

Revised on: 14.11.2019

Barium chloride dihydrate p.A.

Created on: 14.11.2019

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

1.1. Product identifier

Trade name: Barium chloride dihydrate p.A.

Article number: LC-6917

CAS Number: 10326-27-9

Registration number: A registration number is not available for this substance as the substance or its use are exempted from registration according to Article 2 REACH Regulation (EC) No 1907/2006, the annual tonnage does not require a registration or the registration is envisaged for a later registration deadline.

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

Identified uses:

Reagent for analysis, Chemical production

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

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 (REGULATION (EC) No 1272/2008):

Acute toxicity, Category 3, Oral, H301

Acute toxicity, Category 4, Inhalation, H332

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:

Danger

Hazard statements:

H301 Toxic if swallowed.

H332 Harmful if inhaled.

Precautionary statements:

Response

P308 + P310 IF exposed or concerned: immediately call a POISON CENTER or doctor/ physician.

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Index-No.:

056-004-00-8

2.3. Other hazards

None known.

3. Composition / information on ingredients

3.1. Substance

Formula: BaCl₂ * 2 H₂O (Hill)

EC-No.: 233-788-1

Index-No.: 056-004-00-8

Molar mass: 244,28 g/mol

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

Chemical name (Concentration):

barium chloride dihydrate (<= 100 %)

CAS-No.:

10326-27-9

Registration number:

A registration number is not available for this substance as the substance or its use are exempted from registration according to Article 2 REACH Regulation (EC) No 1907/2006, the annual tonnage does not require a registration or the registration is envisaged for a later registration deadline.

Classification:

Acute toxicity, Category 3, H301

Acute toxicity, Category 4, H332

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

General advice:

First aider needs to protect himself.

After inhalation: fresh air. If breathing stops: mouth-to-mouth breathing or artificial respiration. Oxygen if necessary. Immediately call in physician.

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: give water to drink (two glasses at most). Seek medical advice immediately. In exceptional cases only, if medical care is not available within one hour, induce vomiting (only in persons who are wide awake and fully conscious), administer activated charcoal (20 - 40 g in a 10% slurry) and consult a doctor as quickly as possible.

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

The following applies to soluble barium compounds in general: after swallowing: mucosal irritation, nausea, salivation, vomiting, dizziness, pain, colics, and diarrhoea. Systemic effects include: cardiac dysrhythmias, bradycardia (subdued cardiac activity), rise in blood pressure, shock and circulatory collapse as well as muscular rigidity.

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irritant effects, conjunctivitis, Cough, respiratory paralysis, Shortness of breath, Dermatitis, cardiac arrest, death

- 4.3. Indication of any immediate medical attention and special treatment needed
Subsequently administer: Sodium sulfate (1 tablespoon/1/4 l water).

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.

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.

Work under hood. Do not inhale substance/mixture.

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Hygiene measures:

Change contaminated clothing. Preventive skin protection recommended.

Wash hands after working with substance.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions:

Tightly closed. Dry. Keep in a well-ventilated place. Keep locked up or in an area accessible only to qualified or authorised persons.

Recommended storage temperature see product label.

7.3. Specific end use(s)

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

8. Exposure controls / personal protection

8.1. Control parameters

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).

Other protective equipment:

protective clothing

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Respiratory protection:

required when dusts are generated.

Recommended Filter type: Filter P 3 (acc. to DIN 3181) for solid and liquid particles of toxic and very toxic 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.

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: 5,2 - 8,0 at 50 g/l 25 °C

Melting point: 2.800 °C

Boiling point/boiling range: No information available.

Flash point: Not applicable

Evaporation rate: No information available.

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

Lower explosion limit: No information available.

Upper explosion limit: No information available.

Vapour pressure: No information available.

Relative vapour density: No information available.

Density: 3,86 g/cm³ at 20 °C

Relative density: No information available.

Water solubility: No information available.

Partition coefficient: noctanol/water: No information available.

Auto-ignition temperature: No information available.

Decomposition temperature: > 100 °C Elimination of water of crystallisation

Viscosity, dynamic: No information available.

Explosive properties: Not classified as explosive.

Oxidizing properties: none

9.2. Other information

Bulk density: ca.1.200 - 1.400 kg/m³

10. Stability and reactivity

10.1. Reactivity

See section 10.3

10.2. Chemical stability

releases water of crystallisation when heated.

10.3. Possibility of hazardous reactions

Risk of explosion with:

furan-2-percarbonic acid

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Violent reactions possible with:

halogen-halogen compounds, Strong oxidizing agents, strong reducing agents, acids

10.4. Conditions to avoid

Strong heating (decomposition).

10.5. Incompatible materials

no information available

10.6. Hazardous decomposition products

in the event of fire: See section 5.

11. Toxicological information

11.1. Information on toxicological effects

Acute oral toxicity:

LD50 Rat: 118 mg/kg

(anhydrous substance) (IUCLID)

Acute inhalation toxicity:

Acute toxicity estimate: 1,6 mg/l; dust/mist

Expert judgement

Symptoms: mucosal irritations, Cough, Shortness of breath

Acute dermal toxicity:

This information is not available.

Skin irritation:

This information is not available.

Eye irritation:

This information is not available.

Sensitisation:

This information is not available.

Germ cell mutagenicity:

This information is not available.

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

After uptake:

Possible damages:

respiratory paralysis, cardiac arrest, death

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Chronic intoxication:

damage of respiratory tract, conjunctivitis, Dermatitis, Cardio-vascular system

The following applies to soluble barium compounds in general: after swallowing: mucosal irritation, nausea, salivation, vomiting, dizziness, pain, colics, and diarrhoea. Systemic effects include: cardiac dysrhythmias, bradycardia (subdued cardiac activity), rise in blood pressure, shock and circulatory collapse as well as muscular rigidity.

Other dangerous properties can not be excluded.

This substance should be handled with particular care.

12. Ecological information

12.1. Toxicity

No information available.

12.2. Persistence and degradability

No information available.

12.3. Bioaccumulative potential

No information available.

12.4. Mobility in soil

No information available.

12.5. Results of PBT and vPvB assessment

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

12.6. Other adverse effects

Additional ecological information:

Formation of health-hazardous mixtures possible with water. Endangers drinking-water supplies if allowed to enter soil or water.

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 UN number

UN 1564

14.2 Proper shipping name

BARIUM COMPOUND, N.O.S. (BARIUM CHLORIDE)

14.3 Class

6.1

14.4 Packing group

III

14.5 Environmentally hazardous

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14.6 Special precautions for user

yes

Tunnel restriction code

E

Inland waterway transport (ADN):

Not relevant

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Air transport (IATA)

14.1 UN number

UN 1564

14.2 Proper shipping name

BARIUM COMPOUND, N.O.S. (BARIUM CHLORIDE)

14.3 Class

6.1

14.4 Packing group

III

14.5 Environmentally hazardous

--

14.6 Special precautions for user

no

Sea transport (IMDG):

14.1 UN number

UN 1564

14.2 Proper shipping name

BARIUM COMPOUND, N.O.S. (BARIUM CHLORIDE)

14.3 Class

6.1

14.4 Packing group

III

14.5 Environmentally hazardous

--

14.6 Special precautions for user

yes

EmS

F-A S-A

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. Observe work restrictions regarding maternity protection in accordance to Dir 92/85/EEC or stricter national regulations where applicable.

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 ≥ 0.1 % (w/w).

National legislation:

Storage class: 6.1 D

15.2. Chemical safety assessment:

For this product a chemical safety assessment was not carried out.

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16. Other information

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

H301 Toxic if swallowed.

H332 Harmful if inhaled.

Training advice:

Provide adequate information, instruction and training for operators.

Labelling:

Signal word:

Danger

Hazard statements:

H301 Toxic if swallowed.

H332 Harmful if inhaled.

Precautionary statements

Response

P308 + P310 IF exposed or concerned: immediately call a POISON CENTER or doctor/ physician.

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.

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