

Revised on: 22.08.2019

Calcium chloride dihydrate for biochemistry

Created on: 22.08.2019

## 1. Identification of the substance/mixture and of the company/undertaking

### 1.1. Product identifier

**Trade name:** Calcium chloride dihydrate for biochemistry

**Article number:** 1186

**CAS Number:** 10035-04-8

**Registration number:** 01-2119494219-28-XXXX

### 1.2. Relevant identified uses of the substance or mixture and uses advised against

No further relevant information available.

**Application of the substance / the mixture:**

Laboratory chemical, pharmaceutical production and analysis

### 1.3. Details of the supplier of the safety data sheet

**Manufacturer/Supplier:**

neoFroxx GmbH

Marie-Curie-Str. 3

D-64683 Einhausen

[info@neofroxx.com](mailto:info@neofroxx.com)

**Further information obtainable from:**

Dep. Quality Control

### 1.4. Emergency telephone number

+49 (6251) 989 24 - 0 (during normal business hours)

## 2. Hazards identification

### 2.1. Classification of the substance or mixture

**Classification according to Regulation (EC) No 1272/2008:**

Eye irritation, Category 2, H319

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

### 2.2. Label elements

**Labelling according to Regulation (EC) No 1272/2008:**

**Hazard pictograms:**



**Signal word:** Warning

**Hazard statements:**

H319 Causes serious eye irritation.

**Precautionary statements:**

Response

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

**Index-No.:** 017-013-00-2

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- 2.3. Other hazards  
None known.

### 3. Composition / information on ingredients

3.1. Substance

**Formula:**  $\text{CaCl}_2 \cdot 2\text{H}_2\text{O}$  (Hill)

**Index-No.:** 017-013-00-2

**EC-No.:** 233-140-8

**Molar mass:** 147,01 g/mol

**Hazardous components (REGULATION (EC) No 1272/2008):**

**Chemical Name (Concentration):**

Calcium chloride dihydrate ( $\leq 100\%$ )

PBT/vPvB: Not applicable for inorganic substances

**CAS-No.:**

10035-04-8

**Registration number:**

01-2119494219-28-XXXX

**Classification:**

Eye irritation, Category 2, H319

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

3.2. Mixture

Not applicable

### 4. First aid measures

4.1. Description of first aid measures

**After inhalation:** fresh air.

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

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

**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

irritant effects, Stomach/intestinal disorders

irritant effects

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

No information available.

### 5. Firefighting 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

Non-combustible.

Ambient fire may liberate hazardous vapours.

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**Fire may cause evolution of:**

Hydrogen chloride gas

**5.3. Advice for firefighters**

**Special protective equipment for firefighters:**

Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.

**Further information:**

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

## 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.

**Advice for emergency responders:**

Protective equipment see section 8.

**6.2. Environmental precautions**

Do not let product enter drains.

**6.3. Methods and material 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**

Indications about waste treatment see section 13.

## 7. Handling and storage

**7.1. Precautions for safe handling**

**Advice on safe handling:**

Observe label precautions.

**Hygiene measures:**

Change contaminated clothing. Wash hands after working with substance.

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

**Storage conditions:**

Tightly closed. Dry.

Recommended storage temperature see product label.

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

No further relevant information available.

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## 8. Exposure controls / personal protection

### 8.1. Control parameters

#### Derived No Effect Level (DNEL):

Worker DNEL, longterm	Local effects	inhalation	5 mg/m <sup>3</sup>
Worker DNEL, acute	Local effects	inhalation	10 mg/m <sup>3</sup>
Consumer DNEL, longterm	Local effects	inhalation	2,5 mg/m <sup>3</sup>
Consumer DNEL, acute	Local effects	inhalation	5 mg/m <sup>3</sup>

### 8.2. Exposure controls

#### Engineering measures:

Technical measures and appropriate working operations should be given priority over the use of personal protective equipment.

See section 7.1.

#### Individual protection measures:

Protective clothing needs to be selected specifically for the workplace, depending on concentrations and quantities of the hazardous substances handled. The chemical resistance of the protective equipment should be enquired at the respective supplier.

#### Eye/face protection:

Safety glasses

#### Hand protection:

full contact:

Glove material: Nitrile rubber

Glove thickness: 0,11 mm

Break through time: > 480 min

splash contact:

Glove material: Nitrile rubber

Glove thickness: 0,11 mm

Break through time: > 480 min

The protective gloves to be used must comply with the specifications of EC Directive 89/686/EEC and the related standard EN374, for example KCL 741 Dermatril® L (full contact), KCL 741 Dermatril® L (splash contact).

The breakthrough times stated above were determined by KCL in laboratory tests acc. to EN374 with samples of the recommended glove types.

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 EN374 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: [www.kcl.de](http://www.kcl.de)).

#### Other protective equipment:

protective clothing

#### Respiratory protection:

required when dusts are generated.

Recommended Filter type: Filter P 2 (acc. to DIN 3181) for solid and liquid particles of harmful substances

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.

#### Environmental exposure controls:

Do not let product enter drains.

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## 9. Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

**Form:** solid

**Colour:** white

**Odour:** odourless

**Odour Threshold:** Not applicable

**pH:** 4,5 - 8,5 at 50 g/l 20 °C

**Melting point:** ca. 176 °C

**Boiling point:** No information available.

**Flash point:** does not flash

**Evaporation rate:** No information available.

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

**Lower explosion limit:** Not applicable

**Upper explosion limit:** Not applicable

**Vapour pressure:** No information available.

**Relative vapour density:** No information available.

**Density:** 1,85 g/cm<sup>3</sup> at 20 °C

**Relative density:** No information available.

**Water solubility:** 1.280 g/l at 40 °C

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

**Auto-ignition temperature:** No information available.

**De Viscosity, dynamic:** No information available.

**Explosive properties:** Not classified as explosive.

**Oxidizing properties:** none

### 9.2. Other information

**Ignition temperature:** not combustible

## 10. Stability and reactivity

### 10.1. Reactivity

exothermic dissolution process with water

### 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, Water

**Generates dangerous gases or fumes in contact with:**

Metals, Zinc

### 10.4. Conditions to avoid

Exposure to moisture

### 10.5. Incompatible materials

no information available

### 10.6. Hazardous decomposition products

in the event of fire: See section 5.

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## 11. Toxicological information

### 11.1. Information on toxicological effects

#### **Acute oral toxicity:**

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

#### **Acute inhalation toxicity:**

Symptoms: Possible damages:, mucosal irritations

#### **Acute dermal toxicity:**

LD50 Rat: 2.630 mg/kg

(anhydrous substance) (IUCLID)

#### **Skin irritation:**

Rabbit

Result: No irritation

OECD Test Guideline 404

(anhydrous substance)

#### **Eye irritation:**

Rabbit

Result: Eye irritation

OECD Test Guideline 405

(anhydrous substance)

Causes serious eye irritation.

#### **Sensitisation:**

This information is not available.

#### **Germ cell mutagenicity:**

#### **Genotoxicity in vitro:**

Ames test

Result: negative

(anhydrous substance) (Lit.)

#### **Carcinogenicity:**

This information is not available.

#### **Reproductive toxicity:**

This information is not available.

#### **Teratogenicity:**

This information is not available.

#### **Specific target organ toxicity - single exposure:**

This information is not available.

#### **Specific target organ toxicity - repeated exposure:**

This information is not available.

#### **Aspiration hazard:**

This information is not available.

### 11.2. Further information

Other dangerous properties can not be excluded.

Handle in accordance with good industrial hygiene and safety practice.

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## 12. Ecological information

### 12.1. Toxicity

#### Toxicity to fish:

LC50 *Lepomis macrochirus* (Bluegill sunfish): 10.650 mg/l; 96 h  
(anhydrous substance) (IUCLID)

#### Toxicity to daphnia and other aquatic invertebrates:

EC50 *Daphnia magna* (Water flea): 144 mg/l; 48 h  
(anhydrous substance) (IUCLID)

#### Toxicity to algae:

IC50 algae: 3.130 mg/l; 120 h  
(anhydrous substance) (IUCLID)

### 12.2. Persistence and degradability

No further relevant information available.

### 12.3. Bioaccumulative potential

No further relevant information available.

### 12.4. Mobility in soil

No further relevant information available.

### 12.5. Results of PBT and vPvB assessment

**PBT:** Not applicable.

**vPvB:** Not applicable.

### 12.6. Other adverse effects

#### Additional ecological information:

Discharge into the environment must be avoided.

## 13. Disposal considerations

### 13.1. Waste treatment methods

#### Recommendation:

Must not be disposed together with household garbage. Do not allow product to reach sewage system.

#### Uncleaned packaging:

Recommendation: Disposal must be made according to official regulations

## 14. Transport information

### Land transport (ADR/RID):

#### 14.1 - 14.6:

Not classified as dangerous in the meaning of transport regulations.

### Inland waterway transport (ADN):

Not relevant

### Air transport (IATA):

#### 14.1 - 14.6:

Not classified as dangerous in the meaning of transport regulations.

### Sea transport (IMDG):

#### 14.1 - 14.6:

Not classified as dangerous in the meaning of transport regulations.

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## 14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not relevant

## 15. Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

### EU regulations:

#### Major Accident Hazard Legislation:

SEVESO III

Not applicable

#### Occupational restrictions:

Take note of Dir 94/33/EC on the protection of young people at work.

#### Regulation (EC) No 1005/2009 on substances that deplete the ozone layer:

not regulated

#### Regulation (EC) No 850/2004 of the European Parliament and of the Council of 29 April 2004 on persistent organic pollutants and amending Directive 79/117/EEC:

not regulated

#### Substances of very high concern (SVHC):

This product does not contain substances of very high concern according to Regulation (EC) No 1907/2006 (REACH), Article 57 above the respective regulatory concentration limit of  $\geq 0.1\%$  (w/w).

#### National legislation:

**Storage class:** 10 - 13

15.2. Chemical safety assessment:

A Chemical Safety Assessment has been carried out according to regulation (EC) No. 1907/2006 (REACH) for this substance.

## 16. Other information

### Full text of H-Statements referred to under sections 2 and 3.:

H319 Causes serious eye irritation.

### Training advice:

Provide adequate information, instruction and training for operators.

### Labelling:

**Signal word:** Warning

### Hazard statements

H319 Causes serious eye irritation.

### Precautionary statements

Response

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

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.



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**Abbreviations and acronyms:**

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)

IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)

ICAO: International Civil Aviation Organisation

ICAO-TI: Technical Instructions by the "International Civil Aviation Organisation" (ICAO)

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

DNEL: Derived No-Effect Level (REACH)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

Met. Corr. 1: Corrosive to metals – Category 1

Acute Tox. 4: Acute toxicity – Category 4

Skin Corr. 1A: Skin corrosion/irritation – Category 1A