

# Bioland Scientific LLC

# Material Safety Data Sheet

Version 1.0  
Revision Date 08/07/2024  
Print Date 08/08/2024

## SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

Product name	<b>Magnesium chloride hexahydrate</b>
Product Number	CC01
Brand	Bioland Chemical
Company	Bioland Scientific LLC 14925 Paramount Blvd., Suite C Paramount, CA 90723 USA
Telephone	1-562-377-2668
Fax	1-562-733-6008
Emergency Phone #	1-562-377-2668

## SECTION 2: COMPOSITION/INFORMATION ON INGREDIENTS

## 2.1 Substances

Formula :  $\text{CaCl}_2$   
Molecular weight : 110.98 g/mol  
CAS-No. : 10043-52-4  
EC-No. : 233-140-8  
Index-No.: 017-013-00-2

Component	Classification	Concentration
Calcium Chloride	Eye Irrit. 2A; H319	<= 100 %

For the full text of the H-Statements mentioned in this Section, see Section 16.

### SECTION 3 : HAZARDS IDENTIFICATION

### 3.1 Classification of the substance or mixture

**GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)**

Eye irritation (Category 2A), H319

For the full text of the H-Statements mentioned in this Section, see Section 16.

### 3.2 GHS Label elements, including precautionary statements

Pictogram \*\* INCLUDE PICTOGRAMMMMM

Signal Word                      Warning

Hazard Statements  
H319

Causes serious eye irritation.

Precautionary Statements  
P264

Wash skin thoroughly after handling.

P280

Wear 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.

### 3.3 Hazards not otherwise classified (HNOC) or not covered by GHS - none

## SECTION 4 : FIRST AID MEASURES

### 4.1 Description of first-aid measures

#### General advice

Show this material safety data sheet to the doctor in attendance.

#### If inhaled

After inhalation: fresh air.

#### In case of skin contact

In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/shower.

#### In case of eye contact

After eye contact: rinse out with plenty of water. Call in the ophthalmologist. Remove contact lenses.

#### If swallowed

After swallowing: immediately make victim drink water (two glasses at most). Consult a physician.

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

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

### 4.3 Indication of any immediate medical attention and special treatment needed

No data available

## **SECTION 5 : FIRE-FIGHTING MEASURES**

### **5.1 Extinguishing media**

#### **Suitable extinguishing media**

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

#### **Unsuitable extinguishing media**

For this substance/mixture no limitations of extinguishing agents are given.

### **5.2 Special Hazards arising from the substance or mixture**

Hydrogen chloride gas

Calcium oxide

Not combustible.

Ambient fire may liberate hazardous vapors.

### **5.3 Advice for firefighters**

In the event of fire, wear self-contained breathing apparatus.

### **5.4 Further information**

Suppress (knock down) gases/vapors/mists/ with a water spray jet. Prevent fire extinguishing water from contaminating surface water or the ground water system.

## **SECTION 6 : ACCIDENTAL RELEASE MEASURES**

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

Advice for non-emergency personnel: Avoid inhalation of dusts. Avoid substance contact. Ensure adequate ventilation.

Evacuate the danger area, observe emergency procedures, consult an expert.

For personal protection see Section 8.

### **6.2 Environmental precautions**

Do not let product enter drains.

### **6.3 Methods and materials for containment and cleaning up**

Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up dry. Dispose of properly. Clean up affected area. Avoid generation of dusts.

### **6.4 Reference to other sections**

For disposal see section 13.

## **SECTION 7 : HANDLING AND STORAGE**

### **7.1 Precautions for safe handling**

For precautions see section 2.2.

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

#### **Storage conditions**

Tightly closed. Dry.

Moisture sensitive.

#### **Storage class**

Storage class (TRGS 510): 13: Non-Combustible Solids

### **7.3 Specific end use(s)**

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

## **SECTION 8 : EXPOSURE CONTROLS/PERSONAL PROTECTION**

### **8.1 Control parameters**

#### **Ingredients with workplace control parameters**

Contains no substances with occupational exposure limit values.

### **8.2 Exposure controls**

#### **Appropriate engineering controls**

Change contaminated clothing. Wash hands after working with substance.

#### **Personal protective equipment**

##### **Eye/face protection**

Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). Safety glasses

##### **Skin protection**

This recommendation applies only to the product stated in the safety data sheet, supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN 16523-1 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: [www.kcl.de](http://www.kcl.de)).

Full contact

Material: Nitrile rubber

Minimum layer thickness: 0.11 mm

Break through time: 480 min

Material tested:KCL 741 Dermatril® L

This recommendation applies only to the product stated in the safety data sheet, supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN 16523-1 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: [www.kcl.de](http://www.kcl.de)).

Splash contact

Material: Nitrile rubber

Minimum layer thickness: 0.11 mm

Break through time: 480 min

Material tested:KCL 741 Dermatril® L

##### **Body Protection**

protective clothing

##### **Respiratory protection**

Recommended Filter type: Filter type P2

The entrepreneur has to ensure that maintenance, cleaning and testing of respiratory protective devices are carried out according to the instructions of the producer.

These measures have to be properly documented.

required when dusts are generated.

Our recommendations on filtering respiratory protection are based on the following standards: DIN EN 143, DIN 14387 and other accompanying standards relating to the used respiratory protection system.

##### **Control of environmental exposure**

Do not let product enter drains.

## SECTION 9 : PHYSICAL AND CHEMICAL PROPERTIES

### 9.1 Information on basic physical and chemical properties

a) Appearance	Form: powder Color: white
b) Odor	odorless
c) Odor Threshold	Not applicable
d) pH	8 - 10
e) Melting point/freezing point	Melting point: 775 °C (1427 °F) at 1,013 hPa
f) Initial boiling point and boiling range	1,935 °C 3,515 °F at 1,013 hPa
g) Flash point	( )No data available
h) Evaporation rate	No data available
i) Flammability (solid, gas)	The product is not flammable.
j) Upper/lower flammability or explosive limits	No data available
k) Vapor pressure	0.01 hPa at 20 °C (68 °F)
l) Vapor density	No data available
m) Density	2.15 g/cm <sup>3</sup> at 25 °C (77 °F)
Relative density	No data available
n) Water solubility	745 g/l at 20 °C (68 °F) - soluble
o) Partition coefficient: n-octanol/water	Not applicable for inorganic substances

p) Autoignition temperature	No data available
q) Decomposition temperature	No data available
r) Viscosity	No data available
s) Explosive properties	No data available
t) Oxidizing properties	none

## 9.2 Other safety information

No data available

## SECTION 10 : STABILITY AND REACTIVITY

### 10.1 Reactivity

No data available

### 10.2 Chemical stability

The product is chemically stable under standard ambient conditions (room temperature) .

### 10.3 Possibility of hazardous reactions

Exothermic reaction with:

boron trifluoride

vinylmethyl ether

Generates dangerous gases or fumes in contact with:

Metals

Zinc

(generation of hydrogen)

### 10.4 Conditions to avoid

Exposure to moisture may affect product quality.

no information available

### 10.5 Incompatible materials

No data available

### 10.6 Hazardous decomposition products

In the event of fire: see section 5

## SECTION 11 : TOXICOLOGICAL INFORMATION

### 11.1 Information on toxicological effects

#### Acute toxicity

Oral: No data available

Symptoms: After uptake of large quantities:, Stomach/intestinal disorders, Nausea

Symptoms: Possible damages:, mucosal irritations

LD50 Dermal - Rabbit - male and female - > 5,000 mg/kg

Remarks: (ECHA)

No data available

#### Skin corrosion/irritation

Skin - Rabbit

Result: No skin irritation - 4 h

(OECD Test Guideline 404)

#### Serious eye damage/eye irritation

Eyes - Rabbit

Result: Moderate eye irritation

(OECD Test Guideline 405)

#### Respiratory or skin sensitization

No data available

#### Germ cell mutagenicity

Test Type: Mutagenicity (mammal cell test): chromosome aberration.

Test system: Chinese hamster fibroblasts

Metabolic activation: without metabolic activation

Method: OECD Test Guideline 473

Result: negative

Test Type: Ames test

Test system: S. typhimurium

Metabolic activation: Metabolic activation

Method: OECD Test Guideline 471

Result: negative

Remarks: (Lit.)

#### Carcinogenicity

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

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

OSHA: OSHA: No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

#### Reproductive toxicity

No data available

#### Specific target organ toxicity – single exposure

No data available

#### Specific target organ toxicity - repeated exposure

No data available

**Aspiration hazard**

No data available

**11.2 Additional Information**

RTECS: EV9800000

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

**SECTION 12: ECOLOGICAL INFORMATION****12.1 Toxicity**

Toxicity to fish	static test LC50 - Pimephales promelas (fathead minnow) - 4,630 mg/l - 96 h (US-EPA)
Toxicity to daphnia and other aquatic invertebrates	static test EC50 - Daphnia magna (Water flea) - 2,400 mg/l - 48 h (OECD Test Guideline 202)
Toxicity to algae	EC50 - Pseudokirchneriella subcapitata - 2,900 mg/l - 72 h (OECD Test Guideline 201)
Toxicity to daphnia and other aquatic invertebrates(Chronic toxicity)	EC50 - Daphnia magna (Water flea) - 610 mg/l - 21 d

**12.2 Persistence and degradability**

The methods for determining the biological degradability are not applicable to inorganic substances.

**12.3 Bioaccumulative potential**

No data available

**12.4 Mobility in soil**

No data available

**12.5 Results of PBT and vPvB assessment**

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted



**12.6 Endocrine disrupting properties**

No data available

**12.7 Other adverse effects**

No data available

**SECTION 13: DISPOSAL CONSIDERATIONS****13.1 Waste treatment methods****Product**

Waste material must be disposed of in accordance with the national and local regulations.  
Leave chemicals in original containers. No mixing with other waste. Handle uncleaned containers like the product itself.

**SECTION 14: TRANSPORT INFORMATION****DOT (US)**

Not dangerous goods

**IMDG**

Not dangerous goods

**IATA**

Not dangerous goods

**Further information**

Not classified as dangerous in the meaning of transport regulations.

**SECTION 15: REGULATORY INFORMATION****SARA 302 Components**

This material does not contain any components with a section 302 EHS TPQ.

**SARA 313 Components**

This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

**SARA 311/312 Hazards**

Acute Health Hazard

**Massachusetts Right To Know Components**

No components are subject to the Massachusetts Right to Know Act.

## SECTION 16: OTHER INFORMATION

### Further information

The information is believed to be correct but is not exhaustive and will be used solely as a guideline, which is based on current knowledge of the chemical substance or mixture and is applicable to appropriate safety precautions for the product. It does not represent any guarantee of the properties of the product. Sigma-Aldrich Corporation and its affiliates shall not be held liable for any damage resulting from handling or from contact with the above product. See [www.sigma-aldrich.com](http://www.sigma-aldrich.com) and/or the reverse side of invoice or packing slip for additional terms and conditions of sale.

### Disclaimer:

\*\*\*\*\*

**Bioland Scientific LLC provides the information contained herein in good faith but makes no representation as to its comprehensiveness or accuracy. This document is intended only as a guide to the appropriate precautionary handling of the material by a properly trained person using this product. Individuals receiving the information must exercise their independent judgment in determining its appropriateness for a particular purpose. BIOLAND SCIENTIFIC LLC MAKES NO REPRESENTATIONS OR WARRANTIES, EITHER EXPRESS OR IMPLIED, INCLUDING WITHOUT LIMITATION ANY WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE WITH RESPECT TO THE INFORMATION SET FORTH HEREIN OR THE PRODUCT TO WHICH THE INFORMATION REFERS. ACCORDINGLY, BIOLAND SCIENTIFIC LLC WILL NOT BE RESPONSIBLE FOR DAMAGES RESULTING FROM USE OF OR RELIANCE UPON THIS INFORMATION.**