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

Product identifier
Product Name: 1,3-Cyclohexadiene
Product Code: SC-237712

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
Flammable liquids

Label elements
Signal word: Danger
Hazard statements: Highly flammable liquid and vapor

Symbols/Pictograms

Precautionary Statements - Prevention
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
Wear protective gloves/protective clothing/eye protection/face protection

Precautionary Statements - Response
IF exposed or concerned: Get medical advice/attention
IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower
In case of fire: Use CO2, dry chemical, or foam for extinction
Store in a well-ventilated place. Keep cool

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

Hazards not otherwise classified (HNOC)
Not applicable

Other Information
Unknown acute toxicity
100% of the mixture consists of ingredient(s) of unknown toxicity.
NFPA Health hazards 1  
Flammability 3  
Stability 0  
Physical and chemical properties  

HMIS Health hazards 0  
Flammability 3  
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>
<tbody>
<tr>
<td>1,3-Cyclohexadiene</td>
<td>592-57-4</td>
<td>&gt;98</td>
<td>-</td>
<td>-</td>
<td>-</td>
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</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**
Wash with plenty of water.

**Skin Contact**
Wash off immediately with plenty of water.

**Inhalation**
Remove to fresh air If breathing is difficult, give oxygen If not breathing, give artificial respiration

**Ingestion**
Never give anything by mouth to an unconscious person. Clean mouth with water.

**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**
No information available.

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

7. HANDLING AND STORAGE

Precautions for safe handling
Advice on safe handling
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/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
Wear safety glasses with side shields (or 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

<table>
<thead>
<tr>
<th>Property</th>
<th>Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>pH</td>
<td>No information available</td>
</tr>
<tr>
<td>Melting point/freezing point</td>
<td>No information available</td>
</tr>
<tr>
<td>Boiling point</td>
<td>80 °C</td>
</tr>
<tr>
<td>Flash point</td>
<td>-8 °C CC (closed cup)</td>
</tr>
<tr>
<td>Liquid Density</td>
<td>0.84 g/mL</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>No information available</td>
</tr>
<tr>
<td>Upper flammability limits</td>
<td>No information available</td>
</tr>
<tr>
<td>Lower flammability limit</td>
<td>No information available</td>
</tr>
<tr>
<td>Vapor pressure</td>
<td>No information available</td>
</tr>
<tr>
<td>Vapor density</td>
<td>No information available</td>
</tr>
<tr>
<td>Specific gravity</td>
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</tr>
<tr>
<td>Water solubility</td>
<td>No information available</td>
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<tr>
<td>Solubility in other solvents</td>
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</tr>
<tr>
<td>Partition coefficient</td>
<td>No information available</td>
</tr>
<tr>
<td>Autoignition temperature</td>
<td>No information available</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>No information available</td>
</tr>
<tr>
<td>Kinematic viscosity</td>
<td>No information available</td>
</tr>
<tr>
<td>Explosive properties</td>
<td>No information available</td>
</tr>
<tr>
<td>Oxidizing properties</td>
<td>No information available</td>
</tr>
</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: 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: 100% of the mixture consists of ingredient(s) of unknown toxicity
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.

14. TRANSPORT INFORMATION

DOT
UN/ID no: UN3295
Hazard Class: 3
Packing Group: II
Proper shipping name: Hydrocarbons, liquid, n.o.s.
Description: UN3295, Hydrocarbons, liquid, n.o.s., 3, II
Emergency Response Guide Number: 128

IMDG
UN/ID no: UN3295
Hazard Class: 3
Packing Group: II
Proper shipping name: Hydrocarbons, liquid, n.o.s.
Description: UN3295, Hydrocarbons, liquid, n.o.s., 3, II, (-8°C c.c.)
EmS-No: F-E, S-D

IATA
UN/ID no: UN3295
Hazard Class: 3
Packing Group: II
Proper shipping name: Hydrocarbons, liquid, n.o.s.
Description: UN3295, Hydrocarbons, liquid, n.o.s., 3, II
ERG Code: 3H

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): ENCS (Japan):

<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>1,3-Cyclohexadiene</td>
<td>X</td>
<td>-</td>
<td>X</td>
<td>X</td>
<td>-</td>
<td>X</td>
<td>-</td>
<td>X</td>
<td>-</td>
<td>X</td>
</tr>
</tbody>
</table>

X - Listed
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 No
Chronic Health Hazard No
Fire hazard Yes
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