagenic Effects: May affect genetic material

Product code: C1096

Product name: CALCIUM
CHLORIDE, DIHYDRATE, REAGENT,
ACS

7 / 12

Carcinogenic effects: Not considered carcinogenic. Equivocal tumorigenic agent by Registry of Toxic Effects of Chemical Substances (RTECS) criteria.

Components	CAS-No.	IARC	ACGIH - Carcinogens	NTP	OSHA HCS - Carcinogens	Australia - Notifiable Carcinogenic Substances	Australia - Prohibited Carcinogenic Substances
Calcium Chloride, Dihydrate	10035-04-8	Not listed	Not listed	Not listed	Not listed	Not listed	Not listed

ACGIH (American Conference of Governmental Industrial Hygienists)

IARC (International Agency for Research on Cancer)

NTP (National Toxicology Program)

OSHA (Occupational Safety and Health Administration of the US Department of Labor)

Reproductive toxicity No data is available

Reproductive Effects: No information available

Developmental Effects: No information available

Teratogenic Effects: No information available

Specific Target Organ Toxicity

STOT - single exposure No information available.

STOT - repeated exposure No information available.

Target Organs: No information available.

12. ECOLOGICAL INFORMATION

Ecotoxicity

Ecotoxicity effects: No data available.

Persistence and degradability: No information available

Bioaccumulative potential: No information available.

Mobility: No information available.

13. DISPOSAL CONSIDERATIONS

Disposal Methods

Waste from residues / unused products:

Waste must be disposed of in accordance with Federal, State and Local regulation.

Contaminated packaging:

Empty containers should be taken for local recycling, recovery or waste disposal

Components	CAS-No.	RCRA - F Series Wastes	RCRA - K Series Wastes	RCRA - P Series Wastes	RCRA - U Series Wastes
Calcium Chloride, Dihydrate	10035-04-8	None	None	None	None

14. TRANSPORT INFORMATION

Product code: C1096

Product name: CALCIUM
CHLORIDE, DIHYDRATE, REAGENT,
ACS

8 / 12

DOT

UN-No:	Not Regulated
Proper Shipping Name:	No information available
Hazard Class:	No information available
Subsidiary Class	No information available
Packing group:	No information available
Emergency Response Guide Number	No information available
Marine Pollutant	No data available
DOT RQ (lbs):	No information available
Special Provisions	No Information available
Symbol(s):	No information available
Description:	No information available

TDG (Canada)

UN-No:	Not Regulated
Proper Shipping Name:	No information available
Hazard Class:	No information available
Subsidiary Risk:	No information available
Packing Group:	No information available
Marine Pollutant	No Information available
Description:	No information available

ADR

UN-No:	Not Regulated
Proper Shipping Name:	No information available
Hazard Class:	No information available
Packing Group:	No information available
Subsidiary Risk:	No information available

IMO / IMDG

UN-No:	Not Regulated
Proper Shipping Name:	No information available
Hazard Class:	No information available
Subsidiary Risk:	No information available
Packing Group:	No information available
Marine Pollutant	No information available

RID

UN-No:	Not Regulated
Proper Shipping Name:	No information available
Hazard Class:	No information available
Subsidiary Risk:	No information available
Packing Group:	No information available

ICAO

UN-No:	Not Regulated
Proper Shipping Name:	No information available
Hazard Class:	No information available
Subsidiary Risk:	No information available
Packing Group:	No information available

IATA

UN-No:	Not Regulated
Proper Shipping Name:	No information available
Hazard Class:	No information available

Subsidiary Risk: No information available
Packing Group: No information available
ERG Code: No information available
Special Provisions No information available

15. REGULATORY INFORMATION

International Inventories

Components	CAS-No.	U.S. TSCA	KOREA KECL	Philippines (PICCS)	Japan ENCS	CHINA	Australia (AICS)	EINECS-No.
Calcium Chloride, Dihydrate	10035-04-8	Not listed. Calcium chloride, dihydrate (CAS number 10035-04-8) is exempt from TSCA 8(b) Inventory listing since it is a hydrate. However, the anhydrous form (CAS number 10043-52-4) is listed as ACTIVE in the TSCA 8(b) Inventory	Not present	Present	Present (1)-176	Present	Present	Not present

U.S. Regulations

Calcium Chloride, Dihydrate

FDA - Food Additives Generally Recognized as Safe (GRAS): 21 CFR 184.1193

FDA - 21 CFR - Total Food Additives 133.102 133.108 133.111 133.113 133.118 133.127 133.136 133.138 133.141 133.144 133.147 133.149 133.152 133.153 133.156 133.157 133.164 133.165 133.179 133.182 133.183 133.185 133.187 133.188 133.189 133.190 133.195 145.145 150.141 150.161 172.560 178.1010 184.1193

California Prop. 65: Safe Drinking Water and Toxic Enforcement Act of 1986.

Chemicals Known to the State of California to Cause Cancer:

This product does not contain a chemical requiring a warning under California Prop. 65. (See table below)

Chemicals Known to the State of California to Cause Reproductive Toxicity:

This product does not contain a chemical requiring a warning under California Prop. 65. (See table below)

Components	CAS-No.	Carcinogen	Developmental Toxicity	Male Reproductive Toxicity	Female Reproductive Toxicity:
Calcium Chloride, Dihydrate	10035-04-8	Not Listed	Not Listed	Not Listed	Not Listed

CERCLA/SARA

Components	CAS-No.	CERCLA - Hazardous Substances and their Reportable Quantities	Section 302 Extremely Hazardous Substances and TPQs	Section 302 Extremely Hazardous Substances and RQs	Section 313 - Chemical Category	Section 313 - Reporting de minimis
Calcium Chloride, Dihydrate	10035-04-8	None	None	None	None	None

Product code: C1096

Product name: CALCIUM CHLORIDE, DIHYDRATE, REAGENT, ACS

10 / 12

U.S. TSCA

Components	CAS-No.	TSCA Section 5(a)2 - Chemicals With Significant New Use Rules (SNURS)	TSCA 8(d) -Health and Safety Reporting
Calcium Chloride, Dihydrate	10035-04-8	Not Applicable	Not Applicable

Canada

WHMIS 2015 - GHS Classifications

WHMIS 2015 Hazard Classification Information:

Component
Calcium Chloride, Dihydrate
10035-04-8 (100)

WHMIS 2015 Hazard Classification
Serious Eye Damage/Eye Irritation - Category 2: H319 Causes serious eye irritation.

Canada Hazardous Products Regulation This product has been classified according to the hazard criteria of the HPR (Hazardous Products Regulation) and the SDS contains all of the information required by the HPR

WHMIS 1988 Hazard Class

D2B Toxic materials

Components
Calcium Chloride, Dihydrate

WHMIS 1988
D2B

Canada Controlled Products Regulation:

This product has been classified according to the hazard criteria of the CPR (Controlled Products Regulation) and the MSDS contains all of the information required by the CPR.

Inventory

Components	CAS-No.	Canada (DSL)	Canada (NDSL)
Calcium Chloride, Dihydrate	10035-04-8	Not Listed	Not Listed

Components	CAS-No.	CEPA Schedule I - Toxic Substances
Calcium Chloride, Dihydrate	10035-04-8	Not listed
Components	CAS-No.	CEPA - 2010 Greenhouse Gases Subject to Mandatory Reporting
Calcium Chloride, Dihydrate	10035-04-8	Not listed

EU Classification

EU GHS - SV - CLP 1272/2008

Components	CAS-No.	EU GHS - SV - CLP (1272/2008)
Calcium Chloride, Dihydrate	10035-04-8	No information

EU - CLP (1272/2008)

R-phrases(s)

R36 - Irritating to eyes.

S -phrase(s)

S 2 - Keep out of the reach of children.
S22 - Do not breathe dust.
S24 - Avoid contact with skin.

Product code: C1096

Product name: CALCIUM
CHLORIDE, DIHYDRATE, REAGENT,
ACS

11 / 12

Components	CAS-No.	Classification	Concentration Limits:	Safety Phrases
Calcium Chloride, Dihydrate	10035-04-8		No information	

The product is classified in accordance with Annex VI to Directive 67/548/EEC

Indication of danger:

Xi - Irritant.

Xi



16. OTHER INFORMATION

Preparation Date: 1/23/2015
Revision Date: 6/26/2018
Prepared by: Sonia Owen

Disclaimer:

All chemicals may pose unknown hazards and should be used with caution. This Safety Data Sheet (SDS) applies only to the material as packaged. If this product is combined with other materials, deteriorates, or becomes contaminated, it may pose hazards not mentioned in this SDS. The physical properties reported in this SDS are obtained from the literature and do not constitute product specifications. Information contained herein does not constitute a warranty, whether expressed or implied, as to the safety, merchantability or fitness of the goods for a particular purpose. Spectrum Chemicals & Laboratory Products, Inc. assumes no responsibility for results obtained or for incidental or consequential damages, including lost profits, arising from the use of these data. No warranty against infringement of any patent, copyright or trademark is made or implied. It shall be the user's responsibility to develop proper methods of handling and personal protection based on the actual conditions of use. While this SDS is based on technical data judged to be reliable, Spectrum assumes no responsibility for the completeness or accuracy of the information contained herein.

End of Safety Data Sheet