



**BARIUM SULPHIDE**  
**CAS No 21109-95-5**

**MATERIAL SAFETY DATA SHEET**  
**SDS/MSDS**

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

**1.1 Product identifiers**

Product name : Barium Sulphide

CAS-No. : 21109-95-5

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

Identified uses : Laboratory chemicals, Industrial & for professional use only.

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

Company : Central Drug House (P) Ltd  
7/28 Vardaan House  
Ansari Road Daryaganj  
New Delhi-110002  
INDIA

Telephone : +91 11 49404040

Email : [care@cdfinechemical.com](mailto:care@cdfinechemical.com)

**1.4 Emergency telephone number**

Emergency Phone # : +91 11 49404040 (9:00am - 6:00 pm) [Office hours]

**SECTION 2: Hazards identification**

**2.1 Classification of the substance or mixture**

**Classification according to Regulation (EC) No 1272/2008**

Corrosive to metals (Category 1), H290  
Acute toxicity, Oral (Category 3), H301  
Acute toxicity, Inhalation (Category 4), H332  
Skin corrosion (Category 1A), H314  
Acute aquatic toxicity (Category 1), H400

For the full text of the H-Statements mentioned in this Section, see Section 16.

**2.2 Label elements**

**Labelling according Regulation (EC) No 1272/2008**

Pictogram



Signal word : Danger

Hazard statement(s)

H290 : May be corrosive to metals.

H301 : Toxic if swallowed.

H314	Causes severe skin burns and eye damage.
H332	Harmful if inhaled.
H400	Very toxic to aquatic life.
Precautionary statement(s)	
P260	Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.
P280	Wear protective gloves/ protective clothing/ eye protection/ face protection.
P301 + P330 + P331 + P310	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. Immediately call a POISON CENTER/doctor.
P303 + P361 + P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304 + P340 + P310	IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/doctor.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Supplemental Hazard information (EU)	
EUH031	Contact with acids liberates toxic gas.

### 2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.  
Contact with acids liberates toxic gas.

## SECTION 3: Composition/information on ingredients

### 3.1 Substances

Formula	:	BaS
Molecular weight	:	169.39 g/mol
CAS-No.	:	21109-95-5
EC-No.	:	244-214-4
Index-No.	:	016-002-00-X

#### Hazardous ingredients according to Regulation (EC) No 1272/2008

Component		Classification	Concentration
<b>Barium sulphide</b>			
CAS-No.	21109-95-5	Met. Corr. 1; Acute Tox. 3;	<= 100 %
EC-No.	244-214-4	Acute Tox. 4; Skin Corr. 1A;	
Index-No.	016-002-00-X	Aquatic Acute 1; H290, H301, H332, H314, H400	
		M-Factor - Aquatic Acute: 10	

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

Consult a physician. Show this safety data sheet to the doctor in attendance.

#### If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

#### In case of skin contact

Take off contaminated clothing and shoes immediately. Wash off with soap and plenty of water. Take victim immediately to hospital. Consult a physician.

#### In case of eye contact

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

**If swallowed**

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

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

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

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

No data available

**SECTION 5: Firefighting measures****5.1 Extinguishing media****Suitable extinguishing media**

Dry powder

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

Sulphur oxides, Barium oxide

**5.3 Advice for firefighters**

Wear self-contained breathing apparatus for firefighting if necessary.

**5.4 Further information**

No data available

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

Wear respiratory protection. Avoid dust formation. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust. For personal protection see section 8.

**6.2 Environmental precautions**

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

**6.3 Methods and materials for containment and cleaning up**

Pick up and arrange disposal without creating dust. Sweep up and shovel. Do not flush with water. Keep in suitable, closed containers for disposal.

**6.4 Reference to other sections**

For disposal see section 13.

**SECTION 7: Handling and storage****7.1 Precautions for safe handling**

Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Provide appropriate exhaust ventilation at places where dust is formed. For precautions see section 2.2.

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

Store in cool place. Keep container tightly closed in a dry and well-ventilated place. Never allow product to get in contact with water during storage. Do not store near acids. Storage class (TRGS 510): Solid substances which give off flammable gases in contact with water

**7.3 Specific end use(s)**

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

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

## 8.2 Exposure controls

### Appropriate engineering controls

Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.

### Personal protective equipment

#### Eye/face protection

Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

#### Skin protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

#### Body Protection

Complete suit protecting against chemicals, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

#### Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use (EN 143) respirator cartridges as a backup to engineering controls. If th full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

#### Control of environmental exposure

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

- |   |                               |
|---|-------------------------------|
| a) Appearance                                   | Form: powder                  |
| b) Odour  | sulphurous                    |
| c) Odour Threshold                              | No data available             |
| d) pH   | No data available             |
| e) Melting point/freezing point                 | Melting point/range: 1,200 °C |
| f) Initial boiling point and boiling range      | No data available             |
| g) Flash point                                  | No data available             |
| h) Evaporation rate                             | No data available             |
| i) Flammability (solid, gas)                    | No data available             |
| j) Upper/lower flammability or explosive limits | No data available             |
| k) Vapour pressure                              | No data available             |
| l) Vapour density                               | No data available             |

m) Relative density	4.25 g/mL at 15 °C
n) Water solubility	No data available
o) Partition coefficient: n-octanol/water	No data available
p) Auto-ignition temperature	No data available
q) Decomposition temperature	No data available
r) Viscosity	No data available
s) Explosive properties	No data available
t) Oxidizing properties	No data available

## 9.2 Other safety information

No data available

## SECTION 10: Stability and reactivity

### 10.1 Reactivity

No data available

### 10.2 Chemical stability

Stable under recommended storage conditions.

### 10.3 Possibility of hazardous reactions

No data available

### 10.4 Conditions to avoid

No data available

### 10.5 Incompatible materials

acids, Oxidizing agents, Phosphorous oxides, Lead, Potassium chlorate, Potassium nitrate

### 10.6 Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. - Sulphur oxides, Barium oxide

Other decomposition products - No data available

In the event of fire: see section 5

## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

#### Acute toxicity

LD50 Oral - Rat - male and female - 271 mg/kg(Barium sulphide)  
(OECD Test Guideline 401)

Inhalation: No data available(Barium sulphide)

#### Skin corrosion/irritation

Skin - in vitro assay(Barium sulphide)

Result: Causes severe burns. - 3 - 60 min  
(Skin corrosion: Human Skin Model Test)

#### Serious eye damage/eye irritation

No data available(Barium sulphide)

#### Respiratory or skin sensitisation

No data available(Barium sulphide)

### **Germ cell mutagenicity**

No data available(Barium sulphide)

### **Carcinogenicity**

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

### **Reproductive toxicity**

No data available(Barium sulphide)

### **Specific target organ toxicity - single exposure**

No data available(Barium sulphide)

### **Specific target organ toxicity - repeated exposure**

No data available

### **Aspiration hazard**

No data available(Barium sulphide)

### **Additional Information**

RTECS: Not available

Nausea, Vomiting, Diarrhoea, To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.(Barium sulphide)

## **SECTION 12: Ecological information**

### **12.1 Toxicity**

No data available

### **12.2 Persistence and degradability**

No data available

### **12.3 Bioaccumulative potential**

No data available

### **12.4 Mobility in soil**

No data available(Barium sulphide)

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

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

### **12.6 Other adverse effects**

Very toxic to aquatic life.

No data available

## **SECTION 13: Disposal considerations**

### **13.1 Waste treatment methods**

#### **Product**

Offer surplus and non-recyclable solutions to a licensed disposal company. Dissolve or mix the material with a combustible solvent and burn in a chem scrubber.

#### **Contaminated packaging**

Dispose of as unused product.

## SECTION 14: Transport information

<b>14.1 UN number</b>			
ADR/RID: 2813	IMDG: 2813	IATA: 2813	
<b>14.2 UN proper shipping name</b>			
ADR/RID: WATER-REACTIVE SOLID, N.O.S. (Barium sulphide)			
IMDG: WATER-REACTIVE SOLID, N.O.S. (Barium sulphide)			
IATA: Water-reactive solid, n.o.s. (Barium sulphide)			
<b>14.3 Transport hazard class(es)</b>			
ADR/RID: 4.3	IMDG: 4.3	IATA: 4.3	
<b>14.4 Packaging group</b>			
ADR/RID: II	IMDG: II	IATA: II	
<b>14.5 Environmental hazards</b>			
ADR/RID: no	IMDG Marine pollutant: no	IATA: no	
<b>14.6 Special precautions for user</b>			
No data available			

## SECTION 15: Regulatory information

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

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

### 15.2 Chemical safety assessment

For this product a chemical safety assessment was not carried out

## SECTION 16: Other information

### Full text of H-Statements referred to under sections 2 and 3.

EUH031	Contact with acids liberates toxic gas.
H290	May be corrosive to metals.
H301	Toxic if swallowed.
H314	Causes severe skin burns and eye damage.
H332	Harmful if inhaled.
H400	Very toxic to aquatic life.

### 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. Central Drug House (P) Ltd and its Affiliates shall not be held liable for any damage resulting from handling or from contact with the above product. See [www.cdhfinechemical.com](http://www.cdhfinechemical.com) for additional terms and conditions of sale.