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

**Product identifier**
Product Name: Propiconazole
Product Code: SC-250786

**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 4
- Acute toxicity - Inhalation (Dusts/Mists): Category 1
- Skin sensitization: Category 1

**Label elements**
- **Signal word**: Danger
- **Hazard statements**: Harmful if swallowed, May be harmful in contact with skin, Fatal if inhaled, May cause an allergic skin reaction

**Precautionary Statements - Prevention**
- Wash face, hands and any exposed skin thoroughly after handling
- Do not eat, drink or smoke when using this product
- Do not breathe dust/fume/gas/mist/vapors/spray
- Use only outdoors or in a well-ventilated area
- Wear respiratory protection
- Contaminated work clothing should not be allowed out of the workplace
- Wear protective gloves
Precautionary Statements - Response
IF exposed or concerned: Get medical advice/attention
IF ON SKIN: Wash with plenty of soap and water
If skin irritation or rash occurs: Get medical advice/attention
Wash contaminated clothing before reuse
IF INHALED: Remove victim to fresh air and keep at rest in a
position comfortable for breathing
Immediately call a POISON CENTER or doctor/physician
IF SWALLOWED: Call a POISON CENTER or doctor/physician if
you feel unwell
Rinse mouth

Precautionary Statements - Storage
Store in a well-ventilated place. Keep container tightly closed
Store locked up

Precautionary Statements - Disposal
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
Toxic to aquatic life with long lasting effects. Very toxic to aquatic
life.

NFPA
<table>
<thead>
<tr>
<th>Health hazards</th>
<th>Flammability</th>
<th>Stability</th>
<th>Physical and chemical properties</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>1</td>
<td>0</td>
<td>-</td>
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HMIS
<table>
<thead>
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<th>Health hazards</th>
<th>Flammability</th>
<th>Physical hazards</th>
<th>Personal protection</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>1</td>
<td>0</td>
<td>-</td>
</tr>
</tbody>
</table>

3. COMPOSITION/INFORMATION ON INGREDIENTS

CAS No 60207-90-1
Molecular Weight 342.22
Formula C₁₅H₁₇Cl₂N₃O₂

<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>
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</thead>
<tbody>
<tr>
<td>Propiconazole</td>
<td>60207-90-1</td>
<td>&gt;98</td>
<td>= 1517 mg/kg (Rat)</td>
<td>&gt; 6000 mg/kg (Rabbit) &gt; 4 g/kg (Rat)</td>
<td>&gt; 5800 mg/m³ (Rat) 4 h = 1264 mg/m³ (Rat) 4 h</td>
</tr>
</tbody>
</table>

4. FIRST AID MEASURES

First Aid Measures

General advice
Immediate medical attention is required. In case of accident or unwellness, seek medical
advice immediately (show directions for use or safety data sheet if possible).

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. Call a physician
immediately.

Skin Contact
Wash off immediately with plenty of water. Wash off immediately with soap and plenty of
water.

Inhalation
Remove to fresh air Avoid direct contact with skin. Use barrier to give mouth-to-mouth
resuscitation Immediate medical attention is required If not breathing, give artificial
respiration

Ingestion
Do NOT induce vomiting. Drink plenty of water. Never give anything by mouth to an
unconscious person. Call a physician or poison control center immediately.

Self-protection of the first aider
Remove all sources of ignition.

Most important symptoms and effects, both acute and delayed

Symptoms
No information available.
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: In the event of fire and/or explosion do not breathe fumes. May cause sensitization by inhalation and skin contact. Thermal decomposition can lead to release of irritating and toxic gases and vapors. Thermal decomposition can lead to release of toxic/corrosive gases and vapors.


**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: Remove all sources of ignition. Evacuate personnel to safe areas. Ensure adequate ventilation, especially in confined areas. Use personal protective equipment as required.

Environmental precautions: Prevent further leakage or spillage if safe to do so. Prevent product from entering drains. Do not flush into surface water or sanitary sewer system. 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. 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.

7. HANDLING AND STORAGE

**Precautions for safe handling**
Advice on safe handling: Ensure adequate ventilation, especially in confined areas. Keep away from heat, sparks, flame and other sources of ignition (i.e., pilot lights, electric motors and static electricity). Take precautionary measures against static discharges. Use spark-proof tools and explosion-proof equipment. All equipment used when handling the product must be grounded. Corrosive hazard. Wear protective gloves/clothing and eye/face protection.
Thermal decomposition can lead to release of toxic/corrosive gases and vapors. Handle in accordance with good industrial hygiene and safety practice.

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

**Storage Conditions**
- Keep tightly closed in a dry and cool place. Keep in properly labeled containers. Keep containers tightly closed in a cool, well-ventilated place. Store at 4 °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.

**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.

### 9. PHYSICAL AND CHEMICAL PROPERTIES

**Physical State**
- Solid

**Appearance**
- No information available

**Odor**
- No information available

**Property**

<table>
<thead>
<tr>
<th>Property</th>
<th>Values</th>
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<tr>
<td>Melting point/freezing point</td>
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<tr>
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<td>Flash point</td>
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<td>Liquid Density</td>
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<td>Kinematic viscosity</td>
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<td>Explosive properties</td>
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<tr>
<td>Oxidizing properties</td>
<td>No information available</td>
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</tbody>
</table>
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
Heat, flames and sparks.

Incompatible materials
Strong oxidizing agents.

Hazardous Decomposition Products

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
Repeated contact may cause allergic reactions in very susceptible persons. Avoid repeated exposure.

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

<table>
<thead>
<tr>
<th>Type</th>
<th>Value</th>
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<tr>
<td>ATEmix (dermal)</td>
<td>4000 mg/kg</td>
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<td>ATEmix (inhalation-dust/mist)</td>
<td>0 mg/l</td>
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<tr>
<td>ATEmix (inhalation-vapor)</td>
<td>1264</td>
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</table>

12. ECOLOGICAL INFORMATION

Ecotoxicity
Toxic to aquatic life with long lasting effects

0% 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
14. TRANSPORT INFORMATION

**DOT**
- UN/ID no: UN3082
- Hazard Class: 9
- Packing Group: III
- Proper shipping name: Environmentally hazardous substance, liquid, n.o.s.
- Description: UN3082, Environmentally hazardous substance, liquid, n.o.s. (Propiconazole), 9, III, Marine pollutant
- Emergency Response Guide Number: 171

**IMDG**
- UN/ID no: UN3082
- Hazard Class: 9
- Packing Group: III
- Proper shipping name: Environmentally hazardous substance, liquid, n.o.s.
- Description: UN3082, Environmentally hazardous substance, liquid, n.o.s. (Propiconazole), 9, III, Marine pollutant
- Special Provisions: 274, 335, 969
- EmS-No: F-A, S-F

**IATA**
- UN/ID no: UN3082
- Hazard Class: 9
- Packing Group: III
- Proper shipping name: Environmentally hazardous substance, liquid, n.o.s.
- Description: UN3082, Environmentally hazardous substance, liquid, n.o.s. (Propiconazole), 9, III
- ERG Code: 9L

15. REGULATORY INFORMATION

**International Inventories**
All of the components in the product are on the following Inventory lists
- Europe (EINECS/ELINCS/NLP)
- Australia (AICS)
- 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>
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<td>Propiconazole</td>
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<td>-</td>
<td>X</td>
<td>-</td>
<td>-</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

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>New Jersey</th>
<th>Massachusetts</th>
<th>Pennsylvania</th>
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</thead>
<tbody>
<tr>
<td>Propiconazole</td>
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<td>Not Listed</td>
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<tr>
<td>60207-90-1</td>
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</tbody>
</table>

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