

## MATERIAL SAFETY DATA SHEET (SDS/MSDS)

**BARIUM HYDROXIDE OCTAHYDRATE  
98% AR**

**CAS-No.: 12230-71-6**

**Product Code: 00342**

**Molecular Formula: Ba(OH)<sub>2</sub>.8H<sub>2</sub>O**

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

**1.1. Product identifier**

Product form : Substance  
Trade name : Barium Hydroxide Octahydrate 98% AR  
EC-No. : 241-234-5  
CAS No : 12230-71-6  
Synonyms : Barium Hydrate

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

**1.2.1. Relevant identified uses**

Use of the substance/mixture : Laboratory chemicals, Manufacture of substances

**1.2.2. Uses advised against**

No additional information available

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

Company : Chemnovo Synthesis Pvt Ltd.  
N-226 Near Kumbhavali Naka  
Tarapur MIDC, Boisar-401 506  
Palghar, Maharashtra  
Telephone : +91 7400096089  
Email: export@chemnovo.in

**1.4. Emergency telephone number**

Emergency number : + 91 7400096089 (9:00am - 6:00 pm)

**SECTION 2: Hazards identification**

**2.1. Classification of the substance or mixture**

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Skin corrosion/irritation, H314

Category 1B

Acute toxicity (inhal.), H332

Category 4

Acute toxicity (oral), H302

Category 4

Full text of classification categories and H statements : see section 16

Classification according to Directive 67/548/EEC [DSD] or 1999/45/EC [DPD]

C; T; R20-22-34

Full text of R-phrases: 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) :



GHS05



GHS07

Signal word (CLP) :

Danger

Hazard statements (CLP) :

H302+H332 - Harmful if swallowed or if inhaled

H314 - Causes severe skin burns and eye damage.

Precautionary statements (CLP) :

P280 - Wear protective gloves, protective clothing, eye protection, face protection.

P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes.

Remove contact lenses, if present and easy to do. Continue rinsing.

P310 - Immediately call a doctor.

## 2.3. Other hazards

No additional information available

## SECTION 3: Composition/information on ingredients

### 3.1. Substance

Name : Barium Hydroxide Octahydrate 98% AR  
CAS-No. : 12230-71-6  
EC-No. : 241-234-5

Full text of R- and H-statements: see section 16

### 3.2. Mixture

Not applicable

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

First-aid measures after inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a POISON CENTER or doctor/physician.

First-aid measures after skin contact : Get immediate medical advice/attention. Wash with plenty of soap and water.

First-aid measures after eye contact : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call

a POISON CENTER or doctor/physician.

First-aid measures after ingestion : Rinse mouth. Do NOT induce vomiting. Immediately call a POISON CENTER or doctor/physician.

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

Symptoms/injuries : Causes severe skin burns and eye damage.

Symptoms/injuries after ingestion : Swallowing a small quantity of this material will result in serious health hazard.

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

Treat symptomatically.

**SECTION 5: Firefighting measures**

**5.1. Extinguishing media**

Suitable extinguishing media : Carbon dioxide. Dry powder. Foam. Water spray.

Unsuitable extinguishing media : Do not use a heavy water stream.

**5.2. Special hazards arising from the substance or mixture**

No additional information available

**5.3. Advice for firefighter**

Protection during firefighting : 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**

**6.1.1. For non-emergency personnel**

Emergency procedures : Evacuate unnecessary personnel.

**6.1.2. For emergency responders**

Protective equipment : Use personal protective equipment as required.

Emergency procedures : Ventilate area.

**6.2. Environmental precautions**

Avoid release to the environment.

**6.3. Methods and material for containment and cleaning up**

Methods for cleaning up : Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. On land, sweep or shovel into suitable containers.

**6.4. Reference to other sections**

No additional information available

**SECTION 7: Handling and storage**

**7.1. Precautions for safe handling**

Precautions for safe handling : Avoid contact with skin and eyes. Do not breathe vapours. Avoid dust formation.

Hygiene measures : Do not eat, drink or smoke when using this product. 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 : Store in a well-ventilated place. Keep container tightly closed.

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

No additional information available

**SECTION 8: Exposure controls/personal protection****8.1. Control parameters**

No additional information available

**8.2. Exposure controls**

Hand protection	:	protective gloves
Eye protection	:	Chemical goggles or safety glasses
Skin and body protection	:	Wear suitable protective clothing
Respiratory protection	:	Wear respiratory protection.

**SECTION 9: Physical and chemical properties****9.1. Information on basic physical and chemical properties**

Physical state	:	Solid
Colour	:	White crystalline.
Odour	:	odourless.
Odour threshold	:	No data available
pH	:	12.5 at 50 g/l at 20 °C
Relative evaporation rate (butylacetate=1)	:	No data available
Melting point	:	78 °C
Freezing point	:	No data available
Boiling point	:	780 °C
Flash point	:	No data available
Auto-ignition temperature	:	No data available
Decomposition temperature	:	No data available
Flammability (solid, gas)	:	No data available
Vapour pressure	:	No data available
Relative vapour density at 20 °C	:	No data available
Relative density	:	No data available
Density	:	2.18 g/cm <sup>3</sup>
Solubility	:	Water: 5.6 g/100g water
Log Pow	:	No data available
Viscosity, kinematic	:	No data available
Viscosity, dynamic	:	No data available
Explosive properties	:	No data available
Oxidising properties	:	No data available

Explosive limits : No data available

**9.2. Other information**

No additional information available

**SECTION 10: Stability and reactivity**

**10.1. Reactivity**

Thermal decomposition generates : Corrosive vapours.

**10.2. Chemical stability**

Stable under normal conditions.

**10.3. Possibility of hazardous reactions**

No additional information available

**10.4. Conditions to avoid**

Direct sunlight. Overheating. Open flame. Heat. Sparks.

**10.5. Incompatible materials**

No additional information available

**10.6. Hazardous decomposition products**

Thermal decomposition generates : Corrosive vapours.

**SECTION 11: Toxicological information**

**11.1. Information on toxicological effects**

Acute toxicity	:	Inhalation: Harmful if inhaled. Oral: Harmful if swallowed.
Skin corrosion/irritation	:	Causes severe skin burns and eye damage.
pH	:	12.5 at 50 g/l at 20 °C
Serious eye damage/irritation	:	Serious eye damage, category 1, implicit
pH	:	12.5 at 50 g/l at 20 °C
Respiratory or skin sensitisation	:	Not classified
Germ cell mutagenicity	:	Not classified
Carcinogenicity	:	Not classified
Reproductive toxicity	:	Not classified
Specific target organ toxicity (single exposure)	:	Not classified
Specific target organ toxicity (repeated exposure)	:	Not classified
Aspiration hazard	:	Not classified
Potential adverse human health effects and symptoms	:	Harmful if swallowed.

**SECTION 12: Ecological information**

**12.1. Toxicity**

No additional information available

**12.2. Persistence and degradability**

No additional information available

**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. Other adverse effects**

No additional information available

**SECTION 13: Disposal considerations**

**13.1. Waste treatment methods**

Product/Packaging disposal : Dispose of contents/container to ...  
recommendations

**SECTION 14: Transport information**

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

**14.1. UN number**

UN-No. (ADR)	:	3262
UN-No. (IMDG)	:	3262
UN-No.(IATA)	:	3262
UN-No.(AND)	:	3262
UN-No. (RID)	:	3262

**14.2. UN proper shipping name**

Proper Shipping Name (ADR)	:	CORROSIVE SOLID, BASIC, INORGANIC, N.O.S.
Proper Shipping Name (IMDG)	:	CORROSIVE SOLID, BASIC, INORGANIC, N.O.S.
Proper Shipping Name (IATA)	:	CORROSIVE SOLID, BASIC, INORGANIC, N.O.S.
Proper Shipping Name (ADN)	:	CORROSIVE SOLID, BASIC, INORGANIC, N.O.S.
Proper Shipping Name (RID)	:	CORROSIVE SOLID, BASIC, INORGANIC, N.O.S.
Transport document description (ADR):		UN 3262 CORROSIVE SOLID, BASIC, INORGANIC, N.O.S., 8, II, (E)
Transport document description (IMDG)		UN 3262 CORROSIVE SOLID, BASIC, INORGANIC, N.O.S., 8, II
Transport document description (IATA) :		UN 3262 CORROSIVE SOLID, BASIC, INORGANIC, N.O.S., 8, II
Transport document description (ADN) :		UN 3262 CORROSIVE SOLID, BASIC, INORGANIC, N.O.S., 8, II
Transport document description (RID) :		UN 3262 CORROSIVE SOLID, BASIC, INORGANIC, N.O.S., 8, II

**14.3. Transport hazard class(es)**

ADR

Transport hazard class(es) (ADR)	:	8
Danger labels (ADR)	:	8

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DRIVEN BY CHEMISTRY, DEFINED BY PRECISION**IMDG**

Transport hazard class(es) (IMDG) : 8  
Danger labels (IMDG) : 8

**IATA**

Transport hazard class(es) (IATA) : 8  
Hazard labels (IATA) : 8

**AND**

Transport hazard class(es) (ADN) : 8  
Danger labels (AND) : 8

**RID**

Transport hazard class(es) (RID) : 8  
Danger labels (RID) : 8

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**14.4. Packing group**

Packing group (ADR)	:	II
Packing group (IMDG)	:	II
Packing group (IATA)	:	II
Packing group (ADN)	:	II
Packing group (RID)	:	II

**14.5. Environmental hazards**

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

**14.6. Special precautions for user**

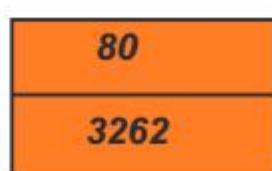
**- Overland transport**

Classification code (ADR)	:	C6
Special provisions (ADR)	:	274
Limited quantities (ADR)	:	1kg
Excepted quantities (ADR)	:	E2
Packing instructions (ADR)	:	P002, IBC08
Special packing provisions (ADR)	:	B4
Mixed packing provisions (ADR)	:	Mp10
Portable tank and bulk container	:	T3

instructions (ADR)

Portable tank and bulk container special provisions (ADR)	:	Tp33
Tank code (ADR)	:	SGAN, L4BN
Vehicle for tank carriage	:	AT
Transport category (ADR)	:	2
Special provisions for carriage - Packages (ADR)	:	V11
Hazard identification number (Kemler No.)	:	80

Orange plates



Tunnel restriction code (ADR)	:	E
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EAC code	:	2X
- Transport by sea		
Special provisions (IMDG)	:	274
Limited quantities (IMDG)	:	1kg
Excepted quantities (IMDG)	:	E2
Packing instructions (IMDG)	:	P002
IBC packing instructions (IMDG)	:	IBC08
IBC special provisions (IMDG)	:	B21, B4
Tank instructions (IMDG)	:	T3
Tank special provisions (IMDG)	:	Tp33
EmS-No. (Fire)	:	F-A
EmS-No. (Spillage)	:	S-B
Stowage category (IMDG)	:	B
Segregation (IMDG)	:	Sg35
MFAG-No	:	154
- Air transport		
PCA Excepted quantities (IATA)	:	E2
PCA Limited quantities (IATA)	:	Y844
PCA limited quantity max net quantity (IATA)	:	5kg
PCA packing instructions (IATA)	:	859
PCA max net quantity (IATA)	:	15kg
CAO packing instructions (IATA)	:	863
CAO max net quantity (IATA)	:	50kg
Special provisions (IATA)	:	A3
ERG code (IATA)	:	8L
- Inland waterway transport		
Classification code (ADN)	:	C6
Special provisions (ADN)	:	274
Limited quantities (ADN)	:	1kg
Excepted quantities (ADN)	:	E2
Equipment required (ADN)	:	PP, EP
Number of blue cones/lights (ADN)	:	0
- Rail transport		
Classification code (RID)	:	C6
Special provisions (RID)	:	274
Limited quantities (RID)	:	1kg
Excepted quantities (RID)	:	E2
Packing instructions (RID)	:	P002, IBC08
Special packing provisions (RID)	:	B4
Mixed packing provisions (RID)	:	Mp10
Portable tank and bulk container instructions (RID)	:	T3

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Portable tank and bulk container special provisions (RID)	:	Tp33
Tank codes for RID tanks (RID)	:	SGAN, L4BN
Transport category (RID)	:	2
Special provisions for carriage – Packages (RID)	:	W11
Colis express (express parcels) (RID)	:	Ce10
Hazard identification number (RID)	:	80

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

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**

No REACH Annex XVII restrictions

Barium Hydroxide Octahydrate 98% AR is not on the REACH Candidate List

Barium Hydroxide Octahydrate 98% AR is not on the REACH Annex XIV List

**15.1.2. National regulations**

**Germany**

Reference to AwSV : Water hazard class (WGK) 1, slightly hazardous to water (Classification according to VwVwS, Annex 3; WGK No 3303)

12th Ordinance Implementing the Federal Immission Control Act - 12.BImSchV : Is not subject of the 12. BImSchV (Hazardous Incident Ordinance)

**Denmark**

Recommendations Danish Regulation : 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 R-, H- and EUH-statements:

Acute Tox. 4 (Inhalation)	Acute toxicity (inhal.), Category 4
Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
Skin Corr. 1B	Skin corrosion/irritation, Category 1B
H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.
H332	Harmful if inhaled.
C	Corrosive

**MATERIAL SAFETY DATA SHEET (SDS/MSDS)****BARIUM HYDROXIDE OCTAHYDRATE 98% AR****CAS-No.: 12230-71-6****Further information**

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Chemnovo Synthesis Pvt Ltd. and its Affiliates shall not be held liable for any damage resulting from handling or from contact with the above product. See [www.chemnovo.in](http://www.chemnovo.in) for additional terms and conditions of sale.

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