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

Product identifier
Product Name: Bafilomycin A1
Product Code: SC-201550

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

2. HAZARDS IDENTIFICATION

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

Classification
Serious eye damage/eye irritation: Category 2A
Specific target organ toxicity (single exposure): Category 3

Label elements
Signal word: Warning
Hazard statements:
- Causes serious eye irritation
- May cause respiratory irritation

Symbols/Pictograms

Precautionary Statements - Prevention
- Wash face, hands and any exposed skin thoroughly after handling
- Wear protective gloves/protective clothing/eye protection/face protection
- Avoid breathing dust/fume/gas/mist/vapors/spray
- Use only outdoors or in a well-ventilated area

Precautionary Statements - Response
- IF exposed or concerned: Get medical advice/attention
- IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
- IF eye irritation persists: Get medical advice/attention
- 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
- Store in a well-ventilated place. Keep container tightly closed

Precautionary Statements - Storage
Precautionary Statements - Disposal
- Dispose of contents/container to an approved waste disposal plant

Hazards not otherwise classified (HNOC)
3. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>CAS No.</th>
<th>Weight-%</th>
<th>Oral LD50</th>
<th>Dermal LD50</th>
<th>Inhalation LC50</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bafilomycin A1</td>
<td>88899-55-2</td>
<td>&gt;98</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

4. FIRST AID MEASURES

First Aid Measures

General advice
If symptoms persist, call a physician.
Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. If symptoms persist, call a physician. 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.

Eye contact
Wash off immediately with plenty of water for at least 15 minutes. If skin irritation persists, call a physician. Wash contaminated clothing before reuse. Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes.

Skin Contact
Remove to fresh air If symptoms persist, call a physician Artificial respiration and/or oxygen may be necessary Call a physician Immediate medical attention is not required. Move to fresh air in case of accidental inhalation of vapors

Inhalation
Immediate medical attention is not required. Rinse mouth. Drink plenty of water. Do NOT induce vomiting. Clean mouth with water and drink afterwards plenty of water. Never give anything by mouth to an unconscious person. Call a physician.

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

5. FIRE-FIGHTING MEASURES

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
No information available.
chemical Hazardous combustion products Carbon oxides.

**Explosion data**

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

**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. Avoid contact with eyes and skin. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.

- **Environmental precautions**: Prevent entry into waterways, sewers, basements or confined areas. Do not flush into surface water or sanitary sewer system. 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. Use personal protective equipment as required. Take up mechanically, placing in appropriate containers for disposal. Clean contaminated surface thoroughly. Cover powder spill with plastic sheet or tarp to minimize spreading and keep powder dry. Avoid creating dust. 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**: Ensure adequate ventilation, especially in confined areas. Use personal protective equipment as required. Use with local exhaust ventilation. Do not breathe dust/fume/gas/mist/vapors/spray.

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

- **Storage Conditions**: Keep container tightly closed. Keep out of the reach of children. Keep containers tightly closed in a cool, well-ventilated place. Keep in properly labeled containers. May form explosive peroxides. Store at -20 °C.

- **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**: 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. Wash contaminated clothing before reuse. Regular cleaning of equipment, work area and clothing is recommended.

9. PHYSICAL AND CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>Property</th>
<th>Values</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Physical State</strong></td>
<td>Solid</td>
</tr>
<tr>
<td><strong>Appearance</strong></td>
<td>powder</td>
</tr>
<tr>
<td><strong>Odor</strong></td>
<td>No information available</td>
</tr>
<tr>
<td><strong>pH</strong></td>
<td>No information available</td>
</tr>
<tr>
<td><strong>Melting point/freezing point</strong></td>
<td>No information available</td>
</tr>
<tr>
<td><strong>Boiling point</strong></td>
<td>710.1 °C</td>
</tr>
<tr>
<td><strong>Flash point</strong></td>
<td>232.2 °C</td>
</tr>
<tr>
<td><strong>Liquid Density</strong></td>
<td>1.1 g/cm³</td>
</tr>
<tr>
<td><strong>Evaporation rate</strong></td>
<td>No information available</td>
</tr>
<tr>
<td><strong>Upper flammability limits</strong></td>
<td>No information available</td>
</tr>
<tr>
<td><strong>Lower flammability limit</strong></td>
<td>No information available</td>
</tr>
<tr>
<td><strong>Vapor pressure</strong></td>
<td>0 mmHg</td>
</tr>
<tr>
<td><strong>Vapor density</strong></td>
<td>No information available</td>
</tr>
<tr>
<td><strong>Specific gravity</strong></td>
<td>No information available</td>
</tr>
<tr>
<td><strong>Water solubility</strong></td>
<td>No information available</td>
</tr>
<tr>
<td><strong>Solubility in other solvents</strong></td>
<td>No information available</td>
</tr>
<tr>
<td><strong>Partition coefficient</strong></td>
<td>No information available</td>
</tr>
<tr>
<td><strong>Autoignition temperature</strong></td>
<td>No information available</td>
</tr>
<tr>
<td><strong>Decomposition temperature</strong></td>
<td>No information available</td>
</tr>
<tr>
<td><strong>Kinematic viscosity</strong></td>
<td>No information available</td>
</tr>
<tr>
<td><strong>Explosive properties</strong></td>
<td>No information available</td>
</tr>
<tr>
<td><strong>Oxidizing properties</strong></td>
<td>No information available</td>
</tr>
</tbody>
</table>

10. STABILITY AND REACTIVITY

<table>
<thead>
<tr>
<th>Reactivity</th>
<th>Not applicable</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Chemical stability</strong></td>
<td>May form explosive peroxides.</td>
</tr>
<tr>
<td><strong>Possibility of Hazardous Reactions</strong></td>
<td>None under normal processing.</td>
</tr>
<tr>
<td><strong>Hazardous polymerization</strong></td>
<td>No information available.</td>
</tr>
<tr>
<td><strong>Conditions to avoid</strong></td>
<td>Extremes of temperature and direct sunlight.</td>
</tr>
<tr>
<td><strong>Incompatible materials</strong></td>
<td>Strong oxidizing agents.</td>
</tr>
<tr>
<td><strong>Hazardous Decomposition Products</strong></td>
<td>Carbon oxides.</td>
</tr>
</tbody>
</table>

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.

Numerical measures of toxicity - Product Information
Unknown acute toxicity  No information available

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
China (IECSC)

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>TSCA</th>
<th>DSL</th>
<th>NDSL</th>
<th>EINECS</th>
<th>ELINCS</th>
<th>ENCS</th>
<th>IECSC</th>
<th>KECL</th>
<th>PICCS</th>
<th>AICS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bafilomycin A1</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>X</td>
<td>-</td>
<td>-</td>
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</tr>
</tbody>
</table>
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

<table>
<thead>
<tr>
<th>Hazard Category</th>
<th>Yes/No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute health hazard</td>
<td>Yes</td>
</tr>
<tr>
<td>Chronic Health Hazard</td>
<td>No</td>
</tr>
<tr>
<td>Fire hazard</td>
<td>No</td>
</tr>
<tr>
<td>Sudden release of pressure hazard</td>
<td>No</td>
</tr>
<tr>
<td>Reactive hazard</td>
<td>No</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Revision note</th>
<th>No information available</th>
</tr>
</thead>
</table>

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.