

Bioland Scientific LLC

Material Safety Data Sheet

Version 1.0

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SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

Product name	Magnesium chloride hexahydrate
Product Number	CM04
Brand	Bioland Chemicals
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 : : $\text{Cl}_2\text{Mg} \cdot 6\text{H}_2\text{O}$

Molecular weight : 203.30 g/mol

CAS-No. : 7791-18-6

EC-No. : 232-094-6

No components need to be disclosed according to the applicable regulations.

SECTION 3 : HAZARDS IDENTIFICATION

3.1 Classification of the substance or mixture

Not a hazardous substance or mixture

3.2 GHS Label elements, including precautionary statements

Not a hazardous substance or mixture

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

No data available

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

No data available

5.2 Special Hazards arising from the substance or mixture

Hydrogen chloride gas

Magnesium oxide

Not combustible

5.3 Advice for firefighters

No data available.

5.4 Further information

No data available.

SECTION 6 : ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

For personal protection see Section 8.

6.2 Environmental precautions

No data available

6.3 Methods and materials for containment and cleaning up

No data available

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

Moisture sensitive. Hygroscopic.

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

Personal protective equipment

Skin protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) 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.

Full contact

Material: Nitrile rubber

Minimum layer thickness: 0.11 mm

Break through time: 480 min

Material tested: :Dermatril® (KCL 740 / Aldrich Z677272, Size M)

Splash contact

Material: Nitrile rubber

Minimum layer thickness: 0.11 mm

Break through time: 480 min

Material tested: Dermatril® (KCL 740 / Aldrich Z677272, Size M)

Data source: KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 87300, e-mail

sales@kcl.de, test method: EN374

If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the EC approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

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: solid
b) Odor	No data available
c) Odor Threshold	No data available
d) pH	No data available
e) Melting point/freezing point	Melting point: 116.7 °C (242.1 °F)
f)	No data available

Initial boiling point
and boiling range

g) Flash point ()No data available

h) Evaporation rate No data available

i) Flammability (solid,
gas) The product is not flammable.

j) No data available
Upper/lower
flammability or
explosive limits

k) Vapor pressure No data available

l) No data available
Vapor density

m) Density 1.570 g/cm³ at 20 °C (68 °F)

Relative density No data available

n) Water solubility 468.7 g/l at 20 °C (68 °F) - OECD Test
Guideline 105

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

No data available

10.3 Possibility of hazardous reactions

No information available

10.4 Conditions to avoid

Exposure to moisture may affect product quality.

10.5 Incompatible materials

No information 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

LD50 Oral - Rat - female - > 5,000 mg/kg

(OECD Test Guideline 423)

Remarks: (anhydrous substance)

The value is given in analogy to the following substances: magnesium chloride

Inhalation: No data available

Symptoms: slight mucosal irritations

Acute toxicity estimate Dermal - 2,500 mg/kg

(Calculation method)

LD50 Dermal - Rat - male and female - > 2,000 mg/kg

(OECD Test Guideline 402)

Remarks: (anhydrous substance)

The value is given in analogy to the following substances: magnesium chloride

No data available

Skin corrosion/irritation

Skin - In vitro study

Result: No skin irritation - 15 min

(Regulation (EC) No. 440/2008, Annex, B.46)

Remarks: (anhydrous substance)

The value is given in analogy to the following substances: magnesium chloride. The value is given in analogy to the following substances: Magnesium chloride hexahydrate

Serious eye damage/eye irritation

Eyes - Rabbit

Result: No eye irritation - 72 h

(OECD Test Guideline 405)

Remarks: (anhydrous substance)

The value is given in analogy to the following substances: magnesium chloride

Respiratory or skin sensitization

Maximization Test - Guinea pig

Result: negative

(OECD Test Guideline 406)

Remarks: (anhydrous substance)

The value is given in analogy to the following substances: magnesium chloride

Germ cell mutagenicity

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

Test system: Human lymphocytes

Metabolic activation: with and without metabolic activation

Method: OECD Test Guideline 473

Result: negative

Remarks: (anhydrous substance)

The value is given in analogy to the following substances: magnesium chloride

Test Type: In vitro mammalian cell gene mutation test

Test system: Mouse lymphoma test

Metabolic activation: with and without metabolic activation

Method: OECD Test Guideline 476

Result: negative

Remarks: (anhydrous substance)

The value is given in analogy to the following substances: magnesium chloride

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

Repeated dose toxicity - Rat - male and female - Oral - 54 d - NOAEL (No observed adverse effect level) - > 1,000 mg/kg

Remarks: Subacute toxicity

(anhydrous substance) The value is given in analogy to the following substances: magnesium chloride

RTECS: OM2975000

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

After uptake of large quantities:

Metal-fume fever after inhalation of large quantities.

Nausea

Vomiting

Diarrhea

Systemic effects:

drop in blood pressure

Cardiac irregularities

muscular weakness

paralysis symptoms

Tiredness

After absorption of large quantities:

cardiovascular disorders

However, when the product is handled appropriately, hazardous effects are unlikely to occur.

Handle in accordance with good industrial hygiene and safety practice.

Liver - Irregularities - Based on Human Evidence

SECTION 12: ECOLOGICAL INFORMATION

12.1 Toxicity

Toxicity to fish	static test LC50 - Pimephales promelas (fathead minnow) - 2,119.3 mg/l - 96 h (US-EPA) Remarks: (anhydrous substance) The value is given in analogy to the following substances: magnesium chloride
Toxicity to bacteria	static test EC50 - activated sludge - > 900 mg/l - 3 h (OECD Test Guideline 209)
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	static test LC50 - Daphnia magna (Water flea) - 548.4 mg/l - 48 h Remarks: (ECHA) (anhydrous) The value is given in analogy to the following substances: rous substance) magnesium chloride
Toxicity to algae	Static test ErC50 - Desmodesmus subspicatus (green algae) - > 100 mg/l - 72 h (OECD Test Guideline 201)
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	semi-static test EC10 - Daphnia magna (Water flea) - 321 mg/l - 21 d Remarks: (ECHA)

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

Discharge into the environment must be avoided.

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

No data available.

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

CERCLA Reportable Quantity

This material does not contain any components with a CERCLA RQ.

SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ

SARA 302 Extremely Hazardous Substances Threshold Planning Quantity

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

SARA 311/312 Hazards

Chronic Health Hazard

SARA 313

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.

US State Regulations

Massachusetts Right To Know Components

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

Maine Chemicals of High Concern

Product does not contain any listed chemicals

Vermont Chemicals of High Concern

Product does not contain any listed chemicals

Washington Chemicals of High Concern

Product does not contain any listed chemicals

The ingredients of this product are reported in the following inventories:

TSCA : All substances listed as active on the TSCA inventory

TSCA list

No substances are subject to a Significant New Use Rule.

No substances are subject to TSCA 12(b) export notification requirements.

SECTION 16: OTHER INFORMATION

Product Use:

For research use only.

Disclaimer:

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