



The Power to Question

SAFETY DATA SHEET

Santa Cruz Biotechnology, Inc.

Revision date 15-Jun-2018

Version 1.2

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

Product identifier

Product Name Ethylbenzene
Product Code SC-239957

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

Acute toxicity - Inhalation (Vapors) Category 4
Acute toxicity - Inhalation (Dusts/Mists) Category 4
Carcinogenicity Category 2
Specific target organ toxicity (repeated exposure) Category 2
Aspiration toxicity Category 1
Flammable liquids Category 2

Label elements

Signal word Danger
Hazard statements
May be harmful if swallowed
Harmful if inhaled
Suspected of causing cancer
May cause damage to organs through prolonged or repeated exposure
May be fatal if swallowed and enters airways
Highly flammable liquid and vapor

Symbols/Pictograms



Precautionary Statements - Prevention

Obtain special instructions before use
Do not handle until all safety precautions have been read and understood
Use personal protective equipment as required
Use only outdoors or in a well-ventilated area
Do not breathe dust/fume/gas/mist/vapors/spray
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



Precautionary Statements - Response

IF exposed or concerned: 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
 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician
 Do NOT induce vomiting
 In case of fire: Use CO2, dry chemical, or foam for extinction
 Store locked up Store in a well-ventilated place. Keep cool
 Dispose of contents/container to an approved waste disposal plant

Precautionary Statements - Storage
 Precautionary Statements - Disposal

Hazards not otherwise classified (HNOC)

Hazards not otherwise classified (HNOC) Not applicable

Other Information

Other hazards Harmful to aquatic life with long lasting effects. Toxic to aquatic life.

NFPA	Health hazards	2		HMIS	Health hazards	2
	Flammability	3			Flammability	3
	Stability	0			Physical hazards	0
	Physical and chemical properties	-			Personal protection	-

* = Chronic Health Hazard

3. COMPOSITION/INFORMATION ON INGREDIENTS

CAS No 100-41-4
 Molecular Weight 106.17
 Formula C₈H₁₀

Chemical name	CAS No.	Weight-%	Oral LD50	Dermal LD50	Inhalation LC50
Ethylbenzene	100-41-4	>98	= 3500 mg/kg (Rat)	= 15400 mg/kg (Rabbit)	= 17.4 mg/L (Rat) 4 h

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).
 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 Wash off immediately with plenty of water.
 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 Do NOT induce vomiting. Rinse mouth. Drink plenty of water. If symptoms persist, call a physician.
 Self-protection of the first aider Remove all sources of ignition.

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 Remove all sources of ignition. Evacuate personnel to safe areas. Ensure adequate ventilation, especially in confined areas.

Environmental precautions

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

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.

Conditions for safe storage, including any incompatibilities

Storage Conditions Keep tightly closed in a dry and cool place. Keep in properly labeled containers. Protect from moisture. Store at room temperature.

Incompatible materials None known based on information supplied.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION



Control parameters

Exposure Guidelines

Other Information

Vacated limits revoked by the Court of Appeals decision in AFL-CIO v. OSHA, 965 F.2d 962 (11th Cir., 1992).

Chemical name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Ethylbenzene 100-41-4	TWA: 20 ppm	TWA: 100 ppm TWA: 435 mg/m ³ (vacated) TWA: 100 ppm (vacated) TWA: 435 mg/m ³ (vacated) STEL: 125 ppm (vacated) STEL: 545 mg/m ³	IDLH: 800 ppm TWA: 100 ppm TWA: 435 mg/m ³ STEL: 125 ppm STEL: 545 mg/m ³

NIOSH IDLH *Immediately Dangerous to Life or Health*

Appropriate engineering controls

Engineering Controls

- Showers
- Eyewash stations
- Ventilation systems

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

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

<u>Property</u>	<u>Values</u>
pH	No information available
Melting point/freezing point	-95 °C
Boiling point	136 °C
Flash point	15 °C CC (closed cup)
Liquid Density	0.87 g/mL
Evaporation rate	No information available
Upper flammability limits	6.7%
Lower flammability limit	1%
Vapor pressure	10 mmHg
Vapor density	No information available
Specific gravity	No information available
Water solubility	No information available
Solubility in other solvents	No information available
Partition coefficient	3.6
Autoignition temperature	432 °C
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	Stable under recommended storage conditions.
Possibility of Hazardous Reactions	None under normal processing.
Hazardous polymerization	No information available.
Conditions to avoid	Heat, flames and sparks. Exposure to air or moisture over prolonged periods.
Incompatible materials	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.
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Delayed and immediate effects as well as chronic effects from short and long-term exposure

Chronic Toxicity	No information available.
Target Organ Effects	Central nervous system, Eyes, Respiratory system, Skin.
Carcinogenicity	The table below indicates whether each agency has listed any ingredient as a carcinogen.

Chemical name	ACGIH	IARC	NTP	OSHA
Ethylbenzene 100-41-4	A3	Group 2B	-	X

ACGIH (American Conference of Governmental Industrial Hygienists) A3 - Animal Carcinogen

IARC (International Agency for Research on Cancer) Group 2B - Possibly Carcinogenic to Humans

OSHA (Occupational Safety and Health Administration of the US Department of Labor) X - Present

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)	3500 mg/kg
ATEmix (dermal)	15400 mg/kg
ATEmix (inhalation-dust/mist)	1.5 mg/l
ATEmix (inhalation-vapor)	17.4 mg/l

12. ECOLOGICAL INFORMATION

Ecotoxicity Harmful to aquatic life with long lasting effects

Chemical name	Algae/aquatic plants	Fish	Toxicity to Microorganisms	Crustacea
Ethylbenzene 100-41-4	1.7 - 7.6: 96 h Pseudokirchneriella subcapitata mg/L EC50 static 2.6 - 11.3: 72 h Pseudokirchneriella subcapitata mg/L EC50 static 4.6: 72 h Pseudokirchneriella subcapitata mg/L EC50 438: 96 h Pseudokirchneriella	9.6: 96 h Poecilia reticulata mg/L LC50 static 9.1 - 15.6: 96 h Pimephales promelas mg/L LC50 static 32: 96 h Lepomis macrochirus mg/L LC50 static 7.55 - 11: 96 h Pimephales promelas mg/L LC50 flow-through 4.2: 96 h Oncorhynchus mykiss mg/L LC50 semi-static 11.0 - 18.0:	-	1.8 - 2.4: 48 h Daphnia magna mg/L EC50



	subcapitata mg/L EC50	96 h Oncorhynchus mykiss mg/L LC50 static	
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0% of the mixture consists of component(s) of unknown hazards to the aquatic environment.

Persistence and degradability No information available.
 Bioaccumulation No information available.
 Mobility No information available.

Chemical name	Partition coefficient
Ethylbenzene 100-41-4	3.2

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.
 California Hazardous Waste Status This product contains one or more substances that are listed with the State of California as a hazardous waste.

Chemical name	California Hazardous Waste Status
Ethylbenzene 100-41-4	Toxic Ignitable

14. TRANSPORT INFORMATION

DOT

UN/ID no UN1175
 Hazard Class 3
 Packing Group II
 Proper shipping name Ethylbenzene
 Reportable Quantity (RQ) (Ethylbenzene: RQ (kg)= 454.00)
 Description UN1175, Ethylbenzene, 3, II
 Emergency Response Guide Number 130

IMDG

UN/ID no UN1175
 Hazard Class 3
 Packing Group II
 Proper shipping name Ethylbenzene
 Description UN1175, Ethylbenzene, 3, II, (15°C c.c.)
 EmS-No F-E, S-D

IATA

UN/ID no UN1175
 Hazard Class 3
 Packing Group II
 Proper shipping name Ethylbenzene
 Description UN1175, Ethylbenzene, 3, II
 ERG Code 3L

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) South Korea (KECL): China (IECSC)
ENCS (Japan): Philippines (PICCS)

Chemical name	TSCA	DSL	NDSL	EINECS	ELINCS	ENCS	IECSC	KECL	PICCS	AICS
Ethylbenzene	X	X	-	X	-	X	X	X	X	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	Yes
Fire hazard	Yes
Sudden release of pressure hazard	No
Reactive hazard	No

CWA (Clean Water Act)

This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

Chemical name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Ethylbenzene 100-41-4	1000 lb	X	X	X

US State Regulations

California Proposition 65

This product contains the following Proposition 65 chemicals.

Chemical name	California Proposition 65
Ethylbenzene - 100-41-4	Carcinogen

U.S. State Right-to-Know Regulations

Chemical name	New Jersey	Massachusetts	Pennsylvania
Ethylbenzene 100-41-4	X	X	X

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