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### MATERIAL SAFETY DATA SHEET (MSDS)

#### BARIUM HYDROXIDE AR

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

##### 1.1. Product identifier

Trade name : BARIUM HYDROXIDE AR

Product code : B0036505000

Identification of the product : BARIUM HYDROXIDE EXTRA PURE (OCTAHYDRATE) 97%  
CAS No: 12230-71-6

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

Use : Industrial. For professional use only.

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

Company identification : SUVCHEM  
Chaitanya Tower, 2nd Floor, Office # 206,  
Siddharth Nagar, S.V. Road,  
Goregaon (West), Mumbai - 400062,  
Maharashtra, India.  
Contact: +91 22 28725393 / 94 / 95  
Email ID: info@suvchem.com/care@suvchem.com

##### 1.4. Emergency telephone number

Phone no. : + 91 22 28725393 / 94 / 95 (9:00am - 6:00 pm) [ Office hours ]

#### 2. Hazards identification -DSD

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

###### Classification EC 67/548 or EC 1999/45

Classification : Xn; R20  
C; R34

###### Hazard Class and Category Code(s), Regulation (EC) No 1272/2008 (CLP)

Health hazards : Acute toxicity, Oral - Category 4 - Warning (CLP : Acute Tox. 4) H302  
Acute toxicity, Inhalation - Category 4 - Warning (CLP : Acute Tox. 4) H332  
Skin corrosion - Category 1B - Danger (CLP : Skin Corr. 1B) H314

##### 2.2. Label elements

###### Labelling EC 67/548 or EC 1999/45

Symbol(s)



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#### 2. Hazards identification -DSD (continued)

<b>Symbol(s)</b>	: C : Corrosive T : Toxic
<b>R Phrase(s)</b>	: R20 : Harmful by inhalation. R22 : Harmful if swallowed. R34 : Causes burns.
<b>S Phrase(s)</b>	: S26 : In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. S36 : Wear suitable protective clothing. S37 : Wear suitable gloves. S39 : Wear eye/face protection. S45 : In case of accident or if you feel unwell, seek medical advice immediately ( show the label when possible).

#### Labelling Regulation EC 1272/2008 (CLP)

##### Hazard pictograms



##### Signal words

: Danger

##### Hazard statements

: H314 : Causes severe skin burns and eye damage.  
H302 : Harmful if swallowed.  
H332 : Harmful if inhaled.

##### Precautionary statements

###### • Prevention

: P280: Wear protective gloves, protective clothing, eye protection, face protection.  
P271: Use only outdoors or in a well-ventilated area.  
P260: Do not breathe dust, fume, gas, mist, vapours, spray.  
P264: Wash thoroughly after handling.  
P270: Do not eat, drink or smoke when using this product.

###### • Response

: P301+P330+P331: IF SWALLOWED : Rinse mouth. Do NOT induce vomiting.  
P305+P351+P338: IF IN EYES : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P304+P340: IF INHALED : Remove to fresh air and keep at rest in a position comfortable for breathing.  
P303+P361+P353: IF ON SKIN (or hair) : Remove immediately all contaminated clothing. Rinse skin with water/shower.  
P363: Wash contaminated clothing before reuse.

###### • Storage

: P405: Store locked up.

###### • Disposal considerations

: P501: Dispose of this material and its container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

#### 2.3. Other hazards

##### Other hazards

: The substance does not fulfil the criteria to be identified as PBT substance or vPvB substance according to Annex XIII of Regulation REACH.

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#### 3. Composition/information on ingredients

**Substance / Preparation** : BARIUM HYDROXIDE EXTRA PURE (OCTAHYDRATE) 97%

Substance.

Contains no other components or impurities which will influence the classification of the product.

#### 4. First aid measures

##### 4.1. Description of first aid measures

**Inhalation** : Immediately call a POISON CENTER or doctor. Remove to fresh air and keep at rest in a position comfortable for breathing.

**Skin contact** : Remove/Take off immediately all contaminated clothing. Wash with plenty of soap and water. Immediately call a POISON CENTER or doctor.

**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.

**Ingestion** : Immediately call a POISON CENTER or doctor. Rinse mouth. Do NOT induce vomiting. Call a POISON CENTER or doctor if you feel unwell.

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

**Symptoms relating to use** : Causes severe skin burns and eye damage.  
Danger of serious damage to health by prolonged exposure through inhalation.  
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

**General information** : Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).

#### 5. Fire-fighting measures

##### 5.1. Extinguishing media

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

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

**Surrounding fires** : Use water spray or fog for cooling exposed containers.

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

**Hazardous combustion products** : Under fire conditions, hazardous fumes will be present.  
Thermal decomposition generates : Corrosive vapours.

##### 5.3. Advice for fire-fighters

**Protection against fire** : Do not enter fire area without proper protective equipment, including respiratory protection.

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**5. Fire-fighting measures (continued)**

**Special procedures** : Exercise caution when fighting any chemical fire. Avoid (reject) fire-fighting water to enter environment.

**6. Accidental release measures**
**6.1. Personal precautions, protective equipment and emergency procedures**

**For emergency responders** : Equip cleanup crew with proper protection.  
Ventilate area.

**For non-emergency personnel** : Evacuate unnecessary personnel.

**6.2. Environmental precautions**

**Environmental precautions** : Prevent entry to sewers and public waters. Notify authorities if product enters sewers or public waters.

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

**Clean up methods** : On land, sweep or shovel into suitable containers. Minimize generation of dust.  
Store away from other materials.

**6.4. Reference to other sections**

See section 8. Exposure controls/personal protection

**7. Handling and storage**
**7.1. Precautions for safe handling**

**Handling** : Wash contaminated clothing before reuse. Wash thoroughly after handling. Do not breathe dust, fume, gas, mist, vapours, spray. Use only outdoors or in a well-ventilated area. Do not eat, drink or smoke when using this product.

**Technical protective measures** : Provide good ventilation in process area to prevent formation of vapour.

**7.2. Conditions for safe storage, including any incompatibilities**

**Storage** : Keep only in the original container in a cool, well ventilated place. Keep container closed when not in use.

**Storage regulation** : Comply with applicable regulations.

**Storage - away from** : Strong bases. Strong acids. Sources of ignition. Direct sunlight.

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

**Specific end use(s)** : None.

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#### 8. Exposure controls/personal protection

##### 8.1. Exposure controls

Personal protection	: Avoid all unnecessary exposure.
• Respiratory protection	: In case of insufficient ventilation, wear suitable respiratory equipment.
• Hand protection	: Wear protective gloves.
• Skin protection	: Wear suitable protective clothing.
• Eye protection	: Chemical goggles or face shield.
• Others	: When using, do not eat, drink or smoke.

##### 8.2. Control parameters

Occupational Exposure Limits	: No data available.
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#### 9. Physical and chemical properties

##### 9.1. Information on basic physical and chemical properties

Physical state at 20 °C	: Solid.
Colour	: White crystalline
Odour	: Odorless
Odour threshold	: No data available.
pH value	: Not applicable.
Melting point [°C]	: 78 °C
Decomposition point [°C]	: N/A
Critical temperature [°C]	: N/A
Auto-ignition temperature [°C]	: N/A
Flammability (solid, gas)	: N/A
Flash point [°C]	: N/A
Boiling point [°C]	: 7800C
Initial boiling point [°C]	: N/A
Final boiling point [°C]	: N/A
Evaporation rate	: N/A
Vapour pressure [20°C]	: N/A
Vapour pressure mm/Hg	: N/A
Vapour density	: N/A
Density [g/cm <sup>3</sup> ]	: 2,18
Relative density, gas (air=1)	: N/A
Relative density, liquid (water=1)	: N/A
Solubility in water [% weight]	: 5.6g/100g water @ 15
Solubility in water	: N/A

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**9. Physical and chemical properties (continued)**

Log Pow octanol / water at 20°C : No data available.  
 Solubility : 12.5 at 50 g/l at 20  
 Viscosity at 40°C [mm<sup>2</sup>/s] : N/A

**9.2. Other information**

Explosive properties : N/A  
 Explosion limits - upper [%] : N/A  
 Explosion limits - lower [%] : N/A  
 Oxidising properties : No data available.

**10. Stability and reactivity**
**10.1. Reactivity**

Reactivity : Not established.

**10.2. Chemical stability**

Chemical stability : Stable under recommended storage conditions.

**10.3. Possibility of hazardous reactions**

Hazardous reactions : Not established.

**10.4. Conditions to avoid**

Conditions to avoid : Direct sunlight. Extremely high or low temperatures.

**10.5. Incompatible materials**

Materials to avoid : Strong acids. Strong bases.

**10.6. Hazardous decomposition products**

Hazardous decomposition products : Fumes. Carbon monoxide. Carbon dioxide.  
 Thermal decomposition generates : Corrosive vapours.

**11. Toxicological information**
**11.1. Information on toxicological effects**

Acute toxicity  
 • Inhalation : Harmful if inhaled.

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#### 11. Toxicological information (continued)

• Dermal	: Based on available data, the classification criteria are not met.
• Ingestion	: Harmful if swallowed.
Corrosion	: Causes severe skin burns and eye damage.
Irritation	: Based on available data, the classification criteria are not met.
Sensitization	: Based on available data, the classification criteria are not met.
Mutagenicity	: Based on available data, the classification criteria are not met.
Carcinogenicity	: Based on available data, the classification criteria are not met.
Toxic for reproduction	: Based on available data, the classification criteria are not met.
STOT-single exposure	: Based on available data, the classification criteria are not met.
STOT-repeated exposure	: Based on available data, the classification criteria are not met.
Aspiration hazard	: Based on available data, the classification criteria are not met.

#### 12. Ecological information

##### 12.1. Toxicity

Toxicity information : Not established.

##### 12.2. Persistence - degradability

Persistence - degradability : Biodegradable.

##### 12.3. Bioaccumulative potential

Bioaccumulative potential : Not established.

##### 12.4. Mobility in soil

Mobility in soil : Not established.

##### 12.5. Results of PBT and vPvB assessment

**Results of PBT and vPvB assessment** : The substance does not fulfil the criteria to be identified as PBT substance or vPvB substance according to Annex XIII of Regulation REACH.

##### 12.6. Other adverse effects

Environmental precautions : Avoid release to the environment.

#### 13. Disposal considerations

##### 13.1. Waste treatment methods

General : Avoid release to the environment. Dispose in a safe manner in accordance with local/national regulations.



### MATERIAL SAFETY DATA SHEET (MSDS)

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#### 13. Disposal considerations (continued)

Dispose of this material and its container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

#### 14. Transport information

##### 14.1. Land transport (ADR-RID)

Proper shipping name : CORROSIVE SOLID, TOXIC, N.O.S.  
UN N° : 2923  
H.I. nr : 86  
ADR - Class : 8  
Labelling - Transport : 8 : Corrosive substance. 6.1 : Toxic substances.



ADR - Classification code : CT2  
CT2  
CT2  
ADR - Group : II  
ADR - Packing instructions : P002  
ADR - Limited Quantity : 1 KG  
ADR - Tunnel code



: E : Passage forbidden through tunnels of category E.

##### 14.2. Sea transport (IMDG) [English only]

Proper shipping name : CORROSIVE SOLID, TOXIC, N.O.S.  
UN N° : 2923  
IMO-IMDG - Class or division : 8 : Corrosive substance. ( 6.1 : Toxic substances. )  
IMO-IMDG - Packing group : II  
IMO-IMDG - Packing instructions : P002  
IMO-IMDG - Limited quantities : 1 kg  
IMO-IMDG - Marine pollution : Yes  
EMS-Nr : F-A S-B

##### 14.3. Air transport (ICAO-IATA) [English only]

Proper shipping name : CORROSIVE SOLID, TOXIC, N.O.S.



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#### 14. Transport information (continued)

UN N°	: 2923
IATA - Class or division	: 8 : Corrosive substance. ( 6.1 : Toxic substances. )
IATA - Packing group	: II
IATA - Passenger and Cargo Aircraft	: ALLOWED
- Passenger and Cargo - Packing instruction	: 859
- Passenger and Cargo - Maximum Quantity/Packing	: 15 kg
IATA - Cargo only	: ALLOWED
- Cargo only - Packing instruction	: 863
- Cargo only - Maximum Quantity/ Packing	: 50 kg
IATA - Limited Quantities	: 5 kg
ERG-Nr	: 8P

#### 15. Regulatory information

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

Safety, health and environmental regulations/legislation specific for the substance or mixture	: Ensure all national/local regulations are observed.
REACH Restrictions - Annex XVII	: The components of this product are not subject to restrictions.
REACH Authorisation - Annex XIV	: The components of this product are not subject to authorization.

##### 15.2. Chemical Safety Assessment

Chemical Safety Assessment	: It has not been carried out.
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#### 16. Other information

Revision	: Revision - See : *
Abbreviations and acronyms	: PBT: persistent, bioaccumulative and toxic. vPvB: very persistent and very bioaccumulative
Sources of key data used	: REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006
Further information	: None.

storage, use or disposal of the product are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage or expense arising out of or in any way connected with

## MATERIAL SAFETY DATA SHEET (MSDS)

In accordance with REACH Regulation (CE) N° 1907/2006 and with CLP Regulation (CE) N° 1272/2008

### DISCLAIMER:

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- **SUVCHEM** shall not be responsible for any damage resulting from handling or from contact with the above product.
- **SUVCHEM** provides the information contained herein in good faith but makes no representation as to its comprehensiveness or accuracy. This document is intended only as a guide to the appropriate precautionary handling of the material by a properly trained person using this product.

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