

# Hexylbenzene

sc-250113

Material Safety Data Sheet



The Power to Question

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

## Section 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

### PRODUCT NAME

Hexylbenzene

### STATEMENT OF HAZARDOUS NATURE

CONSIDERED A HAZARDOUS SUBSTANCE ACCORDING TO OSHA 29 CFR 1910.1200.

### 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

C12-H18, 1-phenylhexane, n-hexylbenzene

## Section 2 - HAZARDS IDENTIFICATION

### CHEMWATCH HAZARD RATINGS

		Min	Max
Flammability:	1		
Toxicity:	2		
Body Contact:	2		
Reactivity:	1		
Chronic:	2		

Min/Nil=0  
Low=1  
Moderate=2  
High=3  
Extreme=4



### CANADIAN WHMIS SYMBOLS



## EMERGENCY OVERVIEW

### RISK

HARMFUL - May cause lung damage if swallowed.

Irritating to eyes, respiratory system and skin.

Vapours may cause drowsiness and dizziness.

Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

## POTENTIAL HEALTH EFFECTS

### ACUTE HEALTH EFFECTS

#### SWALLOWED

■ Swallowing of the liquid may cause aspiration into the lungs with the risk of chemical pneumonitis; serious consequences may result. (ICSC13733).

■ Accidental ingestion of the material may be damaging to the health of the individual.

■ Considered an unlikely route of entry in commercial/industrial environments.

The liquid may produce gastrointestinal discomfort and may be harmful if swallowed.

#### EYE

■ This material can cause eye irritation and damage in some persons.

#### SKIN

■ This material can cause inflammation of the skin on contact in some persons.

■ The material may accentuate any pre-existing dermatitis condition.

■ Skin contact is not thought to have harmful health effects, however the material may still produce health damage following entry through wounds, lesions or abrasions.

■ 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

■ The material can cause respiratory irritation in some persons.

The body's response to such irritation can cause further lung damage.

■ Inhalation of vapours may cause drowsiness and dizziness.

This may be accompanied by narcosis, reduced alertness, loss of reflexes, lack of coordination and vertigo.

■ Inhalation of aerosols (mists, fumes), generated by the material during the course of normal handling, may be damaging to the health of the individual.

■ Inhalation of high concentrations of gas/vapor causes lung irritation with coughing and nausea, central nervous depression with headache and dizziness, slowing of reflexes, fatigue and inco-ordination.

■ Central nervous system (CNS) depression may include general discomfort, symptoms of giddiness, headache, dizziness, nausea, anaesthetic effects, slowed reaction time, slurred speech and may progress to unconsciousness.

Serious poisonings may result in respiratory depression and may be fatal.

■ If exposure to highly concentrated solvent atmosphere is prolonged this may lead to narcosis, unconsciousness, even coma and possible death.

## CHRONIC HEALTH EFFECTS

■ Long-term exposure to respiratory irritants may result in disease of the airways involving difficult breathing and related systemic problems.

Limited evidence suggests that repeated or long-term occupational exposure may produce cumulative health effects involving organs or biochemical systems.

## Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS

NAME	CAS RN	%
hexylbenzene	1077-16-3	>98

## Section 4 - FIRST AID MEASURES

### SWALLOWED

· If swallowed do NOT induce vomiting. · If vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain open airway and prevent aspiration. · Avoid giving milk or oils. · Avoid giving alcohol. · If spontaneous vomiting appears

imminent or occurs, hold patient's head down, lower than their hips to help avoid possible aspiration of vomitus.

#### **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**

■ Any material aspirated during vomiting may produce lung injury. Therefore emesis should not be induced mechanically or pharmacologically.

For acute or short term repeated exposures to petroleum distillates or related hydrocarbons:

· Primary threat to life, from pure petroleum distillate ingestion and/or inhalation, is respiratory failure.

· Patients should be quickly evaluated for signs of respiratory distress (e.g. cyanosis, tachypnea, intercostal retraction, obtundation) and given oxygen. Patients with inadequate tidal volumes or poor arterial blood gases (pO<sub>2</sub> 50 mm Hg) should be intubated.

### **Section 5 - FIRE FIGHTING MEASURES**

Vapour Pressure (mmHG):	Not available
Upper Explosive Limit (%):	Not available
Specific Gravity (water=1):	0.861
Lower Explosive Limit (%):	Not available

#### **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 100 metres in all directions.

#### **GENERAL FIRE HAZARDS/HAZARDOUS COMBUSTIBLE PRODUCTS**

· Combustible.  
· Slight fire hazard when exposed to heat or flame.  
Combustion products include: carbon dioxide (CO<sub>2</sub>), other pyrolysis products typical of burning organic material.

#### **FIRE INCOMPATIBILITY**

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

#### **PERSONAL PROTECTION**

Glasses:  
Chemical goggles.  
Gloves:  
Respirator:  
Type A Filter of sufficient capacity

### **Section 6 - ACCIDENTAL RELEASE MEASURES**

#### **MINOR SPILLS**

■ Environmental hazard - contain spillage.  
· Clean up all spills immediately.  
· Avoid breathing vapors and contact with skin and eyes.

#### **MAJOR SPILLS**

■ Environmental hazard - contain spillage.  
Moderate hazard.  
· 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**

· Containers, even those that have been emptied, may contain explosive vapours.

- Do NOT cut, drill, grind, weld or perform similar operations on or near containers.
- DO NOT allow clothing wet with material to stay in contact with skin.
- Electrostatic discharge may be generated during pumping - this may result in fire.
- Ensure electrical continuity by bonding and grounding (earthing) all equipment.
- Restrict line velocity during pumping in order to avoid generation of electrostatic discharge ( $\leq 1$  m/sec until fill pipe submerged to twice its diameter, then  $\leq 7$  m/sec).
- Avoid splash filling.
- Do NOT use compressed air for filling discharging or handling operations.
- Avoid all personal contact, including inhalation.
- Wear protective clothing when risk of exposure occurs.

### RECOMMENDED STORAGE METHODS

- Glass container.
- Metal can or drum
- Packing as recommended by manufacturer.

### STORAGE REQUIREMENTS

- Store in original containers.
- Store at room temperature.
- Keep containers securely sealed.

## Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

### EXPOSURE CONTROLS

The following materials had no OELs on our records

- hexylbenzene: CAS:1077-16-3

### PERSONAL PROTECTION



### RESPIRATOR

· Type A Filter of sufficient capacity. (AS/NZS 1716 & 1715, EN 143:2000 & 149:2001, ANSI Z88 or national equivalent)

### EYE

- Safety glasses with side shields.
- Chemical goggles.

### HANDS/FEET

- Wear chemical protective gloves, eg. PVC.

Suitability and durability of glove type is dependent on usage. Important factors in the selection of gloves include: such as:

- 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.

· Neoprene gloves.

### OTHER

- Overalls.
- P.V.C. apron.
- Barrier cream.
- Skin cleansing cream.
- Eye wash unit.

### ENGINEERING CONTROLS

- Local exhaust ventilation usually required. If risk of overexposure exists, wear an approved respirator.

## Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

### PHYSICAL PROPERTIES

Liquid.

Does not mix with water.

Floats on water.

State	Liquid	Molecular Weight	162.28
Melting Range (°F)	-78	Viscosity	Not available
Boiling Range (°F)	439	Solubility in water (g/L)	Immiscible
Flash Point (°F)	182	pH (1% solution)	Not applicable.
Decomposition Temp (°F)	Not available	pH (as supplied)	Not applicable
Autoignition Temp (°F)	Not available	Vapour Pressure (mmHG)	Not available
Upper Explosive Limit (%)	Not available	Specific Gravity (water=1)	0.861
Lower Explosive Limit (%)	Not available	Relative Vapor Density (air=1)	>1
Volatile Component (%vol)	Not available	Evaporation Rate	Not available

### APPEARANCE

Colourless liquid; does not mix with water.

## Section 10 - CHEMICAL STABILITY

### CONDITIONS CONTRIBUTING TO INSTABILITY

- Presence of incompatible materials.
- Product is considered stable.

### STORAGE INCOMPATIBILITY

- Avoid reaction with oxidizing agents.
- Vigorous reactions, sometimes amounting to explosions, can result from the contact between aromatic rings and strong oxidizing agents.
- Aromatics can react exothermically with bases and with diazo compounds.

For incompatible materials - refer to Section 7 - Handling and Storage.

## Section 11 - TOXICOLOGICAL INFORMATION

hexylbenzene

### TOXICITY AND IRRITATION

#### HEXYLBENZENE:

- unless otherwise specified data extracted from RTECS - Register of Toxic Effects of Chemical Substances.
  - Asthma-like symptoms may continue for months or even years after exposure to the material ceases. This may be due to a non-allergenic condition known as reactive airways dysfunction syndrome (RADS) which can occur following exposure to high levels of highly irritating compound. Key criteria for the diagnosis of RADS include the absence of preceding respiratory disease, in a non-atopic individual, with abrupt onset of persistent asthma-like symptoms within minutes to hours of a documented exposure to the irritant. A reversible airflow pattern, on spirometry, with the presence of moderate to severe bronchial hyperreactivity on methacholine challenge testing and the lack of minimal lymphocytic inflammation, without eosinophilia, have also been included in the criteria for diagnosis of RADS. RADS (or asthma) following an irritating inhalation is an infrequent disorder with rates related to the concentration of and duration of exposure to the irritating substance. Industrial bronchitis, on the other hand, is a disorder that occurs as result of exposure due to high concentrations of irritating substance (often particulate in nature) and is completely reversible after exposure ceases. The disorder is characterised by dyspnea, cough and mucus production.
- No significant acute toxicological data identified in literature search.

## Section 12 - ECOLOGICAL INFORMATION

Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

This material and its container must be disposed of as hazardous waste.

Avoid release to the environment.

Refer to special instructions/ safety data sheets.

### Ecotoxicity

Ingredient

Persistence:

Persistence: Air

Bioaccumulation

Mobility

hexylbenzene      **Water/Soil**  
**HIGH**      **No Data Available**      **LOW**      **MED**

### GESAMP/EHS COMPOSITE LIST - GESAMP Hazard Profiles

Name / EHS TRN A1a A1b A1 A2 B1 B2 C1 C2 C3 D1 D2 D3 E1 E2 E3 Cas No / RTECS No \_\_\_\_\_  
 \_\_\_\_\_ Alkyl 178 100 0 4 NR 1 NI 0 (0) (1) (1) (1) F 1 benzenes, 3 C9- C17 (straight or branched) /  
 CAS:1077- 16- 3 /

Legend: EHS=EHS Number (EHS=GESAMP Working Group on the Evaluation of the Hazards of Harmful Substances Carried by Ships)  
 NRT=Net Register Tonnage, A1a=Bioaccumulation log Pow, A1b=Bioaccumulation BCF, A1=Bioaccumulation, A2=Biodegradation,  
 B1=Acuteaquatic toxicity LC/ECIC50 (mg/l), B2=Chronic aquatic toxicity NOEC (mg/l), C1=Acute mammalian oral toxicity LD50 (mg/kg),  
 C2=Acute mammalian dermal toxicity LD50 (mg/kg), C3=Acute mammalian inhalation toxicity LC50 (mg/kg), D1=Skin irritation &  
 corrosion, D2=Eye irritation& corrosion, D3=Long-term health effects, E1=Tainting, E2=Physical effects on wildlife & benthic habitats,  
 E3=Interference with coastal amenities, For column A2: R=Readily biodegradable, NR=Not readily biodegradable. For column D3:  
 C=Carcinogen, M=Mutagenic, R=Reprotoxic, S=Sensitising, A=Aspiration hazard, T=Target organ systemic toxicity, L=Lunginjury,  
 N=Neurotoxic, I=Immunotoxic. For column E1: NT=Not tainting (tested), T=Tainting test positive. For column E2: Fp=Persistent floater,  
 F=Floater, S=Sinking substances. The numerical scales start from 0 (no hazard), while higher numbers reflect increasing hazard.  
 (GESAMP/EHS Composite List of Hazard Profiles - Hazard evaluation of substances transported by ships)

## Section 13 - DISPOSAL CONSIDERATIONS

### Disposal Instructions

All waste must be handled in accordance with local, state and federal regulations.

‡ 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. If it has been contaminated, it may be possible to reclaim the product by filtration, distillation or some other means. 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 or consult manufacturer for recycling options.
- Consult Waste Management Authority for disposal.

## Section 14 - TRANSPORTATION INFORMATION



DOT:

Symbols: G Hazard class or Division: 9

Identification Numbers: UN3082 PG: III

Label Codes: 9 Special provisions: 8, 146,

335, IB3,

T4, TP1,

TP29

Packaging: Exceptions: 155 Packaging: Non- bulk: 203

Packaging: Exceptions: 155 Quantity limitations: No limit

Passenger aircraft/rail:

Quantity Limitations: Cargo No limit Vessel stowage: Location: A

aircraft only:

Vessel stowage: Other: None S.M.P.: YES

Hazardous materials descriptions and proper shipping names:

Environmentally hazardous substance, liquid, n.o.s

### Air Transport IATA:

UN/ID Number: 3082 Packing Group: III

Special provisions: A97

Cargo Only

Packing Instructions: 964 Maximum Qty/Pack: 450 L  
Passenger and Cargo Passenger and Cargo  
Packing Instructions: Y964 Maximum Qty/Pack: 450 L  
Passenger and Cargo Limited Quantity Passenger and Cargo Limited Quantity  
Packing Instructions: 964 Maximum Qty/Pack: 30 kg G  
Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID,  
N.O.S. \*(CONTAINS HEXYLBENZENE)

**Maritime Transport IMDG:**

IMDG Class: 9 IMDG Subrisk: None  
UN Number: 3082 Packing Group: III  
EMS Number: F-A,S-F Special provisions: 274 335  
Limited Quantities: 5 L Marine Pollutant: Yes  
Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.(contains hexylbenzene)

## Section 15 - REGULATORY INFORMATION

**hexylbenzene (CAS: 1077-16-3) is found on the following regulatory lists;**

"Canada Non-Domestic Substances List (NDSL)", "US Department of Transportation (DOT) Marine Pollutants - Appendix B", "US Toxic Substances Control Act (TSCA) - Chemical Substance Inventory"

## Section 16 - OTHER INFORMATION

**LIMITED EVIDENCE**

- Inhalation and/or ingestion may produce health damage\*.
- Cumulative effects may result following exposure\*.
- Repeated exposure potentially causes skin dryness and cracking\*.

\* (limited evidence).

**Denmark Advisory list for selfclassification of dangerous substances**

Substance CAS Suggested codes hexylbenzene 1077- 16- 3 N; R50/53

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- 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](http://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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