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

Product identifier
Product Name 2-Methyl-3-buten-2-ol
Product Code SC-256190

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
Skin corrosion/irritation Category 2
Serious eye damage/eye irritation Category 2A
Specific target organ toxicity (single exposure) Category 3
Flammable liquids Category 2

Label elements
Signal word Danger
Hazard statements Harmful if swallowed
Causes skin irritation
Causes serious eye irritation
May cause respiratory irritation
Highly flammable liquid and vapor

Symbols/Pictograms
Precautionary Statements - Prevention
Wash face, hands and any exposed skin thoroughly after handling.
Do not eat, drink or smoke when using this product.
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.
Keep away from heat/sparks/open flames/hot surfaces. — No smoking.
Keep container tightly closed.
Ground/bond container and receiving equipment.
Use only non-sparking tools.
Take precautionary measures against static discharge.
Keep cool.

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

<table>
<thead>
<tr>
<th>NFPA</th>
<th>HMSC</th>
<th>( R_{\text{flam}} )</th>
<th>( R_{\text{st}} )</th>
<th>( R_{\text{ch}} )</th>
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<tbody>
<tr>
<td>Health hazards</td>
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<td>3</td>
<td>3</td>
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<tr>
<td>Flammability</td>
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<td></td>
<td></td>
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</tr>
<tr>
<td>Stability</td>
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<td></td>
<td></td>
<td></td>
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<tr>
<td>Physical and chemical properties</td>
<td>-</td>
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<td></td>
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</table>

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>
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<tbody>
<tr>
<td>2-Methyl-3-buten-2-ol</td>
<td>115-18-4</td>
<td>&gt;98</td>
<td>( 1800 , \text{mg/kg (Rat)} )</td>
<td>-</td>
<td>( &gt;21.2 , \text{mg/L (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. If symptoms persist, call a physician.

Skin Contact
Wash off immediately with plenty of water.

Inhalation
Remove to fresh air. Call a physician. If breathing is irregular or stopped, administer artificial respiration. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation.

Ingestion
Rinse mouth. Drink plenty of water. If symptoms persist, call a physician. Do NOT induce vomiting.

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

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
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
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.

Environmental precautions
Environmental precautions
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.

Methods for cleaning up
Pick up and transfer to properly labeled containers. Dam up. Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).
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.

Conditions for safe storage, including any incompatibilities
Storage Conditions
Keep tightly closed in a dry and cool place. Keep in properly labeled containers. Store at 4 °C.
Incompatible materials
None known based on information supplied.

8. EXPOSURE CONTROLS/PERSOINAL 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
liquid
Appearance
No information available
Odor
No information available

Property
Values
pH
9-10 at 100 g/L at 20 °C
Melting point/freezing point
-25.99 °C
Boiling point
98 °C
Flash point
11 °C
Density
0.82 g/mL
Evaporation rate
No information available
Upper flammability limits
9.4%
Lower flammability limit
No information available
Vapor pressure
19
Vapor density
No information available
Specific gravity
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: Heat, flames and sparks.
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: No information available.

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): 1800 mg/kg
  - ATEmix (inhalation-vapor): 21.2 mg/l

12. ECOLOGICAL INFORMATION

Ecotoxicity: May cause long lasting harmful effects to aquatic life.

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Algae/aquatic plants</th>
<th>Fish</th>
<th>Toxicity to Microorganisms</th>
<th>Crustacea</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-Methyl-3-buten-2-ol 115-18-4</td>
<td>500: 96 h Desmodesmus subspicatus mg/L EC50 500: 72 h Desmodesmus subspicatus mg/L EC50</td>
<td>-</td>
<td>-</td>
<td>500: 48 h Daphnia magna mg/L EC50</td>
</tr>
</tbody>
</table>

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 was used.

### 14. TRANSPORT INFORMATION

**DOT**
- **UN/ID no**: UN1987
- **Hazard Class**: 3
- **Packing Group**: II
- **Proper shipping name**: Alcohols, n.o.s.
- **Description**: UN1987, Alcohols, n.o.s., 3, II
- **Emergency Response Guide Number**: 127

**IMDG**
- **UN/ID no**: UN1987
- **Hazard Class**: 3
- **Packing Group**: II
- **Proper shipping name**: Alcohols, n.o.s.
- **Description**: UN1987, Alcohols, n.o.s., 3, II, (11°C c.c.)
- **Special Provisions**: 274
- **EmS-No**: F-E, S-D

**IATA**
- **UN/ID no**: UN1987
- **Hazard Class**: 3
- **Packing Group**: II
- **Proper shipping name**: Alcohols, n.o.s.
- **Description**: UN1987, Alcohols, n.o.s., 3, II

### 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>
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<tbody>
<tr>
<td>2-Methyl-3-buten-2-ol</td>
<td>X</td>
<td>X</td>
<td>-</td>
<td>X</td>
<td>-</td>
<td>X</td>
<td>X</td>
<td>X</td>
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<td>X</td>
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</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

Santa Cruz Biotechnology, Inc. www.scbt.com
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

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

| 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