



The Power to Question

# SAFETY DATA SHEET

Santa Cruz Biotechnology, Inc.

Revision date 06-May-2022

Version 1

## 1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

### Product identifier

Product Name Barium sulfide  
Product Code SC-227289

### Recommended use of the chemical and restrictions on use

For research use only. Not intended for diagnostic or therapeutic use.

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

Santa Cruz Biotechnology, Inc.  
10410 Finnell Street  
Dallas, TX 75220  
831.457.3800  
800.457.3801  
scbt@scbt.com

### Emergency telephone number

Chemtrec  
1.800.424.9300 (Within USA)  
+1.703.527.3887 (Outside USA)

## 2. HAZARDS IDENTIFICATION

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200).

### Classification

Acute toxicity - Oral  
Acute toxicity - Inhalation (Dusts/Mists)  
Skin corrosion/irritation  
Serious eye damage/eye irritation  
Substances or mixtures which, in contact with water, emit flammable gases

Category 3  
Category 4  
Category 1 Sub-category A  
Category 1  
Category 2

### Label elements

Signal word  
Hazard statements

Danger  
Toxic if swallowed  
Harmful if inhaled  
Causes severe skin burns and eye damage  
In contact with water releases flammable gases

Symbols/Pictograms



Precautionary Statements - Prevention

Wash face, hands and any exposed skin thoroughly after handling  
Do not eat, drink or smoke when using this product  
Use only outdoors or in a well-ventilated area  
Do not breathe dust/fume/gas/mist/vapors/spray  
Wear protective gloves/protective clothing/eye protection/face protection  
Handle under inert gas. Protect from moisture  
Keep away from any possible contact with water, because of violent reaction and possible flash fire



Precautionary Statements - Response

Immediately call a POISON CENTER or doctor/physician  
 IF IN EYES: 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  
 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower  
 Wash contaminated clothing before reuse  
 Brush off loose particles from skin. Immerse in cool water/wrap in wet bandages  
 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing  
 Call a POISON CENTER or doctor/physician if you feel unwell  
 Immediately call a POISON CENTER or doctor/physician  
 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician  
 Rinse mouth  
 Do NOT induce vomiting  
 In case of fire: Use CO2, dry chemical, or foam for extinction  
 Store locked up Store in a dry place. Store in a closed container  
 Dispose of contents/container to an approved waste disposal plant

Precautionary Statements - Storage  
 Precautionary Statements - Disposal

**Hazards not otherwise classified (HNOC)**

Hazards not otherwise classified (HNOC) Not applicable

**Other Information**

Other hazards Very toxic to aquatic life.

<b>NFPA</b>	Health hazards	-		<b>HMIS</b>	Health hazards	-	
	Flammability	-				Flammability	-
	Stability	-				Physical hazards	-
	Physical and chemical properties	-				Personal protection	-

**3. COMPOSITION/INFORMATION ON INGREDIENTS**

CAS No 21109-95-5  
 Molecular Weight 169.39  
 Formula BaS

Chemical name	CAS No.	Weight-%	Oral LD50	Dermal LD50	Inhalation LC50
Barium sulfide	21109-95-5	>98	= 375 mg/kg ( Rat )	-	-

**4. FIRST AID MEASURES**

**First Aid Measures**

General advice Consult a physician if necessary. Remove to fresh air.  
 Eye contact Wash with plenty of water.  
 Skin Contact Wash skin with soap and water.  
 Inhalation Remove to fresh air If breathing is difficult, give oxygen If not breathing, give artificial respiration  
 Ingestion Never give anything by mouth to an unconscious person. Clean mouth with water.

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

Symptoms No information available.



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

Note to physicians Treat symptomatically.

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**5. FIRE-FIGHTING MEASURES**

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**Suitable Extinguishing Media**

Suitable Extinguishing Media Use CO<sub>2</sub>, dry chemical, or foam.  
Unsuitable Extinguishing Media Water.

**Specific hazards arising from the chemical**

Specific hazards arising from the chemical No information available.  
Hazardous combustion products Hydrogen sulfide.

**Explosion data**

Sensitivity to Mechanical Impact No information available.  
Sensitivity to Static Discharge No information available.

**Protective equipment and precautions for firefighters**

Protective equipment and precautions for firefighters As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

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**6. ACCIDENTAL RELEASE MEASURES**

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**Personal precautions, protective equipment and emergency procedures**

Personal precautions Ensure adequate ventilation, especially in confined areas.

**Environmental precautions**

Environmental precautions See Section 12 for additional Ecological Information.

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

Methods for containment Prevent further leakage or spillage if safe to do so.  
Methods for cleaning up Use personal protective equipment as required. Cover powder spill with plastic sheet or tarp to minimize spreading and keep powder dry. Take up mechanically, placing in appropriate containers for disposal. Avoid creating dust. Clean contaminated surface thoroughly.

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**7. HANDLING AND STORAGE**

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**Precautions for safe handling**

Advice on safe handling Handle in accordance with good industrial hygiene and safety practice.

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

Storage Conditions Keep containers tightly closed in a dry, cool and well-ventilated place. Store at room temperature.  
Incompatible materials None known based on information supplied.

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**8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

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## Control parameters

Exposure Guidelines

Other Information

Vacated limits revoked by the Court of Appeals decision in AFL-CIO v. OSHA, 965 F.2d 962 (11th Cir., 1992).

Chemical name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Barium sulfide 21109-95-5	TWA: 0.5 mg/m <sup>3</sup> Ba	TWA: 0.5 mg/m <sup>3</sup> Ba regulated under CAS 7440-39-3 (vacated) TWA: 0.5 mg/m <sup>3</sup> Ba	IDLH: 50 mg/m <sup>3</sup> Ba TWA: 0.5 mg/m <sup>3</sup> except Barium sulfate Ba

NIOSH IDLH *Immediately Dangerous to Life or Health*

## Appropriate engineering controls

Engineering Controls

Showers  
Eyewash stations  
Ventilation systems

## Individual protection measures, such as personal protective equipment

Eye/face protection

Wear safety glasses with side shields (or goggles).

Skin and Body Protection

Wear protective gloves and protective clothing.

Respiratory protection

If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.

General Hygiene Considerations

Handle in accordance with good industrial hygiene and safety practice.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State

Solid

Appearance

No information available

Odor

No information available

### Property

pH

### Values

No information available

Melting point/freezing point

No information available

Boiling point

No information available

Flash point

No information available

Liquid Density

No information available

Evaporation rate

No information available

Upper flammability limits

No information available

Lower flammability limit

No information available

Vapor pressure

No information available

Vapor density

No information available

Specific gravity

No information available

Water solubility

No information available

Solubility in other solvents

No information available

Partition coefficient

No information available

Autoignition temperature

No information available

Decomposition temperature

No information available

Kinematic viscosity

No information available

Explosive properties

No information available

Oxidizing properties

No information available

## 10. STABILITY AND REACTIVITY

Reactivity

Water

Chemical stability

Stable under recommended storage conditions.



Possibility of Hazardous Reactions	None under normal processing.
Hazardous polymerization	No information available.
Conditions to avoid	Extremes of temperature and direct sunlight.
Incompatible materials	Strong oxidizing agents.
Hazardous Decomposition Products	Hydrogen sulfide.

## 11. TOXICOLOGICAL INFORMATION

### Information on likely routes of exposure

Inhalation	No data available.
Eye contact	No data available.
Skin Contact	No data available.
Ingestion	No data available.

### Information on toxicological effects

Symptoms	No information available.
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### Delayed and immediate effects as well as chronic effects from short and long-term exposure

Chronic Toxicity	No information available.
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### Numerical measures of toxicity - Product Information

Unknown acute toxicity	No information available
The following values are calculated based on chapter 3.1 of the GHS document	
ATEmix (oral)	100 mg/kg
ATEmix (inhalation-dust/mist)	1.5 mg/l

## 12. ECOLOGICAL INFORMATION

Ecotoxicity	Very toxic to aquatic life
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0% of the mixture consists of component(s) of unknown hazards to the aquatic environment.

Persistence and degradability	No information available.
Bioaccumulation	No information available.
Mobility	No information available.

## 13. DISPOSAL CONSIDERATIONS

Disposal of wastes	Disposal should be in accordance with applicable regional, national and local laws and regulations.
Contaminated packaging	Do not reuse container.
US EPA Waste Number	D003
California Hazardous Waste Status	This product contains one or more substances that are listed with the State of California as a hazardous waste.

Chemical name	California Hazardous Waste Status
Barium sulfide 21109-95-5	Toxic

## 14. TRANSPORT INFORMATION

**DOT**

UN/ID no UN2813  
 Hazard Class 4.3  
 Packing Group II  
 Proper shipping name Water-reactive solid, n.o.s.  
 Description UN2813, Water-reactive solid, n.o.s. (Barium sulfide), 4.3, II  
 Emergency Response Guide Number 138

**IMDG**

UN/ID no UN2813  
 Hazard Class 4.3  
 Packing Group II  
 Proper shipping name Water-reactive solid, n.o.s.  
 Description UN2813, Water-reactive solid, n.o.s. (Barium sulfide), 4.3, II, Marine pollutant  
 Special Provisions 274  
 EmS-No F-G, S-N

**IATA**

UN/ID no UN2813  
 Hazard Class 4.3  
 Packing Group II  
 Proper shipping name Water-reactive solid, n.o.s.  
 Description UN2813, Water-reactive solid, n.o.s. (Barium sulfide), 4.3, II  
 ERG Code 4W

**15. REGULATORY INFORMATION****International Inventories**

All of the components in the product are on the following Inventory lists

TSCA (United States): Canada (DSL/NDSL) Europe (EINECS/ELINCS/NLP) Australia (AICS) South Korea (KECL): China (IECSC)  
 ENCS (Japan): Philippines (PICCS)

Chemical name	TSCA	DSL	NDSL	EINECS	ELINCS	ENCS	IECSC	KECL	PICCS	AICS
Barium sulfide	X	-	X	X	-	X	X	X	X	X

X - Listed

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances

ENCS - Japan Existing and New Chemical Substances

IECSC - China Inventory of Existing Chemical Substances

KECL - Korean Existing and Evaluated Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances

**US Federal Regulations****SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

**SARA 311/312 Hazard Categories**

Acute health hazard Yes  
 Chronic Health Hazard No  
 Fire hazard No  
 Sudden release of pressure hazard No  
 Reactive hazard No

**CWA (Clean Water Act)**

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40



CFR 122.42).

### US State Regulations

#### **California Proposition 65**

This product does not contain any Proposition 65 chemicals.

#### **U.S. State Right-to-Know Regulations**

Chemical name	New Jersey	Massachusetts	Pennsylvania
Barium sulfide 21109-95-5	X	Not Listed	X

## 16. OTHER INFORMATION

Revision note

No information available

#### **Disclaimer**

The information provided in this Material 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.

**End of Safety Data Sheet**