

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878
Date of issue: 01/04/2011 Revision date: 17/11/2022 Supersedes version of: 08/11/2021 Version: 2.5

SECTION 1: Identification of the substance/mixture and of the company/undertaking**1.1. Product identifier**

Product form : Substance
Trade name : UN1564 Barium chloride dihydrate Analytical Grade ACS
Chemical name : barium chloride
CAS-No. : 10326-27-9
Product code : BACL-02A
Formula : BaCl₂·2H₂O

1.2. Relevant identified uses of the substance or mixture and uses advised against**1.2.1. Relevant identified uses**

Main use category : Laboratory use

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

labbox labware s.l.
Migjorn, 1
P.O. Box Barcelona (SPAIN)
08338 Premia de Dalt – SPAIN
ES
T +34 937 07 79 70 - F +34 937 909 532
info@labbox.com - www.labbox.com

1.4. Emergency telephone number

Emergency number : +34 937 077 970 (For technical information_Office Hours) In case of medical emergency phone 112 or to your local emergency number.

| Country | Organisation/Company | Address | Emergency number | Comment |
|----------------|---|----------------------------|------------------|---------|
| United Kingdom | National Poisons Information Service (Belfast Centre) Royal Victoria Hospital | Grosvenor Road BT12 6BA | 0344 892 0111 | |

SECTION 2: Hazards identification**2.1. Classification of the substance or mixture****Classification according to Regulation (EC) No. 1272/2008 [CLP]**

Acute toxicity (oral), Category 3 H301
Acute toxicity (inhalation:dust,mist) Category 4 H332
Full text of H and EUH statements: see section 16

Adverse physicochemical, human health and environmental effects

No additional information available

2.2. Label elements**Labelling according to Regulation (EC) No. 1272/2008 [CLP]**

Hazard pictograms (CLP) :



UN1564 Barium chloride dihydrate Analytical Grade ACS

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

| | |
|--------------------------------|---|
| | GHS06 |
| Signal word (CLP) | : Danger |
| Hazard statements (CLP) | : H301 - Toxic if swallowed. H332 - Harmful if inhaled. |
| Precautionary statements (CLP) | : P261 - Avoid breathing dust/fume/gas/mist/vapours/spray. P264 - Wash hands, forearms and face thoroughly after handling. P271 - Use only outdoors or in a well-ventilated area. P301+P310 - IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician. P304+P340 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. P312 - Call a POISON CENTER or doctor/physician if you feel unwell. |

2.3. Other hazards

No additional information available

SECTION 3: Composition/information on ingredients

3.1. Substances

| Name | Product identifier | % |
|---------------------------|---------------------|-----|
| Barium chloride dihydrate | CAS-No.: 10326-27-9 | 100 |

3.2. Mixtures

Not applicable

SECTION 4: First aid measures

4.1. Description of first aid measures

| | |
|---------------------------------------|---|
| First-aid measures after inhalation | : Allow affected person to breathe fresh air. Allow the victim to rest. Give oxygen or artificial respiration if necessary. Call a physician immediately. |
| First-aid measures after skin contact | : Gently wash with plenty of soap and water. If skin irritation occurs: Get medical advice/attention. |
| First-aid measures after eye contact | : Immediately rinse with water for a prolonged period while holding the eyelids wide open. |
| First-aid measures after ingestion | : Rinse mouth. Induce vomiting (ONLY IN CONSCIOUS PERSONS!). Drink plenty of water. Obtain emergency medical attention. |

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

No additional information available

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

Never give anything by mouth to an unconscious person.

SECTION 5: Firefighting measures

5.1. Extinguishing media

| | |
|--------------------------------|---------------------|
| Suitable extinguishing media | : ABC-powder. |
| Unsuitable extinguishing media | : Strong water jet. |

5.2. Special hazards arising from the substance or mixture

Hazardous decomposition products in case of fire : fume.

5.3. Advice for firefighters

Firefighting instructions : Exercise caution when fighting any chemical fire.

UN1564 Barium chloride dihydrate Analytical Grade ACS

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

Protection during firefighting : Do not attempt to take action without suitable protective equipment. Do not enter fire area without proper protective equipment, including respiratory protection.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Absorb spillage to prevent material damage.

6.1.1. For non-emergency personnel

Emergency procedures : Ventilate spillage area. Do not get in eyes, on skin, or on clothing.

Measures in case of dust release : Do not breathe dust.

6.1.2. For emergency responders

Emergency procedures : Ventilate area.

6.2. Environmental precautions

Prevent entry to sewers and public waters.

6.3. Methods and material for containment and cleaning up

For containment : Collect spillage.

Methods for cleaning up : Collect spillage. On land, sweep or shovel into suitable containers. Mechanically recover the product. Take up liquid spill into absorbent material.

6.4. Reference to other sections

For further information refer to section 13. See Heading 8.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Additional hazards when processed : Keep containers closed.

Precautions for safe handling : Ensure good ventilation of the work station. Avoid contact with skin, eyes and clothing. Do not breathe vapours. Wear personal protective equipment.

Hygiene measures : Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Store in a well-ventilated place. Keep container tightly closed.

Incompatible products : Strong acids. Strong bases.

Maximum storage period : 6 months

Storage temperature : 5 – 30 °C

Storage area : Store in a well-ventilated place.

Special rules on packaging : Store in a closed container. Keep only in original container.

7.3. Specific end use(s)

Laboratory chemicals.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1 National occupational exposure and biological limit values

No additional information available

8.1.2. Recommended monitoring procedures

No additional information available

UN1564 Barium chloride dihydrate Analytical Grade ACS

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

8.1.3. Air contaminants formed

No additional information available

8.1.4. DNEL and PNEC

| UN1564 Barium chloride dihydrate Analytical Grade ACS (10326-27-9) | |
|--|---------------------------|
| DNEL/DMEL (Workers) | |
| Long-term - systemic effects, dermal | 43,2 mg/kg bodyweight/day |
| Long-term - systemic effects, inhalation | 8,8 mg/kg bw/day |
| DNEL/DMEL (General population) | |
| Long-term - systemic effects, oral | 3,7 mg/kg bodyweight/day |
| Long-term - systemic effects, inhalation | 2,6 mg/kg bw/day |
| PNEC (Water) | |
| PNEC aqua (freshwater) | 0,3454 mg/l |
| PNEC (Sediment) | |
| PNEC sediment (freshwater) | 1202 mg/l |
| PNEC (Soil) | |
| PNEC soil | 314,9 mg/l |
| PNEC (STP) | |
| PNEC sewage treatment plant | 76 mg/l |

8.1.5. Control banding

No additional information available

8.2. Exposure controls

8.2.1. Appropriate engineering controls

Appropriate engineering controls:

Ensure good ventilation of the work station. Do not inhale vapour.

8.2.2. Personal protection equipment

Personal protective equipment:

Avoid all unnecessary exposure. EN 374.

Personal protective equipment symbol(s):



8.2.2.1. Eye and face protection

Eye protection:

Safety glasses

| Eye protection | | | |
|----------------|----------------------|-----------------|----------|
| Type | Field of application | Characteristics | Standard |
| Category II | | | EN 166 |

8.2.2.2. Skin protection

Skin and body protection:

Wear suitable protective clothing

UN1564 Barium chloride dihydrate Analytical Grade ACS

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

| Skin and body protection | |
|--------------------------|----------|
| Type | Standard |
| Protective clothing | |

| Hand protection | | | | | |
|-----------------|----------|------------|----------------|-------------|----------|
| Type | Material | Permeation | Thickness (mm) | Penetration | Standard |
| Category I | | | | | |

| Other skin protection Materials for protective clothing | | |
|--|----------|--------------|
| Condition | Material | Standard |
| | | EN ISO 20347 |

8.2.2.3. Respiratory protection

| Respiratory protection | | | |
|------------------------|------------------------------|-----------|----------|
| Device | Filter type | Condition | Standard |
| filtering face piece | with filter for vapors/gases | | EN 405 |

8.2.2.4. Thermal hazards

No additional information available

8.2.3. Environmental exposure controls

No additional information available

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

| | |
|---|--------------------------|
| Physical state | : Solid |
| Colour | : Not available |
| Odour | : Not available |
| Odour threshold | : Not available |
| Melting point | : Not available |
| Freezing point | : Not available |
| Boiling point | : Not available |
| Flammability | : Not available |
| Explosive limits | : Not applicable |
| Lower explosion limit | : Not applicable |
| Upper explosion limit | : Not applicable |
| Flash point | : Not applicable |
| Auto-ignition temperature | : Not applicable |
| Decomposition temperature | : Not available |
| pH | : Not available |
| pH solution | : Not available |
| Viscosity, kinematic | : Not applicable |
| Solubility | : Not available |
| Partition coefficient n-octanol/water (Log Kow) | : Not available |
| Vapour pressure | : Not available |
| Vapour pressure at 50 °C | : 3000 hPa |
| Density | : 3100 kg/m ³ |
| Relative density | : 3,1 |
| Relative vapour density at 20 °C | : Not applicable |
| Particle size | : Not available |

UN1564 Barium chloride dihydrate Analytical Grade ACS

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

9.2. Other information

9.2.1. Information with regard to physical hazard classes

No additional information available

9.2.2. Other safety characteristics

VOC content : 0 %

SECTION 10: Stability and reactivity

10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

10.2. Chemical stability

Stable under normal conditions of use.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

No additional information available

10.5. Incompatible materials

Strong bases. Strong acids.

10.6. Hazardous decomposition products

No additional information available

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity (oral) : Toxic if swallowed.
Acute toxicity (dermal) : Not classified
Acute toxicity (inhalation) : Harmful if inhaled.

UN1564 Barium chloride dihydrate Analytical Grade ACS (10326-27-9)

| | |
|-----------------------------------|------------------|
| LD50 oral rat | 255 mg/kg |
| Skin corrosion/irritation | : Not classified |
| Serious eye damage/irritation | : Not classified |
| Respiratory or skin sensitisation | : Not classified |
| Germ cell mutagenicity | : Not classified |
| Carcinogenicity | : Not classified |
| Reproductive toxicity | : Not classified |
| STOT-single exposure | : Not classified |
| STOT-repeated exposure | : Not classified |
| Aspiration hazard | : Not classified |

11.2. Information on other hazards

No additional information available

UN1564 Barium chloride dihydrate Analytical Grade ACS

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

SECTION 12: Ecological information

12.1. Toxicity

Hazardous to the aquatic environment, short-term (acute) : Not classified

Hazardous to the aquatic environment, long-term (chronic) : Not classified

12.2. Persistence and degradability

UN1564 Barium chloride dihydrate Analytical Grade ACS (10326-27-9)

| | |
|-------------------------------|---------------------------|
| Persistence and degradability | Product is biodegradable. |
|-------------------------------|---------------------------|

12.3. Bioaccumulative potential

No additional information available

12.4. Mobility in soil

No additional information available

12.5. Results of PBT and vPvB assessment

No additional information available

12.6. Endocrine disrupting properties

No additional information available

12.7. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

| | |
|------------------------------|--|
| Regional legislation (waste) | : Disposal must be done according to official regulations. |
| Waste treatment methods | : Must follow special treatment according to local regulation. |
| HP Code | : HP6 - "Acute Toxicity:" waste which can cause acute toxic effects following oral or dermal administration, or inhalation exposure. |

SECTION 14: Transport information

In accordance with ADR / IMDG / IATA / ADN / RID

14.1. UN number or ID number

| | |
|---------------|-----------|
| UN-No. (ADR) | : UN 1564 |
| UN-No. (IMDG) | : UN 1564 |
| UN-No. (IATA) | : UN 1564 |
| UN-No. (ADN) | : UN 1564 |
| UN-No. (RID) | : UN 1564 |

14.2. UN proper shipping name

| | |
|--------------------------------------|--|
| Proper Shipping Name (ADR) | : BARIUM COMPOUND, N.O.S. |
| Proper Shipping Name (IMDG) | : BARIUM COMPOUND, N.O.S. |
| Proper Shipping Name (IATA) | : Barium compound, n.o.s. |
| Proper Shipping Name (ADN) | : BARIUM COMPOUND, N.O.S. |
| Proper Shipping Name (RID) | : BARIUM COMPOUND, N.O.S. |
| Transport document description (ADR) | : UN 1564 BARIUM COMPOUND, N.O.S. (Barium chloride dihydrate AGR ACS), 6.1, III, (E) |

UN1564 Barium chloride dihydrate Analytical Grade ACS

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

| | |
|---------------------------------------|---|
| Transport document description (IMDG) | : UN 1564 BARIUM COMPOUND, N.O.S., 6.1, III |
| Transport document description (IATA) | : UN 1564 Barium compound, n.o.s., 6.1, III |
| Transport document description (ADN) | : UN 1564 BARIUM COMPOUND, N.O.S., 6.1, III |
| Transport document description (RID) | : UN 1564 BARIUM COMPOUND, N.O.S., 6.1, III |

14.3. Transport hazard class(es)

ADR

| | |
|----------------------------------|-------|
| Transport hazard class(es) (ADR) | : 6.1 |
| Danger labels (ADR) | : 6.1 |



IMDG

| | |
|-----------------------------------|-------|
| Transport hazard class(es) (IMDG) | : 6.1 |
| Danger labels (IMDG) | : 6.1 |



IATA

| | |
|-----------------------------------|-------|
| Transport hazard class(es) (IATA) | : 6.1 |
| Danger labels (IATA) | : 6.1 |



ADN

| | |
|----------------------------------|-------|
| Transport hazard class(es) (ADN) | : 6.1 |
| Danger labels (ADN) | : 6.1 |



RID

| | |
|----------------------------------|-------|
| Transport hazard class(es) (RID) | : 6.1 |
| Danger labels (RID) | : 6.1 |



14.4. Packing group

| | |
|----------------------|-------|
| Packing group (ADR) | : III |
| Packing group (IMDG) | : III |
| Packing group (IATA) | : III |
| Packing group (ADN) | : III |
| Packing group (RID) | : III |

14.5. Environmental hazards

| | |
|-------------------------------|--|
| Dangerous for the environment | : No |
| Marine pollutant | : No |
| Other information | : No supplementary information available |

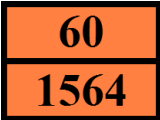
UN1564 Barium chloride dihydrate Analytical Grade ACS

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

14.6. Special precautions for user

Overland transport

| | |
|---|--|
| Classification code (ADR) | : T5 |
| Special provisions (ADR) | : 177, 274, 513, 587 |
| Limited quantities (ADR) | : 5kg |
| Excepted quantities (ADR) | : E1 |
| Packing instructions (ADR) | : P002, IBC08, LP02, R001 |
| Special packing provisions (ADR) | : B3 |
| Mixed packing provisions (ADR) | : MP10 |
| Portable tank and bulk container instructions (ADR) | : T1 |
| Portable tank and bulk container special provisions (ADR) | : TP33 |
| Tank code (ADR) | : SGAH, L4BH |
| Tank special provisions (ADR) | : TU15, TE19 |
| Vehicle for tank carriage | : AT |
| Transport category (ADR) | : 2 |
| Special provisions for carriage - Bulk (ADR) | : VC1, VC2, AP7 |
| Special provisions for carriage - Loading, unloading and handling (ADR) | : CV13, CV28 |
| Special provisions for carriage - Operation (ADR) | : S9 |
| Hazard identification number (Kemler No.) | : 60 |
| Orange plates | :  |
| Tunnel restriction code (ADR) | : E |
| EAC code | : 2Z |

Transport by sea

| | |
|------------------------------------|--|
| Special provisions (IMDG) | : 177, 223, 274 |
| Limited quantities (IMDG) | : 5 kg |
| Excepted quantities (IMDG) | : E1 |
| Packing instructions (IMDG) | : P002, LP02 |
| IBC packing instructions (IMDG) | : IBC08 |
| IBC special provisions (IMDG) | : B3 |
| Tank instructions (IMDG) | : T1 |
| Tank special provisions (IMDG) | : TP33 |
| EmS-No. (Fire) | : F-A |
| EmS-No. (Spillage) | : S-A |
| Stowage category (IMDG) | : A |
| Properties and observations (IMDG) | : White powder, lumps or crystals. Toxic if swallowed, by skin contact or by inhalation. |

Air transport

| | |
|--|-----------|
| PCA Excepted quantities (IATA) | : E1 |
| PCA Limited quantities (IATA) | : Y645 |
| PCA limited quantity max net quantity (IATA) | : 10kg |
| PCA packing instructions (IATA) | : 670 |
| PCA max net quantity (IATA) | : 100kg |
| CAO packing instructions (IATA) | : 677 |
| CAO max net quantity (IATA) | : 200kg |
| Special provisions (IATA) | : A3, A82 |
| ERG code (IATA) | : 6L |

Inland waterway transport

| | |
|-----------------------------------|---------------------------|
| Classification code (ADN) | : T5 |
| Special provisions (ADN) | : 177, 274, 513, 587, 802 |
| Limited quantities (ADN) | : 5 kg |
| Excepted quantities (ADN) | : E1 |
| Equipment required (ADN) | : PP, EP |
| Number of blue cones/lights (ADN) | : 0 |

UN1564 Barium chloride dihydrate Analytical Grade ACS

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

Rail transport

| | |
|---|---------------------------|
| Classification code (RID) | : T5 |
| Special provisions (RID) | : 177, 274, 513, 587 |
| Limited quantities (RID) | : 5kg |
| Excepted quantities (RID) | : E1 |
| Packing instructions (RID) | : P002, IBC08, LP02, R001 |
| Special packing provisions (RID) | : B3 |
| Mixed packing provisions (RID) | : MP10 |
| Portable tank and bulk container instructions (RID) | : T1 |
| Portable tank and bulk container special provisions (RID) | : TP33 |
| Tank codes for RID tanks (RID) | : SGAH, L4BH |
| Special provisions for RID tanks (RID) | : TU15 |
| Transport category (RID) | : 2 |
| Special provisions for carriage – Bulk (RID) | : VC1, VC2, AP7 |
| Special provisions for carriage - Loading, unloading and handling (RID) | : CW13, CW28, CW31 |
| Colis express (express parcels) (RID) | : CE11 |
| Hazard identification number (RID) | : 60 |

14.7. Maritime transport in bulk according to IMO instruments

Not applicable

SECTION 15: Regulatory information

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

15.1.1. EU-Regulations

REACH Annex XVII (Restriction List)

No REACH Annex XVII restrictions

REACH Annex XIV (Authorisation List)

UN1564 Barium chloride dihydrate Analytical Grade ACS is not on the REACH Annex XIV List

REACH Candidate List (SVHC)

UN1564 Barium chloride dihydrate Analytical Grade ACS is not on the REACH Candidate List

PIC Regulation (Prior Informed Consent)

UN1564 Barium chloride dihydrate Analytical Grade ACS is not subject to Regulation (EU) No 649/2012 of the European Parliament and of the Council of 4 July 2012 concerning the export and import of hazardous chemicals.

POP Regulation (Persistent Organic Pollutants)

UN1564 Barium chloride dihydrate Analytical Grade ACS is not subject to Regulation (EU) No 2019/1021 of the European Parliament and of the Council of 20 June 2019 on persistent organic pollutants

Ozone Regulation (1005/2009)

Barium chloride dihydrate is not subject to REGULATION (EU) No 1005/2009 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 September 2009 on substances that deplete the ozone layer.

VOC Directive (2004/42)

VOC content : 0 %

Explosives Precursors Regulation (2019/1148)

Contains no substance subject to Regulation (EU) 2019/1148 of the European Parliament and of the Council of 20 June 2019 on the marketing and use of explosives precursors.

Drug Precursors Regulation (273/2004)

Contains no substance subject to Regulation (EC) 273/2004 of the European Parliament and of the Council of 11 February 2004 on the manufacture and the placing on market of certain substances used in the illicit manufacture of narcotic drugs and psychotropic substances.

UN1564 Barium chloride dihydrate Analytical Grade ACS

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

15.1.2. National regulations

Germany

- Water hazard class (WGK) : Not classified according to Regulation Governing Systems for Handling Substances Hazardous to Waters (AwSV).
- Chemicals Prohibition Ordinance (ChemVerbotsV) : This product is subject to ChemVerbotsV Annex 2 Entry 1. The following requirements must be observed: authorization requirement (according to § 6 paragraph 1 sentence 1), basic requirements for carrying out the delivery (according to § 8 paragraph 1, 3 and 4), identification and documentation (according to § 9 paragraph 1 to 3) and exclusion of the shipping route (according to § 10).
- Hazardous Incident Ordinance (12. BImSchV) : Is not subject of the Hazardous Incident Ordinance (12. BImSchV)

Netherlands

- SZW-lijst van kankerverwekkende stoffen : The substance is not listed
- SZW-lijst van mutagene stoffen : The substance is not listed
- NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Borstvoeding : The substance is not listed
- NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Vruchtbaarheid : The substance is not listed
- NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Ontwikkeling : The substance is not listed

Denmark

- Danish National Regulations : Young people below the age of 18 years are not allowed to use the product

15.2. Chemical safety assessment

No additional information available

SECTION 16: Other information

Full text of H- and EUH-statements:

| | |
|-------------------------------------|--|
| Acute Tox. 3 (Oral) | Acute toxicity (oral), Category 3 |
| Acute Tox. 4 (Inhalation:dust,mist) | Acute toxicity (inhalation:dust,mist) Category 4 |
| H301 | Toxic if swallowed. |
| H332 | Harmful if inhaled. |

Safety Data Sheet (SDS), EU

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.