

# 2-Phenylethanol

sc-238198



The Power is Question

## Material Safety Data Sheet

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

### Section 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

#### PRODUCT NAME

2-Phenylethanol

#### 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

C8-H10-O, C6H5CH2CH2OH, "benzyl carbinol", beta-hydroxyethylbenzene, benzeneethanol, PEA, 2-PEA, beta-PEA, benzylmethanol, phenethanol, "beta-phenethyl alcohol", "2-phenethyl alcohol", beta-phenylethanol, 2-phenylethanol, "phenylethyl alcohol", "beta-phenylethyl alcohol", "2-phenylethyl alcohol", "phenyl ethyl alcohol", "orange oil", "rose oil", "ethanol, 2-phenyl-", "methanol, benzyl-"

### Section 2 - HAZARDS IDENTIFICATION

#### CHEMWATCH HAZARD RATINGS

		Min	Max	
Flammability:	1			
Toxicity:	2			
Body Contact:	3			
Reactivity:	2			
Chronic:	2			

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



#### CANADIAN WHMIS SYMBOLS



## EMERGENCY OVERVIEW

### RISK

Risk of serious damage to eyes.  
Possible risk of impaired fertility.  
Possible risk of harm to the unborn child.  
Possible risk of irreversible effects.  
Harmful in contact with skin and if swallowed.  
Irritating to respiratory system and skin.

### 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.

##### EYE

■ If applied to the eyes, this material causes severe eye damage.

##### SKIN

■ Skin contact with the material may be harmful; systemic effects may result following absorption.  
■ The material may cause moderate inflammation of the skin either following direct contact or after a delay of some time. Repeated exposure can cause contact dermatitis which is characterized by redness, swelling and blistering.  
■ 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.

##### CHRONIC HEALTH EFFECTS

■ Long-term exposure to respiratory irritants may result in disease of the airways involving difficult breathing and related systemic problems. Strong evidence exists that the substance may cause irreversible but non-lethal mutagenic effects following a single exposure. Ample evidence from experiments exists that there is a suspicion this material directly reduces fertility. Results in experiments suggest that this material may cause disorders in the development of the embryo or fetus, even when no signs of poisoning show in the mother. Exposure to the material may result in a possible risk of irreversible effects. The material may produce mutagenic effects in man. This concern is raised, generally, on the basis of appropriate studies using mammalian somatic cells in vivo. Such findings are often supported by positive results from in vitro mutagenicity studies. 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	%
phenethyl alcohol	60-12-8	> 99

## 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: · Immediately hold eyelids apart and flush the eye continuously with 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**

■ for poisons (where specific treatment regime is absent):

-----BASIC TREATMENT

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· Establish a patent airway with suction where necessary.  
· Watch for signs of respiratory insufficiency and assist ventilation as necessary.  
Treat symptomatically.

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

Vapour Pressure (mmHG):	Not available.
Upper Explosive Limit (%):	Not applicable
Specific Gravity (water=1):	1.02
Lower Explosive Limit (%):	Not applicable

#### **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.  
· 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.  
May emit poisonous fumes.

WARNING: Long standing in contact with air and light may result in the formation of potentially explosive peroxides.

#### **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-P Filter of sufficient capacity

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

#### **MINOR SPILLS**

· Remove all ignition sources.  
· Clean up all spills immediately.

#### **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**

· DO NOT allow clothing wet with material to stay in contact with skin.  
The substance accumulates peroxides which may become hazardous only if it evaporates or is distilled or otherwise treated to concentrate the peroxides. The substance may concentrate around the container opening for example.  
Purchases of peroxidisable chemicals should be restricted to ensure that the chemical is used completely before it can become peroxidised.  
· A responsible person should maintain an inventory of peroxidisable chemicals or annotate the general chemical inventory to indicate which chemicals are subject to peroxidation. An expiration date should be determined. The chemical should either be treated to remove peroxides or disposed of before this date.  
· The person or laboratory receiving the chemical should record a receipt date on the bottle. The individual opening the container should add an opening date.  
· Unopened containers received from the supplier should be safe to store for 18 months.  
· Opened containers should not be stored for more than 12 months.  
· Avoid all personal contact, including inhalation.

- Wear protective clothing when risk of exposure occurs.

### RECOMMENDED STORAGE METHODS

- 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

Source	Material	TWA ppm	TWA mg/m <sup>3</sup>	STEL ppm	STEL mg/m <sup>3</sup>	Peak ppm	Peak mg/m <sup>3</sup>	TWA F/CC	Notes
Canada - British Columbia Occupational Exposure Limits	phenethyl alcohol (Diesel fuel, as total hydrocarbons, Inhalable)		100 (V)						Skin
Canada - British Columbia Occupational Exposure Limits	phenethyl alcohol (Kerosene /Jet fuels, as total hydrocarbon vapour, Revised 2003)		200 (P)						Skin
Canada - Alberta Occupational Exposure Limits	phenethyl alcohol (Kerosene/Jet fuels, as total hydrocarbon vapour)		200						
Canada - Saskatchewan Occupational Health and Safety Regulations - Contamination Limits	phenethyl alcohol (Diesel fuel as total hydrocarbons, (vapour))		100		150				Skin
Canada - Alberta Occupational Exposure Limits	phenethyl alcohol (Diesel fuel, as total hydrocarbons)		100						

ENDOELTABLE

### PERSONAL PROTECTION



#### RESPIRATOR

- type a-p filter of sufficient capacity.

#### 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).

· 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) 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) 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.

#### OTHER

· Overalls.

· Eyewash 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.

Sinks in water.

State	Liquid	Molecular Weight	122.18
Melting Range (°F)	-17	Viscosity	Not Available
Boiling Range (°F)	426	Solubility in water (g/L)	Partly miscible
Flash Point (°F)	216	pH (1% solution)	Not available.
Decomposition Temp (°F)	Not available.	pH (as supplied)	Not applicable
Autoignition Temp (°F)	Not available.	Vapour Pressure (mmHG)	Not available.
Upper Explosive Limit (%)	Not applicable	Specific Gravity (water=1)	1.02
Lower Explosive Limit (%)	Not applicable	Relative Vapor Density (air=1)	Not available.
Volatile Component (%vol)	100	Evaporation Rate	Not available

### APPEARANCE

Colourless viscous liquid with floral odour and rose character. Sharp burning taste. Soluble in 50% alcohol; soluble 1 part in 50 parts water; soluble in fixed oils, alcohol and glycerol. Slightly soluble in mineral oil.

## Section 10 - CHEMICAL STABILITY

### CONDITIONS CONTRIBUTING TO INSTABILITY

· Presence of incompatible materials.

· Product is considered stable.

### STORAGE INCOMPATIBILITY

■ Avoid reaction with oxidizing agents.

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

## Section 11 - TOXICOLOGICAL INFORMATION

phenethyl alcohol

### TOXICITY AND IRRITATION

PHENETHYL ALCOHOL:

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

TOXICITY	IRRITATION
Oral (rat) LD50: 1790 mg/kg	Skin (rabbit): 100 mg/24h Moderate
Dermal (rabbit) LD50: 790 mg/kg	Eye (rabbit): 12000 mg/10m Mild
	Eye (rabbit): 0.75 mg/24h SEVERE

■ 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.

The material may cause skin irritation after prolonged or repeated exposure and may produce on contact skin redness, swelling, the production of vesicles, scaling and thickening of the skin.

**For benzyl alkyl alcohols:**

Unlike benzylic alcohols, the beta-hydroxyl group of the members of this cluster is unlikely to undergo phase II metabolic activation. Instead, the beta-hydroxyl group is expected to contribute to detoxification via oxidation to hydrophilic acid. Despite structural similarity to carcinogenic ethyl benzene, only a marginal concern has been assigned to phenethyl alcohol due to limited mechanistic analogy.

Mutation mouse ascites tumour

**CARCINOGEN**

VPVB_(VERY~	US - Maine Chemicals of High Concern List	Carcinogen	EU Carcinogen
VPVB_(VERY~	US - Maine Chemicals of High Concern List	Carcinogen	CA Prop 65; IARC; NTP 11th ROC

**SKIN**

phenethyl alcohol	Canada - Alberta Occupational Exposure Limits - Skin	Substance Interaction	1
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**Section 12 - ECOLOGICAL INFORMATION**

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

**Ecotoxicity**

Ingredient	Persistence: Water/Soil	Persistence: Air	Bioaccumulation	Mobility
phenethyl alcohol	LOW	No Data Available	LOW	HIGH

**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 \_\_\_\_\_  
 \_\_\_\_\_ Alcoholic 293 85 0 0 0 R 0 0 0 0 0 1 D 1 beverages / CAS:60- 12- 8 /

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.

! 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. 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: None Hazard class or Division: 6.1

Identification Numbers: UN2810 PG: III

Label Codes: 6.1 Special provisions: IB3, T7,

TP1, TP28  
Packaging: Exceptions: 153 Packaging: Non- bulk: 203  
Packaging: Exceptions: 153 Quantity limitations: 60 L  
Passenger aircraft/rail:  
Quantity Limitations: Cargo 220 L Vessel stowage: Location: A  
aircraft only:  
Vessel stowage: Other: 40  
Hazardous materials descriptions and proper shipping names:  
Toxic, liquids, organic, n.o.s.

**Air Transport IATA:**

ICAO/IATA Class: 6.1 ICAO/IATA Subrisk: None  
UN/ID Number: 2810 Packing Group: III  
Special provisions: A3  
Cargo Only  
Packing Instructions: 220 L Maximum Qty/Pack: 663  
Passenger and Cargo Passenger and Cargo  
Packing Instructions: 60 L Maximum Qty/Pack: 655  
Passenger and Cargo Limited Quantity Passenger and Cargo Limited Quantity  
Packing Instructions: 2 L Maximum Qty/Pack: Y642  
Shipping Name: TOXIC LIQUID, ORGANIC, N.O.S. \*(CONTAINS  
PHENETHYL ALCOHOL)

**Maritime Transport IMDG:**

IMDG Class: 6.1 IMDG Subrisk: None  
UN Number: 2810 Packing Group: III  
EMS Number: F-A , S-A Special provisions: 223 274  
Limited Quantities: 5 L  
Shipping Name: TOXIC LIQUID, ORGANIC, N.O.S.(contains phenethyl alcohol)

## Section 15 - REGULATORY INFORMATION

**phenethyl alcohol (CAS: 60-12-8) is found on the following regulatory lists;**

"Canada Ingredient Disclosure List (SOR/88-64)", "Canada Toxicological Index Service - Workplace Hazardous Materials Information System - WHMIS (English)", "International Council of Chemical Associations (ICCA) - High Production Volume List", "International Fragrance Association (IFRA) Survey: Transparency List", "OECD Representative List of High Production Volume (HPV) Chemicals", "US Cosmetic Ingredient Review (CIR) Cosmetic ingredients found safe, with qualifications", "US EPA High Production Volume Program Chemical List", "US Food Additive Database", "US Toxic Substances Control Act (TSCA) - Inventory"

## Section 16 - OTHER INFORMATION

**ND**

Substance CAS Suggested codes phenethyl alcohol 60- 12- 8 Xn; R22

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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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