



The Power to Question

# SAFETY DATA SHEET

Santa Cruz Biotechnology, Inc.

Revision date 29-May-2018

Version 1.4

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

### Product identifier

Product Name Silicon dioxide  
Product Code SC-203376

### 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

Carcinogenicity Category 1A  
Specific target organ toxicity (repeated exposure) Category 2

### Label elements

Signal word Danger  
Hazard statements May cause cancer  
May cause damage to organs through prolonged or repeated exposure

Symbols/Pictograms



Precautionary Statements - Prevention

Obtain special instructions before use  
Do not handle until all safety precautions have been read and understood  
Use personal protective equipment as required  
Do not breathe dust/fume/gas/mist/vapors/spray  
IF exposed or concerned: Get medical advice/attention  
Store locked up  
Dispose of contents/container to an approved waste disposal plant

Precautionary Statements - Response

Precautionary Statements - Storage

Precautionary Statements - Disposal

### Hazards not otherwise classified (HNOC)

Hazards not otherwise classified (HNOC) Not applicable

### Other Information



|             |                                  |   |  |             |                           |   |
|-------------|----------------------------------|---|--|-------------|---------------------------|---|
| <b>NFPA</b> | Health hazards                   | 0 |  | <b>HMIS</b> | Health hazards            | 0 |
|             | Flammability                     | 0 |  |             | Flammability              | 0 |
|             | Stability                        | 0 |  |             | Physical hazards          | 0 |
|             | Physical and chemical properties | - |  |             | Personal protection       | - |
|             |                                  |   |  |             | * = Chronic Health Hazard |   |

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

CAS No 14808-60-7  
 Molecular Weight 60.08  
 Formula SiO<sub>2</sub>

| Chemical name            | CAS No.    | Weight-% | Oral LD50 | Dermal LD50 | Inhalation LC50 |
|--------------------------|------------|----------|-----------|-------------|-----------------|
| Silicon dioxide (Quartz) | 14808-60-7 | >98      | -         | -           | -               |

### 4. FIRST AID MEASURES

#### First Aid Measures

**General advice** If symptoms persist, call a physician. Do not breathe dust/fume/gas/mist/vapors/spray. Do not get in eyes, on skin, or on clothing.

**Eye contact** Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Keep eye wide open while rinsing. If symptoms persist, call a physician.

**Skin Contact** Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Consult a physician if necessary. Wash contaminated clothing before reuse. Wash off immediately with plenty of water. If skin irritation persists, call a physician. Immediate medical attention is not required.

**Inhalation** Remove to fresh air Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation Call a physician If breathing is irregular or stopped, administer artificial respiration Artificial respiration and/or oxygen may be necessary Immediate medical attention is not required Move to fresh air in case of accidental inhalation of vapors If symptoms persist, call a physician

**Ingestion** Do NOT induce vomiting. Drink plenty of water. Rinse mouth. If symptoms persist, call a physician. Clean mouth with water and drink afterwards plenty of water. Never give anything by mouth to an unconscious person. Call a physician.

**Self-protection of the first aider** Use personal protective equipment as required.

#### 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 No information available.



**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 Use personal protective equipment as required. Keep people away from and upwind of spill/leak. Evacuate personnel to safe areas.

**Environmental precautions**

Environmental precautions Do not flush into surface water or sanitary sewer system. Prevent entry into waterways, sewers, basements or confined areas. Prevent further leakage or spillage if safe to do so. Prevent product from entering drains. 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. Cover powder spill with plastic sheet or tarp to minimize spreading. Dike far ahead of liquid spill for later disposal.

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. Soak up with inert absorbent material. Dam up. Pick up and transfer to properly labeled containers. Sweep up and shovel into suitable containers for disposal. After cleaning, flush away traces with water. Take precautionary measures against static discharges.

**7. HANDLING AND STORAGE**

**Precautions for safe handling**

Advice on safe handling Avoid contact with skin, eyes or clothing. Use personal protective equipment as required. Wash contaminated clothing before reuse. Do not breathe dust/fume/gas/mist/vapors/spray. Do not eat, drink or smoke when using this product. Use with local exhaust ventilation.

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

Storage Conditions Keep container tightly closed in a dry and well-ventilated place. Keep out of the reach of children. Keep containers tightly closed in a cool, well-ventilated place. Keep in properly labeled containers. Store at room temperature.

Incompatible materials None known based on information supplied.

**8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

**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   |
|--|--|---|--|
| Silicon dioxide (Quartz)<br>14808-60-7 | TWA: 0.025 mg/m <sup>3</sup> respirable particulate matter | TWA: 50 µg/m <sup>3</sup> TWA: 50 µg/m <sup>3</sup> excludes construction work, | IDLH: 50 mg/m <sup>3</sup> respirable dust<br>TWA: 0.05 mg/m <sup>3</sup> respirable |



|  |  |  |      |
|--|--|--|------|
|  |  | agricultural operations, and exposures that result from the processing of sorptive clays (vacated) TWA: 0.1 mg/m <sup>3</sup> respirable dust<br>: (250)/(%SiO <sub>2</sub> + 5) mppcf TWA respirable fraction<br>: (10)/(%SiO <sub>2</sub> + 2) mg/m <sup>3</sup> TWA respirable fraction | dust |
|--|--|--|------|

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                      Tight sealing safety goggles. Face protection shield.  
 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        When using do not eat, drink or smoke. Regular cleaning of equipment, work area and clothing is recommended. Avoid contact with skin, eyes or clothing. Wash hands thoroughly after handling. Keep away from food, drink and animal feeding stuffs.

**9. PHYSICAL AND CHEMICAL PROPERTIES**

Physical State                                Solid  
 Appearance                                    powder  
 Odor    Odorless

| <u>Property</u>              | <u>Values</u>            |
|------------------------------|--------------------------|
| pH                           | No information available |
| Melting point/freezing point | 1610 °C                  |
| Boiling point                | 2230 °C                  |
| Flash point                  | No information available |
| Liquid Density               | 2.6 g/cm <sup>3</sup>    |
| Evaporation rate             | No information available |
| Upper flammability limits    | No information available |
| Lower flammability limit     | No information available |
| Vapor pressure               | 9.98 mmHg                |
| Vapor density                | No information available |
| Specific gravity             | 2.65                     |
| Water solubility             | No information available |
| Solubility in other solvents | No information available |
| Partition coefficient        | No information available |
| Autoignition temperature     | 370 °C                   |
| 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                                      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 Extremes of temperature and direct sunlight.  
 Incompatible materials Strong oxidizing agents.  
 Hazardous Decomposition Products None known based on information supplied.

**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.

**Delayed and immediate effects as well as chronic effects from short and long-term exposure**

Chronic Toxicity Avoid repeated exposure.  
 Target Organ Effects Eyes, Respiratory system, Lungs.  
 Carcinogenicity The table below indicates whether each agency has listed any ingredient as a carcinogen.

| Chemical name                          | ACGIH | IARC    | NTP   | OSHA |
|--|-------|---------|-------|------|
| Silicon dioxide (Quartz)<br>14808-60-7 | A2    | Group 1 | Known | X    |

*ACGIH (American Conference of Governmental Industrial Hygienists) A2 - Suspected Human Carcinogen*  
*IARC (International Agency for Research on Cancer) Group 1 - Carcinogenic to Humans*  
*NTP (National Toxicology Program) Known - Known Carcinogen*  
*OSHA (Occupational Safety and Health Administration of the US Department of Labor) X - Present*

**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) 500

**12. ECOLOGICAL INFORMATION**

Ecotoxicity May cause long lasting harmful effects to aquatic life  
 100% of the mixture consists of components(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.  
 Other Information Waste codes should be assigned by the user based on the application for which the product was used.



## 14. TRANSPORT INFORMATION

|      |               |
|------|---------------|
| DOT  | Not regulated |
| IMDG | Not regulated |
| IATA | Not regulated |

## 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 |
|--------------------------|------|-----|------|--------|--------|------|-------|------|-------|------|
| Silicon dioxide (Quartz) | 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             | Yes |
| 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 contains the following Proposition 65 chemicals.

| Chemical name                         | California Proposition 65 |
|---------------------------------------|---------------------------|
| Silicon dioxide (Quartz) - 14808-60-7 | Carcinogen                |

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

| Chemical name                          | New Jersey | Massachusetts | Pennsylvania |
|--|------------|---------------|--------------|
| Silicon dioxide (Quartz)<br>14808-60-7 | X          | X             | 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**