



The Power to Question

# SAFETY DATA SHEET

Santa Cruz Biotechnology, Inc.

Revision date 12-Oct-2018

Version 1

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

### Product identifier

Product Name 1,10-Phenanthroline  
Product Code SC-255888

### 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 Category 3

### Label elements

Signal word Danger  
Hazard statements Toxic if swallowed  
Symbols/Pictograms



Precautionary Statements - Prevention

Wash face, hands and any exposed skin thoroughly after handling

Precautionary Statements - Response

Do not eat, drink or smoke when using this product  
IF exposed or concerned: Get medical advice/attention  
IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician

Precautionary Statements - Storage  
Precautionary Statements - Disposal

Rinse mouth  
Store locked up  
Dispose of contents/container to an approved waste disposal plant

### Hazards not otherwise classified (HNOC)

Hazards not otherwise classified (HNOC) Not applicable

### Other Information

Other hazards Very toxic to aquatic life with long lasting effects. 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 66-71-7  
 Molecular Weight 180.21  
 Formula C<sub>12</sub>H<sub>8</sub>N<sub>2</sub>

Chemical name	CAS No.	Weight-%	Oral LD50	Dermal LD50	Inhalation LC50
1,10-Phenanthroline	66-71-7	>98	= 132 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.

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

Note to physicians Treat symptomatically.

### 5. FIRE-FIGHTING MEASURES

#### Suitable Extinguishing Media

Suitable Extinguishing Media Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable Extinguishing Media No information available.

#### Specific hazards arising from the chemical

Specific hazards arising from the chemical No information available.

Hazardous combustion products Carbon oxides. Nitrogen oxides (NO<sub>x</sub>).

#### 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.



## 6. ACCIDENTAL RELEASE MEASURES

### 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.

## 7. HANDLING AND STORAGE

### 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                          Protect from moisture. Store at room temperature.  
 Incompatible materials                      None known based on information supplied.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Control parameters

Exposure Guidelines                          This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

### 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                                      powder  
 Odor    No information available

Property    Values  
 pH    No information available



Melting point/freezing point	114 °C
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	114 °C
Kinematic viscosity	No information available
Explosive properties	No information available
Oxidizing properties	No information available

## 10. STABILITY AND REACTIVITY

Reactivity	Not applicable
Chemical stability	Stable under recommended storage conditions.
Possibility of Hazardous Reactions	None under normal processing.
Hazardous polymerization	No information available.
Conditions to avoid	Exposure to air or moisture over prolonged periods.
Incompatible materials	Strong oxidizing agents.
Hazardous Decomposition Products	Carbon oxides. Nitrogen oxides (NOx).

## 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)	132 mg/kg

## 12. ECOLOGICAL INFORMATION

Ecotoxicity	Very toxic to aquatic life with long lasting effects
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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.

### 14. TRANSPORT INFORMATION

#### DOT

UN/ID no UN2811  
 Hazard Class 6.1  
 Packing Group III  
 Proper shipping name Toxic solids, organic, n.o.s.  
 Description UN2811, Toxic solids, organic, n.o.s. (1,10-Phenanthroline), 6.1, III  
 Emergency Response Guide Number 154

#### IMDG

UN/ID no UN2811  
 Hazard Class 6.1  
 Packing Group III  
 Proper shipping name Toxic solid, organic, n.o.s.  
 Description UN2811, Toxic solid, organic, n.o.s. (1,10-Phenanthroline), 6.1, III, Marine pollutant  
 Special Provisions 223, 274  
 EmS-No F-A, S-A

#### IATA

UN/ID no UN2811  
 Hazard Class 6.1  
 Packing Group III  
 Proper shipping name Toxic solid, organic, n.o.s.  
 Description UN2811, Toxic solid, organic, n.o.s. (1,10-Phenanthroline), 6.1, III  
 ERG Code 6L

### 15. REGULATORY INFORMATION

#### International Inventories

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

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

Chemical name	TSCA	DSL	NDL	EINECS	ELINCS	ENCS	IECSC	KECL	PICCS	AICS
1,10-Phenanthroline	X	X	-	X	-	X	X	X	X	X

X - Listed

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

DSL/NDL - 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**

This product does not contain any substances regulated by state right-to-know regulations

## **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**