

Barium hydroxide octahydrate

31127-1KG

Version 1.3

Revision Date 17.12.2022

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product name : Barium hydroxide octahydrate
SDS-number : 000000020789
Type of product : Substance
Remarks : SDS according to Art. 31 of Regulation (EC) 1907/2006.
Chemical name : Barium hydroxide-8-hydrate
Index-No. : 056-002-00-7
REACH Registration Number : no data available

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

Use of the Substance/Mixture : Laboratory chemicals
Uses advised against : none

1.3. Details of the supplier of the safety data sheet

Company	: Honeywell International Inc. 115 Tabor Road 07950-2546 Morris Plains USA	Honeywell International, Inc. 115 Tabor Road Morris Plains, NJ 07950-2546 USA
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Telephone :
For further information, please contact: : SafetyDataSheet@Honeywell.com

1.4. Emergency telephone number

Emergency telephone number : +1-703-527-3887 (ChemTrec-Transport)
+1-303-389-1414 (Medical)
Country based Poison : see chapter 15.1

Barium hydroxide octahydrate

31127-1KG

Version 1.3

Revision Date 17.12.2022

Control Center

SECTION 2: Hazards identification


2.1. Classification of the substance or mixture

REGULATION (EC) No 1272/2008

Acute toxicity Category 4 - Oral
H302 Harmful if swallowed.
Acute toxicity Category 4 - Inhalation
H332 Harmful if inhaled.
Skin corrosion Category 1A
H314 Causes severe skin burns and eye damage.

2.2. Label elements

REGULATION (EC) No 1272/2008

Hazard pictograms	:		
Signal word	:	Danger	
Hazard statements	:	H302 + H332 H314 EUH071	Harmful if swallowed or if inhaled. Causes severe skin burns and eye damage. Corrosive to the respiratory tract.
Precautionary statements	:	P260 P280 P284 P301 + P330 + P331 P302 + P352 P304 + P340 P305 + P351 + P338	Do not breathe dust/ fume/ gas/ mist/ vapours/ spray. Wear protective gloves/protective clothing/eye protection/face protection. Wear respiratory protection. IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. IF ON SKIN: Wash with plenty of water. IF INHALED: Remove person to fresh air and keep comfortable for breathing. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Barium hydroxide octahydrate

31127-1KG

Version 1.3

Revision Date 17.12.2022

P308 + P313

IF exposed or concerned: Get medical
advice/ attention.

2.3. Other hazards

Avoid dust formation. May cause cardiac arrhythmia.

SECTION 3: Composition/information on ingredients

3.1. Substance

Chemical name	CAS-No. Index-No. REACH Registration Number EC-No.	Classification 1272/2008	Concentration	Remarks
Barium hydroxide-8-hydrate	12230-71-6 056-002-00-7 241-234-5	Acute Tox. 4; H302; Oral Acute Tox. 4; H332; Inhalation Skin Corr. 1A; H314 EUH071	100 %	

3.2. Mixture

Not applicable

Occupational Exposure Limit(s), if available, are listed in Section 8.
For the full text of the H-Statements mentioned in this Section, see Section 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

General advice:

First aider needs to protect himself. Move out of dangerous area. Immediately take off contaminated clothing and rinse body with plenty of water.

Inhalation:

In case of irritation when dust is inhaled, provide for plenty of fresh air. Call a physician immediately.

Skin contact:

Barium hydroxide octahydrate

31127-1KG

Version 1.3

Revision Date 17.12.2022

After contact with skin, wash immediately with plenty of water. Call a physician immediately.

Eye contact:

Rinse thoroughly with plenty of water, also under the eyelids. Protect unharmed eye. Call a physician immediately.

Ingestion:

When swallowed, allow water to be drunk. Do NOT induce vomiting. Call a physician immediately.

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

No data available

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

Treat symptomatically.

See Section 11 for more detailed information on health effects and symptoms. :

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media:

Water spray

Foam

Carbon dioxide (CO₂)

Dry powder

Extinguishing media which shall not be used for safety reasons:

High volume water jet

5.2. Special hazards arising from the substance or mixture

The product itself does not burn.

Hazardous decomposition products formed under fire conditions.

Barium hydroxide octahydrate

31127-1KG

Version 1.3

Revision Date 17.12.2022

5.3. Advice for firefighters

In the event of fire, wear self-contained breathing apparatus.
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Forms slippery/greasy layers with water. Wear personal protective equipment. Unprotected persons must be kept away. Do not breathe dust. Avoid contact with skin, eyes and clothing.

6.2. Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not flush into surface water or sanitary sewer system.

6.3. Methods and materials for containment and cleaning up

Use mechanical handling equipment.
Pick for disposal in tightly closed containers

6.4. Reference to other sections

For personal protection see section 8.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling:

Exhaust ventilation at the object is necessary. Wear personal protective equipment. Do not breathe dust. Avoid contact with skin, eyes and clothing. Avoid formation of dust and aerosols.

Advice on protection against fire and explosion:

Normal measures for preventive fire protection.

Hygiene measures:

Keep working clothes separately. Separate rooms are required for washing, showering and changing clothes.

Barium hydroxide octahydrate

31127-1KG

Version 1.3

Revision Date 17.12.2022

7.2. Conditions for safe storage, including any incompatibilities

Further information on storage conditions:

Store in original container. Keep containers tightly closed in a dry, cool and well-ventilated place. Protect from exposure to air/oxygen. Do not leave vessels/containers open. Avoid product residues in/on containers.

7.3. Specific end use(s)

no additional data available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limits:

Components	Basis / Value type	Value / Form of exposure	Exceeding Factor	Remarks
Barium hydroxide-8-hydrate	EH40 WEL	as Ba		Listed
Barium hydroxide-8-hydrate	EH40 WEL TWA	0,5 mg/m3 as Ba		
Barium hydroxide-8-hydrate	EU ELV TWA	0,5 mg/m3 as Ba		Indicative

TWA - Time weighted average

DNEL/ PNEC-Values

Component	End-use/impact	Exposure duration	Value	Exposure routes	Remarks
Barium hydroxide-8-hydrate	Workers / Long-term local effects		0,62 mg/m3	Inhalation	
Barium hydroxide-8-hydrate	Workers / Acute local effects		1,24 mg/m3	Inhalation	
Barium hydroxide-8-hydrate	Consumers / Long-term		0,12 mg/m3	Inhalation	

Barium hydroxide octahydrate

31127-1KG

Version 1.3

Revision Date 17.12.2022

	local effects				
Barium hydroxide-8-hydrate	Consumers / Long-term systemic effects		3,4mg/kg bw/d	Skin contact	

Component	Environmental compartment / Value	Remarks
Barium hydroxide-8-hydrate	Fresh water: 227,8 mg/l	
Barium hydroxide-8-hydrate	Sewage treatment plant: 50,1 mg/l	Assessment factor: 10
Barium hydroxide-8-hydrate	Fresh water sediment: 792,7 mg/kg dw	
Barium hydroxide-8-hydrate	Soil: 207,7 mg/kg dw	

8.2. Exposure controls

Occupational exposure controls

The Personal Protective Equipment must be in accordance with EN standards:respirator EN 136, 140, 149; safety glasses EN 166; protective suit: EN 340, 463, 468, 943-1, 943-2; gloves EN 374, 511; safety shoes EN-ISO 20345.

Do not breathe dust.

Take off all contaminated clothing immediately.

Wash hands before breaks and at the end of workday.

Engineering measures

Provide exhaust ventilation if dust is formed.

Personal protective equipment

Respiratory protection:

In the case of dust or aerosol formation use respirator with an approved filter.

Hand protection:

Glove material: Natural Latex

Break through time: > 480 min

Glove thickness: 0,6 mm

Lapren®706

Barium hydroxide octahydrate

31127-1KG

Version 1.3

Revision Date 17.12.2022

Gloves must be inspected prior to use.

Replace when worn.

Remarks:Supplementary note: The specifications are based on information and tests from similar substances by analogy.

Due to varying conditions (e.g.temperature or other strains) it must be considered that the usage of a chemical protective glove in practice may be much shorter than the permeation time determined in accordance with EN 374.

Since actual conditions of practical use often deviate from standardised conditions according EN 374 the glove manufacturer recommends to use the chemical protective glove in practice not longer than 50% of the recommended permeation time.

Manufacturer´s directions for use should be observed because of great diversity of types .

Suitable gloves tested according EN 374 are supplied e.g. from KCL GmbH, D-36124 Eichenzell, Vertrieb@kcl.de

Eye protection:

Safety goggles

Skin and body protection:

Impervious clothing

Environmental exposure controls

Handle in accordance with local environmental regulations and good industrial practices.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	:	solid
Colour	:	colourless
Odour	:	odourless
molecular weight	:	315,46 g/mol
Melting point/range	:	78 °C
Boiling point/boiling range	:	Decomposes on heating.
Flammability	:	The product is not flammable.

Barium hydroxide octahydrate

31127-1KG

Version 1.3

Revision Date 17.12.2022

Upper explosion limit	:	Not applicable
Lower explosion limit	:	Not applicable
Flash point	:	Not applicable
Auto-ignition temperature	:	Not applicable
Decomposition temperature	:	No decomposition if used as directed.
pH	:	alkaline (as aqueous solution)
Auto-ignition temperature	:	not auto-flammable
Viscosity, kinematic	:	No data available
Water solubility	:	947,0 g/l
Partition coefficient: n-octanol/water	:	No data available
Vapour pressure	:	No data available
Density	:	ca. 2,180 g/cm ³ at 20 °C
Bulk density	:	ca. 1.070 kg/m ³
Relative vapour density	:	No data available

9.2 Other Information

Oxidizing properties	:	The substance or mixture is not classified as oxidizing.
Evaporation rate	:	No data available
Viscosity, dynamic	:	No data available

Barium hydroxide octahydrate

31127-1KG

Version 1.3

Revision Date 17.12.2022

SECTION 10: Stability and reactivity

10.1. Reactivity

Stable under recommended storage conditions.

10.2. Chemical stability

No decomposition if used as directed.

10.3. Possibility of hazardous reactions

Exothermic reaction with strong acids.

10.4. Conditions to avoid

Protect from atmospheric moisture and water.
Corrodes metals in the presence of water or moisture.

10.5. Incompatible materials

Acids

10.6. Hazardous decomposition products

Fire may cause evolution of:
Toxic metal oxide fumes

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute oral toxicity:
Classification based on Annex VI of regulation 1272/2008/EC.

Acute dermal toxicity:
No data available

Acute inhalation toxicity:
Classification based on Annex VI of regulation 1272/2008/EC.

Skin irritation:

Barium hydroxide octahydrate

31127-1KG

Version 1.3

Revision Date 17.12.2022

Causes skin burns.

Eye irritation:

Causes eye burns.

Respiratory or skin sensitisation:

Not classified due to data which are conclusive although insufficient for classification.

Repeated dose toxicity:

Note: No data available

Carcinogenicity:

Species: not specified

Note: Not classified due to data which are conclusive although insufficient for classification.

Germ cell mutagenicity:

Note: Not classified due to data which are conclusive although insufficient for classification.

Reproductive toxicity:

Species: not specified

Remarks: Not classified due to inconclusive data.

Aspiration hazard:

No data available

11.2. Information on other hazards

Endocrine disrupting properties

No data available

Other information:

No data available

SECTION 12: Ecological information

12.1. Toxicity

Toxicity to fish:

Not classified due to data which are conclusive although insufficient for classification.

Toxicity to aquatic plants:

Not classified due to data which are conclusive although insufficient for classification.

Barium hydroxide octahydrate

31127-1KG

Version 1.3

Revision Date 17.12.2022

Toxicity to aquatic invertebrates:

Not classified due to data which are conclusive although insufficient for classification.

12.2. Persistence and degradability

Biodegradability:

The methods for determining biodegradability 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

No data available

12.6. Endocrine disrupting properties

No data available

12.7. Other adverse effects

Should not be released into the environment.
Neutralisation will reduce ecotoxic effects.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Product:

Dispose according to legal requirements.

Packaging:

Legal requirements are to be considered in regard of reuse or disposal of used packaging materials

Further information:

Provisions relating to waste:
EC Directive 2006/12/EC; 2008/98/EEC
Regulation No. 1013/2006

Barium hydroxide octahydrate

31127-1KG

Version 1.3

Revision Date 17.12.2022

For personal protection see section 8.

SECTION 14: Transport information

14.1 UN number

ADR/RID:3262

IMDG:3262

IATA:3262

14.2 UN proper shipping name

ADR/RID:CORROSIVE SOLID, BASIC, INORGANIC, N.O.S.(BARIUM HYDROXIDE)

IMDG:CORROSIVE SOLID, BASIC, INORGANIC, N.O.S.(BARIUM HYDROXIDE)

IATA:Corrosive solid, basic, inorganic, n.o.s.(Barium hydroxide)

14.3 Transport hazard class(es)

ADR/RID: 8

IMDG: 8

IATA: 8

14.4 Packaging group

ADR/RID: II

IMDG: II

IATA: II

14.5 Environmental hazards

ADR/RID:no

Marine pollutant: no

14.6 Special precautions for user

IMDG Code segregation group (SGG18) – ALKALIS,

14.7 Maritime transport in bulk according to IMO instruments

No data available

SECTION 15: Regulatory information

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

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

Barium hydroxide octahydrate

31127-1KG

Version 1.3

Revision Date 17.12.2022

Poison Control Center

Country	Phone Number
Austria	+4314064343
Belgium	070 245245
Bulgaria	(+)35929154233
Croatia	(+3851)23-48-342
Cyprus	+357 2240 5611
Czech Republic	+420224919293; +420224915402
Denmark	82121212
Estonia	16662; (+372)6269390
Finland	9471977
France	+33(0)145425959
Greece	+30 210 779 3777
Hungary	(+36-80)201-199
Iceland	5432222
Ireland	+353(1)8092166
Italy	0382 24444
Germany	Berlin : 030/19240
	Bonn : 0228/19240
	Erfurt : 0361/730730
	Freiburg : 0761/19240
	Göttingen : 0551/19240
	Homburg : 06841/19240
	Mainz : 06131/19240
Munich : 089/19240	
Latvia	+37167042473

Country	Phone Number
Liechtenstein	+41 442515151
Lithuania	+370532362052
Luxembourg	070245245; (+352)80002-5500
Malta	+356 2395 2000
Netherlands	030-2748888
Norway	22591300
Poland	+48 42 25 38 400
Portugal	800250250
Romania	+40 21 318 3606
Slovakia (NTIC)	+421 2 54 774 166
Slovenia	+386 1 400 6051
Spain	+34915620420
Sweden	112 (begär Giftninformation); +46104566786
Switzerland	145
United Kingdom	(+44) 844 892 0111

Other inventory information

US. Toxic Substances Control Act

Barium hydroxide octahydrate

31127-1KG

Version 1.3

Revision Date 17.12.2022

On TSCA Inventory

Australia. Inventory of Industrial Chemicals (AIIC), as amended
On the inventory, or in compliance with the inventory

Canada. Canadian Environmental Protection Act (CEPA). Domestic Substances List (DSL)
All components of this product are on the Canadian DSL

Japan. Kashin-Hou Law List
On the inventory, or in compliance with the inventory

Korea. Existing Chemicals Inventory (KECI)
On the inventory, or in compliance with the inventory

Philippines. Inventory of Chemicals and Chemical Substances (PICCS)
On the inventory, or in compliance with the inventory

China. Inventory of Existing Chemical Substances (IECSC)
On the inventory, or in compliance with the inventory

New Zealand. Inventory of Chemicals (NZIoC), as published by ERMA New Zealand
On the inventory, or in compliance with the inventory

Taiwan Chemical Substance Inventory (TCSI)
On the inventory, or in compliance with the inventory

15.2 Chemical safety assessment

A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

Text of H-statements referred to under heading 3

Barium hydroxide-8-hydrate : H302 Harmful if swallowed.
H332 Harmful if inhaled.
H314 Causes severe skin burns and eye damage.
EUH071 Corrosive to the respiratory tract.

Barium hydroxide octahydrate

31127-1KG

Version 1.3

Revision Date 17.12.2022

Further information

All directives and regulations refer to amended versions.
Vertical lines in the left hand margin indicate a relevant amendment from the previous version.

Abbreviations:

EC European Community
CAS Chemical Abstracts Service
DNEL Derived no effect level
PNEC Predicted no effect level
vPvB Very persistent and very bioaccumulative substance
PBT Persistent, bioaccumulative und toxic substance

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text. Final determination of suitability of any material is the sole responsibility of the user.

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