

1. Identification

Product identifier	CALCIUM CHLORIDE, HYDRATED, 99.999%	
Other means of identification		
Product code	5016	
Recommended use	professional, scientific and technical activities: other professional, scientific and technical activities	
Recommended restrictions	None known.	
Manufacturer/Importer/Supplier/Distributor information		
Company name	GFS Chemicals, Inc.	
Address	P.O. Box 245 Powell OH 43065 US	
Telephone	Phone	740-881-5501
	Toll Free	800-858-9682
	Fax	740-881-5989
Website	www.gfschemicals.com	
E-mail	service@gfschemicals.com	
Emergency phone number	Emergency Assistance	Chemtrec 800-424-9300

2. Hazard(s) identification

Physical hazards	Not classified.	
Health hazards	Acute toxicity, oral	Category 4
	Serious eye damage/eye irritation	Category 2
	Specific target organ toxicity, single exposure	Category 3 respiratory tract irritation
	Specific target organ toxicity, repeated exposure	Category 2 (blood system)
OSHA hazard(s)	Not classified.	
Label elements		



Signal word	Warning	
Hazard statement	Harmful if swallowed. Causes serious eye irritation. May cause respiratory irritation. May cause damage to organs (blood system) through prolonged or repeated exposure. Harmful to aquatic life. Harmful to aquatic life with long lasting effects.	
Precautionary statement		
Prevention	Use only outdoors or in a well-ventilated area. Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Wear eye/face protection.	
Response	If inhaled: Remove person to fresh air and keep comfortable for breathing. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a POISON CENTER or doctor/physician if you feel unwell. Rinse mouth. If eye irritation persists: Get medical advice/attention.	
Storage	Store in a well-ventilated place. Keep container tightly closed. Store locked up.	
Disposal	Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.	
Hazard(s) not otherwise classified (HNOC)	Not classified.	
Environmental hazards	Hazardous to the aquatic environment, acute hazard	Category 3

Supplemental information**Precautionary statement****Prevention**

Avoid release to the environment.

Disposal

Dispose of contents/container in accordance with local/regional/national/international regulations.

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

Hazardous components			
Chemical name	Common name and synonyms	CAS number	%
CALCIUM CHLORIDE, HYDRATED		7774-34-7	100

*Designates that a specific chemical identity and/or percentage of composition has been withheld as a trade secret.

4. First-aid measures**Inhalation**

Move to fresh air. Call a POISON CENTER or doctor/physician if you feel unwell.

Skin contact

Get medical attention if irritation develops and persists.

Eye contact

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.

Ingestion

IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell. Rinse mouth.

Most important symptoms/effects, acute and delayed

Irritation of eyes and mucous membranes. Prolonged exposure may cause chronic effects.

Indication of immediate medical attention and special treatment needed

In case of shortness of breath, give oxygen. Keep victim warm. Keep victim under observation. Symptoms may be delayed. Provide general supportive measures and treat symptomatically.

General information

Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. In the case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

5. Fire-fighting measures**Suitable extinguishing media** Use extinguishing agent suitable for type of surrounding fire. Water.**Unsuitable extinguishing media** None known.**Specific hazards arising from the chemical** Not applicable.**Special protective equipment and precautions for firefighters** Wear suitable protective equipment.**Fire-fighting equipment/instructions** In the event of fire, cool tanks with water spray. Water runoff can cause environmental damage.**Specific methods** Cool containers exposed to flames with water until well after the fire is out.**6. Accidental release measures****Personal precautions, protective equipment and emergency procedures** Keep unnecessary personnel away. Local authorities should be advised if significant spillages cannot be contained. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Keep people away from and upwind of spill/leak. Keep upwind. Keep out of low areas. Ensure adequate ventilation. Wear appropriate personal protective equipment.**Methods and materials for containment and cleaning up** This product is miscible in water. Stop the flow of material, if this is without risk. Collect spillage. Following product recovery, flush area with water. Prevent entry into waterways, sewer, basements or confined areas. For waste disposal, see section 13 of the MSDS.**Environmental precautions** Contact local authorities in case of spillage to drain/aquatic environment. Avoid discharge into drains, water courses or onto the ground. Avoid release to the environment. Prevent further leakage or spillage if safe to do so. Do not contaminate water.**7. Handling and storage****Precautions for safe handling** Do not taste or swallow. Avoid contact with eyes. When using, do not eat, drink or smoke. Wash hands thoroughly after handling. Avoid release to the environment. Do not empty into drains.

Conditions for safe storage, including any incompatibilities

Keep container tightly closed. Keep out of the reach of children. Store in a cool, dry place out of direct sunlight.

8. Exposure controls/personal protection

Occupational exposure limits No exposure limits noted for ingredient(s).
Biological limit values No biological exposure limits noted for the ingredient(s).
Appropriate engineering controls Provide eyewash station.

Individual protection measures, such as personal protective equipment

Eye/face protection Wear eye/face protection.
Skin protection
Hand protection Wear protective gloves.
Other Normal work clothing (long sleeved shirts and long pants) is recommended.
Respiratory protection In case of insufficient ventilation, wear suitable respiratory equipment.
Thermal hazards Not available.

General hygiene considerations When using, do not eat, drink or smoke. Avoid contact with eyes. Wash hands before breaks and immediately after handling the product. Handle in accordance with good industrial hygiene and safety practice.

9. Physical and chemical properties

Appearance Damp crystals.
Physical state Solid.
Form Solid.
Color White.
Odor Odorless.
Odor threshold Not available.
pH Not available.
Melting point/freezing point 1421.6 °F (772 °C) Anhydrous
1421.6 °F (772 °C) Anhydrous
Initial boiling point and boiling range 3038 °F (1670 °C) Anhydrous
Flash point Not available.
Evaporation rate Not available.
Flammability (solid, gas) Not applicable.
Upper/lower flammability or explosive limits
Flammability limit - lower (%) Not available.
Flammability limit - upper (%) Not available.
Explosive limit - lower (%) Not available.
Explosive limit - upper (%) Not available.
Vapor density Not available.
Relative density Not available.
Solubility(ies) Very soluble
Partition coefficient (n-octanol/water) Not available.
Auto-ignition temperature Not available.
Decomposition temperature When heated to decomp emits toxic fumes of hydrogen chloride.
Viscosity Not available.
Other information
Density 1.71 g/cm3
Molecular formula CaCl2.XH2O X = 5-6
Molecular weight 219.05 g/mol

pH in aqueous solution 4.5 - 8.5 (5% solution)
Specific gravity 1.71

10. Stability and reactivity

Reactivity Not available.
Chemical stability Material is stable under normal conditions.
Possibility of hazardous reactions Hazardous polymerization does not occur.
Conditions to avoid None under normal conditions.
Incompatible materials None known.
Hazardous decomposition products Hydrogen chloride.

11. Toxicological information

Information on likely routes of exposure

Ingestion Harmful if swallowed.
Inhalation May cause irritation to the respiratory system.
Skin contact Based on available data, the classification criteria are not met.
Eye contact Causes serious eye irritation.

Symptoms related to the physical, chemical and toxicological characteristics Not available.

Information on toxicological effects

Acute toxicity Harmful if swallowed.

Product	Species	Test Results
CALCIUM CHLORIDE, HYDRATED (CAS 7774-34-7)		
Acute		
<i>Oral</i>		
LD50	Rat	1000 mg/kg
<i>Other</i>		
LD50	Mouse	42 mg/kg

* Estimates for product may be based on additional component data not shown.

Skin corrosion/irritation Based on available data, the classification criteria are not met.
Serious eye damage/eye irritation Causes serious eye irritation.
Respiratory sensitization Based on available data, the classification criteria are not met.
Skin sensitization Based on available data, the classification criteria are not met.
Germ cell mutagenicity Based on available data, the classification criteria are not met.
Carcinogenicity This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.
Reproductive toxicity Based on available data, the classification criteria are not met.
Specific target organ toxicity - single exposure Respiratory tract irritation.
Specific target organ toxicity - repeated exposure May cause damage to organs (blood system) through prolonged or repeated exposure.
Aspiration hazard Based on available data, the classification criteria are not met.
Chronic effects May cause damage to organs through prolonged or repeated exposure.

12. Ecological information

Ecotoxicity Harmful to aquatic life with long lasting effects. Accumulation in aquatic organisms is expected. Contains a substance which causes risk of hazardous effects to the environment.

Product	Species	Test Results
CALCIUM CHLORIDE, HYDRATED (CAS 7774-34-7)		
Aquatic		
Crustacea	EC50 Water flea (Daphnia magna)	52 mg/l, 48 hours

Product	Species	Test Results
Fish	LC50	Fathead minnow (<i>Pimephales promelas</i>) 3930 - 5360 mg/l, 96 hours

* Estimates for product may be based on additional component data not shown.

Persistence and degradability	No data is available on the degradability of this product.
Bioaccumulative potential	Not available.
Mobility in soil	Not available.
Other adverse effects	Not available.

13. Disposal considerations

Disposal instructions	Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Dilute waste in large quantities of water and flush into sewer connected to wastewater treatment system in compliance with applicable laws and regulations. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations.
Local disposal regulations	Not available.
Hazardous waste code	Not regulated.
Waste from residues / unused products	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).
Contaminated packaging	Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

14. Transport information

DOT
Not regulated as a hazardous material by DOT.

IATA
Not regulated as a dangerous good.

IMDG
Not regulated as a dangerous good.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
No information available.

15. Regulatory information

US federal regulations
CERCLA/SARA Hazardous Substances - Not applicable.
All components are on the U.S. EPA TSCA Inventory List.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)
Not regulated.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)
Not on regulatory list.

CERCLA Hazardous Substance List (40 CFR 302.4)
Not listed.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories
Immediate Hazard - Yes
Delayed Hazard - No
Fire Hazard - No
Pressure Hazard - No
Reactivity Hazard - No

SARA 302 Extremely hazardous substance
No

SARA 311/312 Hazardous chemical
No

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List
Not regulated.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)
Not regulated.

Safe Drinking Water Act (SDWA) Not regulated.

Drug Enforcement Administration (DEA). List 2, Essential Chemicals (21 CFR 1310.02(b) and 1310.04(f)(2) and Chemical Code Number

Not listed.

Drug Enforcement Administration (DEA). List 1 & 2 Exempt Chemical Mixtures (21 CFR 1310.12(c))

Not regulated.

DEA Exempt Chemical Mixtures Code Number

Not regulated.

Food and Drug Administration (FDA) Not regulated.

US state regulations California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins.

US. Massachusetts RTK - Substance List

Not regulated.

US. New Jersey Worker and Community Right-to-Know Act

Not regulated.

US. Pennsylvania RTK - Hazardous Substances

Not regulated.

US. Rhode Island RTK

Not regulated.

US. California Proposition 65

US - California Proposition 65 - Carcinogens & Reproductive Toxicity (CRT): Listed substance

Not listed.

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates this product complies with the inventory requirements administered by the governing country(s)

16. Other information, including date of preparation or last revision

Issue date April-26-2013

Version # 01

Further information Not available.

Disclaimer The information in the sheet was written based on the best knowledge and experience currently available. 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.

Revision Information Product and Company Identification: Product and Company Identification
Physical & Chemical Properties: Multiple Properties
GHS: Classification