

#### The Power to Question

# SAFETY DATA SHEET

Santa Cruz Biotechnology, Inc.
Revision date 22-Aug-2016
Version 1.1

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

**Product identifier** 

Product Name 2-Ethylbutyraldehyde Product Code SC-238033

#### 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

Serious eye damage/eye irritation Category 2A Specific target organ toxicity (single exposure) Category 3 Flammable liquids Category 2

## Label elements

Signal word Hazard statements

Symbols/Pictograms

Precautionary Statements - Prevention

Danger

Causes serious eye irritation May cause respiratory irritation Highly flammable liquid and vapor





Wash face, hands and any exposed skin thoroughly after handling

Wear protective gloves/protective clothing/eye protection/face protection

Avoid breathing dust/fume/gas/mist/vapors/spray Use only outdoors or in a well-ventilated area

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

Keep cool



Precautionary Statements - Response

IF exposed or concerned: Get medical advice/attention IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

If eye irritation persists: Get medical advice/attention 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 In case of fire: Use CO2, dry chemical, or foam for extinction Store in a well-ventilated place. Keep container tightly closed

Store locked up

Dispose of contents/container to an approved waste disposal

plant

Hazards not otherwise classified (HNOC)

Hazards not otherwise classified (HNOC)

Precautionary Statements - Storage

Precautionary Statements - Disposal

Not applicable

#### Other Information

Health hazards **NFPA** Flammability 3 Stability 0

Physical and chemical

properties



**HMIS** 

Health hazards Flammability 3 Physical hazards 0 Personal protection

#### 3. COMPOSITION/INFORMATION ON INGREDIENTS

CAS No 97-96-1 Molecular Weight 100.16 Formula C<sub>6</sub>H<sub>12</sub>O

Chemical Name	CAS No	Weight %	Oral LD50	Dermal LD50	Inhalation LC50
2-Ethylbutyraldehyde	97-96-1	>98	= 3980 mg/kg (Rat)	= 5990 μL/kg (Rabbit)	-

#### 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). If symptoms

persist, call a physician.

Eye contact Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. If

symptoms persist, call a physician. 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.

Skin Contact Wash off immediately with plenty of water. Wash contaminated clothing before reuse. If skin

irritation persists, call a physician. Immediate medical attention is not required. Wash off immediately with soap and plenty of water while removing all contaminated clothes and

shoes.

Remove to fresh air If symptoms persist, call a physician Artificial respiration and/or oxygen Inhalation

may be necessary Call a physician Immediate medical attention is not required Move to

fresh air in case of accidental inhalation of vapors

Immediate medical attention is not required. Rinse mouth. Drink plenty of water. Do NOT Ingestion

induce vomiting. Clean mouth with water and drink afterwards plenty of water. Never give

anything by mouth to an unconscious person. Call a physician.

Self-protection of the first aider Remove all sources of ignition. 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 None.

Specific hazards arising from the chemical

Specific hazards arising from the

No information available. chemical

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

for firefighters

(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. Use personal protective equipment as required.

Keep people away from and upwind of spill/leak.

**Environmental precautions** 

Environmental precautions Prevent further leakage or spillage if safe to do so. Prevent product from entering drains. 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

Prevent further leakage or spillage if safe to do so. Methods for containment

Methods for cleaning up Pick up and transfer to properly labeled containers. Dam up. Soak up with inert absorbent

material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Soak up with inert

absorbent material.

# 7. HANDLING AND STORAGE

## Precautions for safe handling



Advice on safe handling Ensure adequate ventilation, especially in confined areas. 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. Use with local exhaust ventilation. Use personal protective equipment as required. Do not breathe dust/fume/gas/mist/vapors/spray. Noxious vapor/odor.

Conditions for safe storage, including any incompatibilities

Storage Conditions Keep tightly closed in a dry and cool place. Keep in properly labeled containers. Keep

containers tightly closed in a cool, well-ventilated place. May form explosive peroxides.

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. Face protection shield. Skin and Body Protection Wear protective gloves and protective clothing.

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

Property Values

pH No information available

Melting point/freezing point -89 °C Boiling point 117 °C

Flash point 21 °C CC (closed cup)

Density 0.81 g/mL

Evaporation rate No information available

Upper flammability limits 7.7% Lower flammability limit 1.2%

Vapor pressure 13.65 mmHg

Vapor density 1 Specific gravity 0.81

Water solubility

No information available
Solubility in other solvents

No information available

Partition coefficient 1.73

Autoignition temperature No information available Decomposition temperature No information available Kinematic viscosity No information available



Explosive properties No information available Oxidizing properties No information available

## 10. STABILITY AND REACTIVITY

Reactivity Not applicable

Chemical stability
Possibility of Hazardous Reactions
Hazardous polymerization
Conditions to avoid
Incompatible materials

May form explosive peroxides.
None under normal processing.
No information available.
Heat, flames and sparks.
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 Avoid repeated exposure.

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) 3980 mg/kg ATEmix (dermal) 5972 mg/kg

## 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
Bioaccumulation
Mobility
No information available.
No information available.
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.

Other Information Waste codes should be assigned by the user based on the application for which the product

was used.



## 14. TRANSPORT INFORMATION

DOT

UN/ID no UN1178 Hazard Class 3 Packing Group II

Proper shipping name 2-Ethylbutyraldehyde

Description UN1178, 2-Ethylbutyraldehyde, 3, II

Emergency Response Guide Number 130

**IMDG** 

UN/ID no UN1178 Hazard Class 3 Packing Group II

Proper shipping name 2-Ethylbutyraldehyde

Description UN1178, 2-Ethylbutyraldehyde, 3, II, (21°C c.c.)

EmS-No F-E, S-D

**IATA** 

UN/ID no UN1178 Hazard Class 3 Packing Group II

Proper shipping name 2-Ethylbutyraldehyde

Description UN1178, 2-Ethylbutyraldehyde, 3, II

## 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) China (IECSC) ENCS (Japan): Philippines (PICCS)

Chemical Name	TSCA	DSL	NDSL	EINECS	ELINCS	ENCS	IECSC	KECL	PICCS	AICS
2-Ethylbutyraldehyde	X	-	Χ	Χ	-	Χ	Х	-	Х	X

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.

## SARA 311/312 Hazard Categories

Acute health hazard Yes
Chronic Health Hazard No
Fire hazard Yes
Sudden release of pressure hazard No
Reactive hazard No



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# **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

Chemical Name	New Jersey	Massachusetts	Pennsylvania
2-Ethylbutyraldehyde	X	X	X
97-96-1			

## 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**