Material Safety Data Sheet

Butacaine

sc-234227

Hazard Alert Code Key: EXTREME | HIGH | MODERATE | LOW

Section 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME
Butacaine

STATEMENT OF HAZARDOUS NATURE

NFPA

SUPPLIER
Santa Cruz Biotechnology, Inc.
2145 Delaware Avenue
Santa Cruz, California 95060
800.457.3801 or 831.457.3800

EMERGENCY
ChemWatch
Within the US & Canada: 877-715-9305
Outside the US & Canada: +800 2436 2255
(1-800-CHEMCALL) or call +613 9573 3112

SYNONYMS
C18-H30-N2-O2, H2NC6H4CO2(CH2)3N[(CH2)3CH3]2, 3-(p-aminobenzoxy)-1-di-N-butylaminopropane, p-aminobenzoxy/dibutylaminopropanol, "1-propanol, 3-(dibutylamino) p-aminobenzoate (ester)", "3-(dibutylamino)-1-propanol p-aminobenzoate", "3-dibutylaminopropyl p-aminobenzoate", Butyn, "local ester anaesthetic/ anesthetic"

Section 2 - HAZARDS IDENTIFICATION

CHEMWATCH HAZARD RATINGS

<table>
<thead>
<tr>
<th>Hazard Type</th>
<th>Min</th>
<th>Max</th>
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<tbody>
<tr>
<td>Flammability</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Toxicty</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Body Contact</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Reactivity</td>
<td>1</td>
<td></td>
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<tr>
<td>Chronic</td>
<td>2</td>
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</table>

1 of 9
EMERGENCY OVERVIEW
RISK
Harmful if swallowed.
May cause SENSITIZATION by skin contact.
Very toxic to aquatic organisms.

POTENTIAL HEALTH EFFECTS
ACUTE HEALTH EFFECTS

SWALLOWED
- Accidental ingestion of the material may be harmful; animal experiments indicate that ingestion of less than 150 gram may be fatal or may produce serious damage to the health of the individual.
- Systemic toxicity due to local anesthetics may be manifested by yawning, restlessness, excitement, ringing sound in the ear, nausea and vomiting. Early warning signs are numbness of the tongue and around the mouth region.

EYE
- There is some evidence to suggest that this material can cause eye irritation and damage in some persons.
- Direct eye contact with local anesthetics may reduce sensation in the eyes and increase the risk of injury due to foreign bodies. There may be drying of the cornea, a burning sensation, excessive tears, sensitivity to light, swelling and redness of the conjunctiva and increased blinking.

SKIN
- Skin contact with the material may damage the health of the individual; systemic effects may result following absorption.
- There is some evidence to suggest that this material can cause inflammation of the skin on contact in some persons.
- When applied to the skin, local anesthetics can cause burning, stinging, tenderness, redness, sloughing, blisters and tissue death. There may be skin eruptions caused by simultaneous exposure to light.
- Open cuts, abraded or irritated skin should not be exposed to this material.
- Entry into the blood-stream, through, for example, cuts, abrasions or lesions, may produce systemic injury with harmful effects. Examine the skin prior to the use of the material and ensure that any external damage is suitably protected.

INHALED
- Inhalation of vapors, aerosols (mists, fumes) or dusts, generated by the material during the course of normal handling, may be damaging to the health of the individual.
- There is some evidence to suggest that the material can cause respiratory irritation in some persons. The body's response to such irritation can cause further lung damage.
- Inhalation of local anesthetics may result in upper respiratory tract effects including burning sensation, stinging, tenderness, swelling, sloughing, tissue necrosis and irritation. Systemic poisoning is characterized by lightheadedness, nervousness, apprehension, euphoria, confusion, dizziness, drowsiness, tinnitus, blurred or double vision, vomiting and sensations of heat, cold or numbness, twitching, tremors, convulsions, unconsciousness and respiratory depression and arrest.
- Persons with impaired respiratory function, airway diseases and conditions such as emphysema or chronic bronchitis, may incur further disability if excessive concentrations of particulate are inhaled.

CHRONIC HEALTH EFFECTS
- Skin contact with the material is more likely to cause a sensitization reaction in some persons compared to the general population.
Limited evidence suggests that repeated or long-term occupational exposure may produce cumulative health effects involving organs or biochemical systems.
Repeated or prolonged exposure with local anesthetics may result in sensitization of skin, with the development of lesions, hives and edema. There may be anaphylactic reactions that may cause death.
Long term exposure to high dust concentrations may cause changes in lung function i.e. pneumoconiosis; caused by particles less than 0.5 micron penetrating and remaining in the lung.

### Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>NAME</th>
<th>CAS RN</th>
<th>%</th>
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</thead>
<tbody>
<tr>
<td>butacaine</td>
<td>149-16-6</td>
<td>&gt;98</td>
</tr>
</tbody>
</table>

### Section 4 - FIRST AID MEASURES

**SWALLOWED**
- IF SWALLOWED, REFER FOR MEDICAL ATTENTION, WHERE POSSIBLE, WITHOUT DELAY.
- Where Medical attention is not immediately available or where the patient is more than 15 minutes from a hospital or unless instructed otherwise

**EYE**
If this product comes in contact with the eyes
- Wash out immediately with fresh running water.
- Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids.

**SKIN**
If skin contact occurs
- Immediately remove all contaminated clothing, including footwear
- Flush skin and hair with running water (and soap if available).

**INHALED**
- If fumes or combustion products are inhaled remove from contaminated area.
- Lay patient down. Keep warm and rested.

**NOTES TO PHYSICIAN**
- When systemic reaction to local anesthetic occurs, steps should be taken to maintain circulation and respiration and control convulsions. Airway should be established and oxygen given together with assisted ventilation if necessary.

### Section 5 - FIRE FIGHTING MEASURES

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
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</thead>
<tbody>
<tr>
<td>Vapour Pressure (mmHG)</td>
<td>Negligible</td>
</tr>
<tr>
<td>Upper Explosive Limit (%)</td>
<td>Not available</td>
</tr>
<tr>
<td>Specific Gravity (water=1)</td>
<td>Not available</td>
</tr>
<tr>
<td>Lower Explosive Limit (%)</td>
<td>Not available</td>
</tr>
</tbody>
</table>

**EXTINGUISHING MEDIA**
- Foam.
- Dry chemical powder.

**FIRE FIGHTING**
- Alert Emergency Responders and tell them location and nature of hazard.
- Wear full body protective clothing with breathing apparatus.
When any large container (including road and rail tankers) is involved in a fire, consider evacuation by 800 metres in all directions.

**GENERAL FIRE HAZARDS/HAZARDOUS COMBUSTIBLE PRODUCTS**
- Combustible solid which burns but propagates flame with difficulty.
- Avoid generating dust, particularly clouds of dust in a confined or unventilated space as dusts may form an explosive mixture with air, and any source of ignition, i.e. flame or spark, will cause fire or explosion. Dust clouds generated by the fine grinding of the solid are a particular hazard; accumulations of fine dust may burn rapidly and fiercely if ignited.
Combustion products include carbon monoxide (CO), carbon dioxide (CO2), nitrogen oxides (NOx), other pyrolysis products typical of burning organic material. May emit poisonous fumes.

FIRE INCOMPATIBILITY
Avoid contamination with oxidizing agents i.e. nitrates, oxidizing acids, chlorine bleaches, pool chlorine etc. as ignition may result.

**Section 6 - ACCIDENTAL RELEASE MEASURES**

**MINOR SPILLS**
- Clean up waste regularly and abnormal spills immediately.
- Avoid breathing dust and contact with skin and eyes.
- Wear protective clothing, gloves, safety glasses and dust respirator.
- Use dry clean up procedures and avoid generating dust.
- Vacuum up or sweep up. NOTE Vacuum cleaner must be fitted with an exhaust micro filter (HEPA type) (consider explosion-proof machines designed to be grounded during storage and use).
- Dampen with water to prevent dusting before sweeping.
- Place in suitable containers for disposal.

**MAJOR SPILLS**
- Clear area of personnel and move upwind.
- Alert Emergency Responders and tell them location and nature of hazard.

**Section 7 - HANDLING AND STORAGE**

**PROCEDURE FOR HANDLING**
- Avoid all personal contact, including inhalation.
- Wear protective clothing when risk of exposure occurs.

Empty containers may contain residual dust which has the potential to accumulate following settling. Such dusts may explode in the presence of an appropriate ignition source.
- Do NOT cut, drill, grind or weld such containers.
- In addition ensure such activity is not performed near full, partially empty or empty containers without appropriate workplace safety authorisation or permit.

**RECOMMENDED STORAGE METHODS**
Glass container.
- Lined metal can, Lined metal pail/drum
- Plastic pail

For low viscosity materials
- Drums and jerricans must be of the non-removable head type.
- Where a can is to be used as an inner package, the can must have a screwed enclosure.

**STORAGE REQUIREMENTS**
- Store in original containers.
- Keep containers securely sealed.

**Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION**

**EXPOSURE CONTROLS**
The following materials had no OELs on our records
- butacaine CAS149-16-6

**PERSONAL PROTECTION**
RESPIRATOR
• Particulate. (AS/NZS 1716 & 1715, EN 1432000 & 1492001, ANSI Z88 or national equivalent)

EYE
For laboratory, larger scale or bulk handling or where regular exposure in an occupational setting occurs
• Chemical goggles
• Face shield. Full face shield may be required for supplementary but never for primary protection of eyes
• Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants. A written policy document, describing the wearing of lens or restrictions on use, should be created for each workplace or task. This should include a review of lens absorption and adsorption for the class of chemicals in use and an account of injury experience. Medical and first-aid personnel should be trained in their removal and suitable equipment should be readily available. In the event of chemical exposure, begin eye irrigation immediately and remove contact lens as soon as practicable. Lens should be removed at the first signs of eye redness or irritation - lens should be removed in a clean environment only after workers have washed hands thoroughly.
[CDC NIOSH Current Intelligence Bulletin 59], [AS/NZS 1336 or national equivalent]

HANDS/FEET
NOTE  The  material  may  produce  skin  sensitization  in  predisposed  individuals.  Care  must  be  taken, when removing gloves and other protective equipment, to avoid all possible skin contact.
Suitability and durability of glove type is dependent on usage. Important factors in the selection of gloves include
• frequency and duration of contact,
• chemical resistance of glove material,
• glove thickness and
dexterity
Select gloves tested to a relevant standard (e.g. Europe EN 374, US F739, AS/NZS 2161.1 or national equivalent).
• When prolonged or frequently repeated contact may occur, a glove with a protection class of 5 or higher (breakthrough time greater than 240 minutes according to EN 374, AS/NZS 2161.10.1 or national equivalent) is recommended.
• When only brief contact is expected, a glove with a protection class of 3 or higher (breakthrough time greater than 60 minutes according to EN 374, AS/NZS 2161.10.1 or national equivalent) is recommended.
• Contaminated gloves should be replaced.
Gloves must only be worn on clean hands. After using gloves, hands should be washed and dried thoroughly. Application of a non-perfumed moisturiser is recommended.
• Rubber gloves (nitrile or low-protein, powder-free latex). Employees allergic to latex gloves should use nitrile gloves in preference.
• Double gloving should be considered.
• PVC gloves.
• Protective shoe covers. [AS/NZS 2210]
• Head covering.

OTHER
• For quantities up to 500 grams a laboratory coat may be suitable.
• For quantities up to 1 kilogram a disposable laboratory coat or coverall of low permeability is recommended. Coveralls should be buttoned at collar and cuffs.
• For quantities over 1 kilogram and manufacturing operations, wear disposable coverall of low permeability and disposable shoe covers.
• For manufacturing operations, air-supplied full body suits may be required for the provision of advanced respiratory protection.
• Eye wash unit.
• Ensure there is ready access to an emergency shower.
• For Emergencies Vinyl suit

ENGINEERING CONTROLS
Enclosed local exhaust ventilation is required at points of dust, fume or vapor generation.
HEPA terminated local exhaust ventilation should be considered at point of generation of dust, fumes or vapors.

<table>
<thead>
<tr>
<th>Section 9 - PHYSICAL AND CHEMICAL PROPERTIES</th>
</tr>
</thead>
</table>

PHYSICAL PROPERTIES
Solid.
Does not mix with water.

<table>
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<tr>
<th>State</th>
<th>Divided solid</th>
<th>Molecular Weight</th>
<th>306.44</th>
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<tr>
<td>Melting Range (°F)</td>
<td>100~</td>
<td>Viscosity</td>
<td>Not Available</td>
</tr>
<tr>
<td>Boiling Range (°F)</td>
<td>352- 360 (0.11mm)</td>
<td>Solubility in water (g/L)</td>
<td>Partly miscible</td>
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<tr>
<td>Flash Point (°F)</td>
<td>Not available</td>
<td>pH (1% solution)</td>
<td>Not applicable</td>
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<tr>
<td>Decomposition Temp (°F)</td>
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<td>Vapour Pressure (mmHG)</td>
<td>Negligible</td>
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<td>Autoignition Temp (°F)</td>
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<td>Specific Gravity (water=1)</td>
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</tr>
<tr>
<td>Upper Explosive Limit (%)</td>
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<td>Relative Vapor Density (air=1)</td>
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</tr>
<tr>
<td>Lower Explosive Limit (%)</td>
<td>Not available</td>
<td>Evaporation Rate</td>
<td>Not applicable</td>
</tr>
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</table>

APPEARANCE
The commercial grade is a crystalline solid, whilst the pure substance occurs as a liquid; does not mix with water.

<table>
<thead>
<tr>
<th>Section 10 - CHEMICAL STABILITY</th>
</tr>
</thead>
</table>

CONDITIONS CONTRIBUTING TO INSTABILITY
• Presence of incompatible materials.
• Product is considered stable.

STORAGE INCOMPATIBILITY
• Avoid strong acids, bases.
Avoid reaction with oxidizing agents.
For incompatible materials - refer to Section 7 - Handling and Storage.

<table>
<thead>
<tr>
<th>Section 11 - TOXICOLOGICAL INFORMATION</th>
</tr>
</thead>
</table>

butacaine

TOXICITY AND IRRITATION

BUTACAINE
unless otherwise specified data extracted from RTECS - Register of Toxic Effects of Chemical Substances.

TOXICITY

| Subcutaneous (Dog) LD 55 mg/kg |
| Subcutaneous (Cat) LD 30 mg/kg |
| Intravenous (Cat) LD 15 mg/kg |
| Subcutaneous (Rabbit) LD 50 mg/kg |
| Intravenous (Rabbit) LD 12 mg/kg |
| Subcutaneous (Rat) LD 150 mg/kg |
| Intravenous (Rat) LD 7.5 mg/kg |
Subcutaneous (Mouse) LD 50 mg/kg
Intravenous (Mouse) LD 12 mg/kg
Subcutaneous (Guinea pig) LD 45 mg/kg

Contact allergies quickly manifest themselves as contact eczema, more rarely as urticaria or Quincke's edema. The pathogenesis of contact eczema involves a cell-mediated (T lymphocytes) immune reaction of the delayed type. No significant acute toxicological data identified in literature search. Flaccid paralysis, convulsions, change in motor activity, respiratory stimulation, respiratory tract changes recorded.

**CARCINOGEN**

**butacaine** International Agency for Research on Cancer (IARC) - Agents Reviewed by the IARC Monographs Group 3

**Section 12 - ECOLOGICAL INFORMATION**

Very toxic to aquatic organisms. This material and its container must be disposed of as hazardous waste. Avoid release to the environment. Refer to special instructions/ safety data sheets.

**Section 13 - DISPOSAL CONSIDERATIONS**

**Disposal Instructions**

- All waste must be handled in accordance with local, state and federal regulations.
- Puncture containers to prevent re-use and bury at an authorized landfill.
- Legislation addressing waste disposal requirements may differ by country, state and/ or territory. Each user must refer to laws operating in their area. In some areas, certain wastes must be tracked.
- A Hierarchy of Controls seems to be common - the user should investigate:
  - Reduction
  - Reuse
  - Recycling
  - Disposal (if all else fails)

This material may be recycled if unused, or if it has not been contaminated so as to make it unsuitable for its intended use. Shelf life considerations should also be applied in making decisions of this type. Note that properties of a material may change in use, and recycling or reuse may not always be appropriate.

DO NOT allow wash water from cleaning equipment to enter drains. Collect all wash water for treatment before disposal.

- Recycle wherever possible.
- Consult manufacturer for recycling options or consult Waste Management Authority for disposal if no suitable treatment or disposal facility can be identified.

**Section 14 - TRANSPORTATION INFORMATION**

**DOT:**

<table>
<thead>
<tr>
<th>Symbols:</th>
<th>None</th>
<th>Hazard class or Division:</th>
<th>6.1</th>
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<tr>
<td>Identification Numbers:</td>
<td>UN3249</td>
<td>PG:</td>
<td>III</td>
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<tr>
<td>Label Codes:</td>
<td>6.1</td>
<td>Special provisions:</td>
<td>T1, TP33</td>
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</tbody>
</table>
Packaging: Exceptions: 153
Packaging: Non-bulk: 213

Quantity Limitations: Cargo aircraft only: 5 kg
Vessel stowage: Location: C

Hazardous materials descriptions and proper shipping names:
Medicine, solid, toxic, n.o.s.

Air Transport IATA:
ICAO/IATA Class: 6.1
UN/ID Number: 3249
Packing Group: III
Special provisions: A3

Cargo Only
Packing Instructions: 677
Maximum Qty/Pack: 200 kg
Passenger and Cargo
Packing Instructions: 670
Maximum Qty/Pack: 100 kg
Passenger and Cargo
Limited Quantity
Packing Instructions: Y645
Maximum Qty/Pack: 5 kg

Shipping Name: MEDICINE, SOLID, TOXIC, N.O.S.(CONTAINS BUTACAINE)

Maritime Transport IMDG:
IMDG Class: 6.1
UN Number: 3249
Packing Group: III
EMS Number: F-A,S-A
Special provisions: 221 223

Limited Quantities: 5 kg
Marine Pollutant: Yes

Shipping Name: MEDICINE, SOLID, TOXIC, N.O.S.(contains butacaine)

Section 15 - REGULATORY INFORMATION

butacaine (CAS: 149-16-6) is found on the following regulatory lists;
"Canada Domestic Substances List (DSL)"

Section 16 - OTHER INFORMATION

LIMITED EVIDENCE
- Inhalation and/or skin contact may produce health damage*.
- Cumulative effects may result following exposure*.
- May produce discomfort of the eyes, respiratory tract and skin*.
- Repeated exposure potentially causes skin dryness and cracking*.
* (limited evidence).

Denmark Advisory list for selfclassification of dangerous substances

<table>
<thead>
<tr>
<th>Substance</th>
<th>CAS</th>
<th>Suggested codes</th>
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<tr>
<td>butacaine</td>
<td>149-16-6</td>
<td>Mut3; R68 Xn; R22 R43 Xi; R38 N; R50</td>
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no representations and assumes no liability for any direct, incidental or consequential damages resulting from its use. For additional technical information please call our toxicology department on +800 CHEMCALL.

Classification of the preparation and its individual components has drawn on official and authoritative sources as well as independent review by the Chemwatch Classification committee using available literature references. A list of reference resources used to assist the committee may be found at: www.chemwatch.net/references.

The (M)SDS is a Hazard Communication tool and should be used to assist in the Risk Assessment. Many factors determine whether the reported Hazards are Risks in the workplace or other settings. Risks may be determined by reference to Exposures Scenarios. Scale of use, frequency of use and current or available engineering controls must be considered.

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www.chemwatch.net

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