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

Product identifier
Product Name: Hexanoic acid
Product Code: SC-215146

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
- Acute toxicity - Oral: Category 4
- Acute toxicity - Dermal: Category 3
- Acute toxicity - Inhalation (Dusts/Mists): Category 4
- Skin corrosion/irritation: Category 1 Sub-category B
- Serious eye damage/eye irritation: Category 1

Label elements
Signal word: Danger
Hazard statements:
- Toxic in contact with skin
- Causes severe skin burns and eye damage
- Harmful if inhaled
- Harmful if swallowed

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
- Use only outdoors or in a well-ventilated area
- Do not breathe dust/fume/gas/mist/vapors/spray
Precautionary Statements - Response

Immediately call a POISON CENTER or doctor/physician
IF IN EYES: Rinse cautiously with water for several minutes.
Remove contact lenses, if present and easy to do. Continue rinsing
Immediately call a POISON CENTER or doctor/physician
Call a POISON CENTER or doctor/physician if you feel unwell
Wash contaminated clothing before reuse
IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower
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
Immediately call a POISON CENTER or doctor/physician
IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell
Rinse mouth
Do NOT induce vomiting
Consult a physician if necessary. Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes.
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
Rinse mouth. Drink plenty of water. If symptoms persist, call a physician. Do NOT induce

Precautionary Statements - Storage
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
Harmful to aquatic life with long lasting effects. Harmful to aquatic life.

NFPA  Health hazards  3  Flammability  1  Stability  0  Physical and chemical properties
HMIS  Health hazards  3  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>
<tbody>
<tr>
<td>Hexanoic acid</td>
<td>142-62-1</td>
<td>&gt;98</td>
<td>3 g/kg (Rat) = 2050 µL/kg (Rat)</td>
<td>630 mg/kg (Rabbit) = 630 µL/kg (Rabbit)</td>
<td>-</td>
</tr>
</tbody>
</table>

4. FIRST AID MEASURES

First Aid Measures

General advice
If symptoms persist, call a physician. Do not breathe dust/fume/gas/mist/vapors/spray. Do not get in eyes, on skin, or on clothing.

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
Consult a physician if necessary. Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes.

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
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**
  - 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 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**
  - Ensure adequate ventilation, especially in confined areas.

**Environmental precautions**
- **Environmental precautions**
  - Prevent entry into waterways, sewers, basements or confined areas. 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.
- **Methods for cleaning up**
  - Cover liquid spill with sand, earth or other non-combustible absorbent material. Use personal protective equipment as required. Dam up. Take up mechanically, placing in appropriate containers for disposal. Clean contaminated surface thoroughly.

7. HANDLING AND STORAGE

**Precautions for safe handling**
- **Advice on safe handling**
  - Avoid contact with skin, eyes or clothing. Use personal protective equipment as required.
  - Wash contaminated clothing before reuse. Do not breathe dust/fume/gas/mist/vapors/spray.
  - Do not eat, drink or smoke when using this product. Noxious vapor/odor. Ensure adequate ventilation, especially in confined areas.
Conditions for safe storage, including any incompatibilities
Storage Conditions: Keep container tightly closed in a dry and well-ventilated place. Keep out of the reach of children. Store at room temperature.
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: Ensure adequate ventilation, especially in confined areas.

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: Handle in accordance with good industrial hygiene and safety practice.

9. PHYSICAL AND CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>Property</th>
<th>Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical State</td>
<td>liquid</td>
</tr>
<tr>
<td>Appearance</td>
<td>No information available</td>
</tr>
<tr>
<td>Odor</td>
<td>No information available</td>
</tr>
<tr>
<td>pH</td>
<td>No information available</td>
</tr>
<tr>
<td>Melting point/freezing point</td>
<td>-4 °C</td>
</tr>
<tr>
<td>Boiling point</td>
<td>202 °C</td>
</tr>
<tr>
<td>Flash point</td>
<td>102 °C CC (closed cup)</td>
</tr>
<tr>
<td>Liquid Density</td>
<td>0.927 g/mL</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>No information available</td>
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<tr>
<td>Upper flammability limits</td>
<td>10%</td>
</tr>
<tr>
<td>Lower flammability limit</td>
<td>2%</td>
</tr>
<tr>
<td>Vapor pressure</td>
<td>1 mmHg</td>
</tr>
<tr>
<td>Vapor density</td>
<td>4.01</td>
</tr>
<tr>
<td>Specific gravity</td>
<td>No information available</td>
</tr>
<tr>
<td>Water solubility</td>
<td>No information available</td>
</tr>
<tr>
<td>Solubility in other solvents</td>
<td>No information available</td>
</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
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): 500 mg/kg
  - ATEmix (dermal): 628 mg/kg
  - ATEmix (inhalation-dust/mist): 1.5 mg/l

12. ECOLOGICAL INFORMATION

Ecotoxicity
- Harmful to aquatic life with long lasting effects

<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>Hexanoic acid</td>
<td>-</td>
<td>88: 96 h Pimephales promelas mg/L LC50 static 306 - 334: 96 h Pimephales promelas mg/L LC50 flow-through</td>
<td>-</td>
<td>22: 24 h water flea 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.

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>Partition coefficient</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hexanoic acid</td>
<td>1.92</td>
</tr>
</tbody>
</table>

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.
US EPA Waste Number: D002

14. TRANSPORT INFORMATION

DOT
UN/ID no: UN2829
Hazard Class: 8
Packing Group: III
Proper shipping name: Caproic acid
Description: UN2829, Caproic acid, 8, III
Emergency Response Guide Number: 153

IMDG
UN/ID no: UN2829
Hazard Class: 8
Packing Group: III
Proper shipping name: Caproic acid
Description: UN2829, Caproic acid, 8, III
EmS-No: F-A, S-B

IATA
UN/ID no: UN2829
Hazard Class: 8
Packing Group: III
Proper shipping name: Caproic acid
Description: UN2829, Caproic acid, 8, III
ERG Code: 8L

15. REGULATORY INFORMATION

International Inventories
All of the components in the product are on the following Inventory lists:
- TSCA (United States)
- DSL/NDSL (Canada)
- EINECS/ELINCS/NLP (Europe)
- AICS (Australia)
- KECL (South Korea)
- IECSC (China)
- ENCS (Japan)
- PICCS (Philippines)

<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>Hexanoic acid</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.
SC-215146 - Hexanoic acid

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>
</tr>
</thead>
<tbody>
<tr>
<td>Hexanoic acid</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>142-62-1</td>
<td></td>
<td></td>
<td></td>
</tr>
</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