

**Safety Data Sheet**  
according to 1907/2006/EC, Article 31

Revision: 13.07.2010

Printing date 13.07.2010

**1 Identification of substance****Product details**

**Trade name** **Barium hydroxide, anhydrous**  
**Stock number:** 12195

**Manufacturer/Supplier:** Alfa Aesar GmbH & Co.KG  
Benzstrasse 3  
D-76185 Karlsruhe / Germany

E-mail: gcat@matthey.com  
www.alfa-chemcat.com

**Informing department:** Product safety department.  
**Emergency information:** Giftnotruf Universität Mainz / Poison Information Center Mainz  
www.giftinfo.uni-mainz.de Telefon:+49(0)6131/19240

**2 Hazards identification****Hazard designation:**

C Corrosive

**Information pertaining to particular dangers for man and environment****GHS label elements****Prevention:****Response:****Storage:**  
**Disposal:**

R 20/22 Harmful by inhalation and if swallowed.  
R 34 Causes burns.

**Danger**

H314 - Causes severe skin burns and eye damage.

**Warning**

H302 - Harmful if swallowed.  
H332 - Harmful if inhaled.

P260 Do not breathe dust/fume/gas/mist/vapours/spray.

P301+P330+P331 IF SWALLOWED: rinse mouth. Do NOT induce vomiting.

P303+P361+P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.

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

P405 Store locked up.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

**3 Composition/information on ingredients****Chemical characterization:****Designation: (CAS#)****Identification number(s):****EINECS Number:**

Barium hydroxide (CAS# 17194-00-2); 100%

241-234-5

**4 First aid measures****General information**  
**After inhalation**

Instantly remove any clothing soiled by the product.  
Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist.

**After skin contact**

Seek immediate medical advice.  
Instantly wash with water and soap and rinse thoroughly.

**After eye contact**

Seek immediate medical advice.

**After swallowing**

Rinse opened eye for several minutes under running water. Then consult doctor.  
Seek immediate medical advice.

**5 Fire fighting measures****Suitable extinguishing agents****Protective equipment:**

Use fire fighting measures that suit the environment.  
Wear self-contained breathing apparatus.  
Wear full protective suit.

**6 Accidental release measures****Person-related safety precautions:****Measures for environmental protection:****Measures for cleaning/collecting:****Additional information:**

Wear protective equipment. Keep unprotected persons away.

Ensure adequate ventilation

Do not allow material to be released to the environment without proper governmental permits.

Use neutralizing agent.

Dispose of contaminated material as waste according to item 13.

Ensure adequate ventilation.

See Section 7 for information on safe handling

See section 8 for information on personal protection equipment.

See Section 13 for information on disposal.

**7 Handling and storage****Handling****Information for safe handling:****Information about protection against explosions and fires:****Storage****Requirements to be met by storerooms and containers:****Information about storage in one common storage facility:****Further information about storage conditions:**

Keep containers tightly sealed.  
Store in cool, dry place in tightly closed containers.  
Ensure good ventilation/exhaustion at the workplace.

The product is not flammable

No special requirements.

Do not store together with acids.  
Store away from water.

Keep container tightly sealed.  
Store in cool, dry conditions in well sealed containers.  
Store in a locked cabinet or with access restricted to technical experts or their assistants.

**8 Exposure controls and personal protection****Additional information about design of technical systems:****Components with critical values that require monitoring at the workplace:**

Properly operating chemical fume hood designed for hazardous chemicals and having an average face velocity of at least 100 feet per minute.

Barium, and soluble compounds, as Ba

mg/m<sup>3</sup>

ACGIH TLV 0.5; Not classified as a human carcinogen

(Contd. on page 2)  
GB

**Safety Data Sheet**  
according to 1907/2006/EC, Article 31

Revision: 13.07.2010

Printing date 13.07.2010

Trade name **Barium hydroxide, anhydrous**

(Contd. of page 1)

Austria MAK	0.5
Belgium TWA	0.5
Denmark TWA	0.5
Finland TWA	0.5
Germany MAK	0.5 (total dust)
Hungary	0.5-STEL
Ireland TWA	0.5
Korea TLV	0.5
Netherlands MAC-TGG	0.5
Norway TWA	0.5
Poland TWA	0.5; 1.5-STEL
Sweden TWA	0.5
Switzerland MAK-W	0.5
United Kingdom LTEL	0.5
USA PEL	0.5
No data	

**Additional information:****Personal protective equipment****General protective and hygienic measures**

The usual precautionary measures should be adhered to in handling the chemicals.  
Keep away from foodstuffs, beverages and food.  
Instantly remove any soiled and impregnated garments.  
Wash hands during breaks and at the end of the work.  
Avoid contact with the eyes and skin.

**Breathing equipment:****Eye protection:**

Use breathing protection with high concentrations.

Safety glasses

Tightly sealed safety glasses.

Full face protection

Face protection

**Body protection:**

Protective work clothing.

**9 Physical and chemical properties:****General Information**

<b>Form:</b>	Crystalline
<b>Colour:</b>	White
<b>Smell:</b>	Odourless

**Change in condition**

<b>Melting point/Melting range:</b>	408°C
<b>Boiling point/Boiling range:</b>	Not determined
<b>Sublimation temperature / start:</b>	Not determined

**Flash point:** Not applicable**Ignition temperature:** Not determined**Decomposition temperature:** Not determined**Danger of explosion:** Product is not explosive.**Critical values for explosion:**

<b>Lower:</b>	Not determined
<b>Upper:</b>	Not determined

**Steam pressure:** Not determined**Density at 20°C** 2.18 g/cm<sup>3</sup>**Solubility in / Miscibility with Water:** Soluble**10 Stability and reactivity****Thermal decomposition / conditions to be avoided:**

No decomposition if used and stored according to specifications.

**Materials to be avoided:**

Acids  
Carbon dioxide  
Water/moisture  
Reacts with acids  
Toxic metal oxide smoke

**Dangerous reactions:****Dangerous products of decomposition:****11 Toxicological information****Acute toxicity:****LD/LC50 values that are relevant for classification:**

Oral LD50 308 mg/kg (mam)

**Primary irritant effect:****on the skin:**

Corrosive effect on skin and mucous membranes.

**on the eye:**

Strong corrosive effect.

**Sensitization:**

No sensitizing effect known.

**Additional toxicological information:**

Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of esophagus and stomach.

To the best of our knowledge the acute and chronic toxicity of this substance is not fully known.

EPA-D: Not classifiable as to human carcinogenicity: inadequate human and animal evidence of carcinogenicity or no data are available.

EPA-NL: Not likely to be carcinogenic to humans.

ACGIH A4: Not classifiable as a human carcinogen: Inadequate data on which to classify the agent in terms of its carcinogenicity in humans and/or animals.

**12 Ecological information:****Additional ecological information:****General notes:**

Water hazard class 1 (Self-assessment): slightly hazardous for water.

Do not allow undiluted product or large quantities of it to reach ground water, water bodies or sewage system.

Do not allow material to be released to the environment without proper governmental permits.

**13 Disposal considerations****Product:****Recommendation**

Consult state, local or national regulations for proper disposal.

Hand over to disposers of hazardous waste.

Must be specially treated under adherence to official regulations.

**Uncleaned packagings:****Recommendation:**

Disposal must be made according to official regulations.

(Contd. on page 3)

**Safety Data Sheet**  
according to 1907/2006/EC, Article 31

Revision: 13.07.2010

Printing date 13.07.2010

Trade name **Barium hydroxide, anhydrous**

Recommended cleaning agent: Water, if necessary with cleaning agent.

(Contd. of page 2)

**14 Transport information****Land transport ADR/RID and GGVS/GGVE (cross-border/domestic)**

ADR/RID-GGVS/E Class: 8 (C6) Corrosive substances.  
Kemler Number: 80  
UN-Number: 3262  
Packaging group: III  
Label: 8  
Designation of goods: 3262 CORROSIVE SOLID, BASIC, INORGANIC, N.O.S. (Barium hydroxide)  
Limited quantities (LQ): LQ24  
Transport category: 3  
Tunnel restriction code: E

**Maritime transport IMDG/GGVSea:**

IMDG/GGVSea Class: 8  
UN Number: 3262  
Label: 8  
Packaging group: III  
Marine pollutant: No  
Segregation groups: Alkalis  
Correct technical name: CORROSIVE SOLID, BASIC, INORGANIC, N.O.S. (Barium hydroxide)

**Air transport ICAO-TI and IATA-DGR:**

ICAO/IATA Class: 8  
UN/ID Number: 3262  
Label: 8  
Packaging group: III  
Correct technical name: CORROSIVE SOLID, BASIC, INORGANIC, N.O.S. (Barium hydroxide)

UN "Model Regulation": UN3262, CORROSIVE SOLID, BASIC, INORGANIC, N.O.S., 8, III

**15 Regulatory information****Designation according to EC guidelines:****Code letter and hazard designation of product:**

C Corrosive

**Risk phrases:** 20/22 Harmful by inhalation and if swallowed.  
34 Causes burns.

**Safety phrases:** 9 Keep container in a well-ventilated place.  
20 When using do not eat or drink.  
26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.  
36/37/39 Wear suitable protective clothing, gloves and eye/face protection.  
45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

**National regulations**

**Information about limitation of use:** Employment restrictions concerning young persons must be observed.  
For use only by technically qualified individuals.

**Water hazard class:** Water hazard class 1 (Self-assessment): slightly hazardous for water.

**16 Other information:**

Employers should use this information only as a supplement to other information gathered by them, and should make independent judgement of suitability of this information to ensure proper use and protect the health and safety of employees. This information is furnished without warranty, and any use of the product not in conformance with this Material Safety Data Sheet, or in combination with any other product or process, is the responsibility of the user.

**Department issuing data specification sheet:** Health, Safety and Environmental Department.

**Contact:** Zachariah Holt

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

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

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

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

ICAO: International Civil Aviation Organization

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

GHS: Globally Harmonized 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)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent