1. Identification

Production Name: Calcium Chloride, Dihydrate

Catalog Number: C012

Company: Caisson Laboratories

Address: 836 South 100 East, Smithfield UT 84335

Telephone: 435.755.7615

Fax: 435.755.7617

Emergency Contact: CHEMTREC 800.424.9300 (703.527.3887)

Recommended Use: For research and laboratory use only.

Restrictions on Use: This product is intended for research and laboratory use only. This product is not to be used as human or animal therapeutics, cosmetics, pesticidal products, food additives, or as household chemicals.

2. Hazard(s) Identification

Classification of the Substance or Mixture

GHS Classification:

H319 - Eye Irritation (Category 2A)

GHS Label Elements, Including Precautionary Statements

Signal Word: Warning

Hazard Statements:

H319 - Causes serious eye irritation.

Precautionary Statements:

P264 – Wash hands thoroughly after handling.

P280 - Wear protective gloves/protective clothing/eye protection/face protection.

P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do - continue rinsing.

P337 + P313 - IF eye irritation persists: Get medical advice/attention.

Pictograms:



3. Composition/Information on Ingredients

Synonyms: N/A

Formula: $CaCl_2 \cdot 2H_2O$

Molecular Weight: 147.01

CAS-No: 10035-04-8

EC-No: 233-140-8

4. First-Aid Measures

General Advice: Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

Route of Exposure

If Swallowed: Never give anything by mouth to an unconscious person. Rinse mouth with water. Get medical attention.

In Case of Skin Contact: Wash area thoroughly with soap and water. Remove and wash contaminated clothing. Get medical attention if irritation persists.

In Case of Eye Contact: In case of contact with eyes, flush with copious amounts of water for at least 15 minutes. Assure adequate flushing by separating the eyelids with fingers. Get medical attention.

If Inhaled: Safely remove victim to fresh air. If not breathing, institute cardiopulmonary resuscitation (CPR). If breathing is difficult, ensure clear airway and give oxygen. Get medical attention.

Most Important Symptoms and Effects, Both Acute and Delayed: The most important known symptoms and effects are described in the labelling (see section 2 – Hazards Identification) and/or in section 11 – Toxicological Information.

Recommendation for Immediate Medical Care and Special Treatment Needed: No Data Available

5. Fire-Fighting Measures

Suitable Extinguishing Media: Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Special Protective Equipment and Precautions for Fire-Fighters: Wear self-contained breathing apparatus for firefighting if necessary.

Special Hazards Arising from the Substance or Mixture: No Data Available

Additional Information: No Data Available

6. Accidental Release Measures

Personal Precautions, Protective Equipment and Emergency Procedures: Use personal protective equipment. Avoid dust formation. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Avoid breathing dust. For personal protection see section 8.

Environmental Precautions: Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

Methods and Material for Containment and Cleanup: Wear suitable protective clothing. Avoid dust formation. Carefully sweep up and remove. Place material in a dry container and cover. Remove from the area. Flush spill area with water. Do not let products enter drains.

7. Handling and Storage

Precautions for Safe Handling: Further processing of solid materials may result in the formation of combustible dusts. The potential for combustible dust formation should be taken into consideration before additional processing occurs. Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Provide appropriate exhaust ventilation at places where dust is formed. For precautions see section 2.

Conditions for Safe Storage: Keep in a tightly closed container and store in a cool, dry, and well-ventilated area. Protect from moisture. Product is hygroscopic.

Recommended Storage Temperature: 15 to 30 °C

Incompatibilities: Strong acids, Borane/boron oxides, Zinc, Calcium oxide, Methyl vinyl ether, Calcium chloride is attacked by bromine trifluoride

8. Exposure controls / Personal Protection

OSHA Permissible Exposure Limits (PELs): No Data Available

ACGIH Threshold Limit Values (TLVs): No Data Available

Engineering controls: Practice general industrial hygiene practice. Ensure adequate ventilation, especially in confined areas.

Personal Protective Equipment (PPE):

> **Eye/face protection**: Face shield and safety glasses. Use equipment for eye protection tested and approved under appropriate government standards.
>
> **Skin Protection**: Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Respiratory protection: For nuisance exposures use type P95 (US) or type P1 (EU EN 143) particle respirator. For higher level protection use type OV/AG/P99 (US) or type ABEK-P2 (EU EN 143) respirator cartridges. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Body protection: Wear lab coat, gown, or coveralls to protect from exposure.

9. Physical and Chemical Properties

Appearance: Fine White Powder

pH: 4.5 – 8.5 (5%, H_2O)

Solubility: Soluble in Water

Specific Gravity: No Data Available

Melting Range: > 176 °C (> 349 °F)

Odor: Odorless

Odor Threshold: No Data Available

Viscosity: No Data Available

Relative Density: 1.850 g/cm^3

Evaporation Rate: No Data Available

Initial Boiling Point and Boiling Range: No Data Available

Flash Point: No Data Available

Flammability (Solid, gas): No Data Available

Flammability Upper/Lower Limits: No Data Available

Partition Coefficient: No Data Available

Vapor Density: No Data Available

Vapor Pressure: 0.01 hPa (0.01 mmHg) at 20 °C (68 °F)

Auto-ignition Temperature: No Data Available

Decomposition Temperature: No Data Available

10. Stability and Reactivity

Reactivity: No Data Available

Chemical Stability: Stable under recommended storage conditions.

Possibilities of Hazardous Reactions: No Data Available

Conditions to Avoid: No Data Available

Incompatible Materials: Strong acids, Borane/boron oxides, Zinc, Calcium oxide, Methyl vinyl ether, Calcium chloride is attacked by bromine trifluoride

Hazardous Decomposition Productions: No Data Available

In the event of fire: see section 5

11. Toxicological Information:

Toxicity: LD_{50} IP - Mouse: 20,500 mg/kg

LD_{50} Oral - Rabbit: 500 - 1,000 mg/kg

LD_{50} Oral - Rat: 1,000 mg/kg

LD_{50} Dermal - Rat: 2,630 mg/kg

Carcinogenicity:

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Reproductive Toxicity: No Data Available

Symptoms Associated with Overexposure: Irritation, itching, gastrointestinal upset, blurred vision

Specific Target Organ Toxicity – Single Exposure: No Data Available

Specific Target Organ Toxicity – Repeated Exposure: No Data Available

Target Organs: No Data Available

Medical Conditions Aggravated by Exposure: No Data Available

Routes of Entry: Ingestion, skin and eye contact

NIOSH/RTECS: EV9810000

12. Ecological Information

Toxicity: Toxicity to fish - LC_{50} - Lepomis macrochirus: 10,650 mg/L - 96 h

Toxicity to daphnia - EC_{50} - Daphnia magna (Water flea): 144 mg/L - 48 h

Toxicity to algae - IC_{50} - Algae: 3,130 mg/L - 120 h

Persistence and Degradability: No Data Available

Bioaccumulative Potential: No Data Available

Mobility in Soil: No Data Available

Results of PBT and vPvB: PBT/vPvB assessment not available as chemical safety assessment not required/not conducted.

Other Adverse Effects: No Data Available

13. Disposal Considerations

Disposal of Product: Dispose in accordance with all applicable federal, state, and local environmental regulations.

Disposal of Packaging: Dispose of as unused product.

14. Transport Information

DOT (US):

Proper Shipping Name: CHEMICALS, N.O.S. (NON-REGULATED)

UN/NA number: N/A Class: N/A Packaging group: N/A Hazard Label: N/A

Reportable Quantity (RQ): N/A

Poison Inhalation Hazard: N/A

IMDG:

Proper Shipping Name: CHEMICALS, N.O.S. (NON-REGULATED)

UN number: N/A Class: N/A Packaging group: N/A Hazard Label: N/A

IATA:

Proper Shipping Name: CHEMICALS, N.O.S. (NON-REGULATED)

UN Number: N/A Class: N/A Packaging group: N/A Hazard Label: N/A

15. Regulatory Information

TSCA: Not Listed

SARA Title lll:

Section 302 (EHS) Ingredients: No

Section 313 Ingredients: No

Section 304 (EHS/CERCLA) Ingredients: No

Section 311/312 Hazard: Acute Health Hazard

16. Other Information

HMIS Rating

Health Hazard: 2

Chronic Health Hazard: -

Flammability: 0

Physical Hazard: 0

NFPA Rating

Health Hazard: 2

Fire Hazard: 0

Reactivity: 0

Special Hazard: -

Further Information: All chemicals may pose unknown hazards and should be used with caution. 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, Caisson Laboratories, Inc. assumes no responsibility for the completeness or accuracy of the information contained herein.

SP-CN-C012 Revision Change Summary:

Rev.	Date	CR#	Approved	Change description
00	**16-Apr-20**	2359	E. Welker	New Document