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

Product identifier
Product Name: Bisabolene, mixture of isomers
Product Code: SC-278789

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 not considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.122).

Classification
Not a dangerous substance or mixture according to the Globally Harmonized System (GHS)

Label elements
Signal word: Not classified
Hazard statements
Symbols/Pictograms: Not classified
Precautionary Statements - Prevention: Wash hands thoroughly after handling
Precautionary Statements - Response: IF exposed or concerned: Get medical advice/attention

Hazard statements
Health hazards: 0
Flammability: 1
Stability: 0
Physical and chemical properties: -

Other Information
NFPA - Health hazards: 0
Flammability: 1
Stability: 0
Physical and chemical properties: -
HMIS - Health hazards: 0
Flammability: 1
Physical hazards: 0
Personal protection: -

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>
</table>

Santa Cruz Biotechnology, Inc. www.scbt.com
4. FIRST AID MEASURES

**First Aid Measures**

**General advice**
If symptoms persist, call a physician.

**Eye contact**
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.

**Skin 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. Immediate medical attention is not required. Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes.

**Inhalation**
Remove to fresh air. If symptoms persist, call a physician. Immediate medical attention is not required. Move to fresh air in case of accidental inhalation of vapors.

**Ingestion**
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.

**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**
None.

**Specific hazards arising from the chemical**

**Specific hazards arising from the chemical**
No information available.

**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**

**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

**Precautions for safe handling**

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

**Precautions for safe handling**

Prevent further leakage or spillage if safe to do so.  
Soak up with inert absorbent material. Pick up and transfer to properly labeled containers. After cleaning, flush away traces with water. Prevent product from entering drains. Dam up.

## 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**


**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

### Physical State

**Appearance**

No information available

**Odor**

No information available

### Property

**pH**

No information available

**Values**

No information available
Melting point/freezing point 16.49 °C
Boiling point 280.8 °C
Flash point 112.4 °C
Density 0.89 g/mL
Evaporation rate No information available
Upper flammability limits No information available
Lower flammability limit No information available
Vapor pressure 0.0
Vapor density No information available
Specific gravity No information available
Water solubility No information available
Solubility in other solvents No information available
Partition coefficient 7.18
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 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 Carbon oxides.

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

<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>Bisabolene, mixture of isomers</td>
<td>X</td>
<td>X</td>
<td>-</td>
<td>X</td>
<td>-</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>

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
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