

Diethanolamine: sc-211311



The Power to Question

MATERIAL SAFETY DATA SHEET

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: Diethanolamine

Product Number: sc-211311

Supplier: Santa Cruz Biotechnology, Inc.
2145 Delaware Avenue
Santa Cruz, CA 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

2. HAZARDS IDENTIFICATION

Emergency Overview

OSHA Hazards

Target Organ Effect, Harmful by ingestion., Irritant, Carcinogen

Target Organs

Liver, Kidney, Blood Liver, Kidney, Blood

GHS Classification

Acute toxicity, Oral (Category 4)

Skin irritation (Category 3)

Serious eye damage (Category 1)

Acute aquatic toxicity (Category 3)

GHS Label elements, including precautionary statements

Pictogram



Signal word

Danger

Hazard statement(s)

H302

Harmful if swallowed.

H316

Causes mild skin irritation.

H318

Causes serious eye damage.

H402

Harmful to aquatic life.

Precautionary statement(s)

P280

Wear protective gloves/ eye protection/ face protection.

P305 + P351 + P338

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

HMIS Classification

Health hazard: 2

Chronic Health Hazard: *

Flammability: 1

Physical hazards: 0

NFPA Rating

Health hazard: 2

Fire: 1

Reactivity Hazard: 0

Potential Health Effects

Inhalation	May be harmful if inhaled. Causes respiratory tract irritation.
Skin	Harmful if absorbed through skin. Causes skin irritation.
Eyes	Causes eye irritation.
Ingestion	Harmful if swallowed.

3. COMPOSITION/ INFORMATION ON INGREDIENTS

Synonyms :	Bis(2-hydroxyethyl)amine; 2,2'-Iminodiethanol
Formula :	C ₄ H ₁₁ NO ₂
Molecular Weight :	105.14 g/mol

<i>CAS-No.</i>	<i>EC-No.</i>	<i>Index-No.</i>	<i>Concentration</i>
Diethanolamine 111-42-2	203-868-0	603-071-00-1	-

4. FIRST AID MEASURES

General advice

Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact

Wash off with soap and plenty of water. Consult a physician.

In case of eye contact

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

If swallowed

Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

5. FIREFIGHTING MEASURES

Conditions of flammability

Not flammable or combustible.

Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Special protective equipment for firefighters

Wear self contained breathing apparatus for fire fighting if necessary.

Hazardous combustion products

Hazardous decomposition products formed under fire conditions - Carbon oxides, nitrogen oxides (NO_x)

6. ACCIDENTAL RELEASE MEASURES

Personal precautions

Use personal protective equipment. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas.

Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

Methods and materials for containment and cleaning up

Soak up with inert absorbent material and dispose of as hazardous waste. Keep in suitable, closed containers for disposal.

7. HANDLING AND STORAGE

Precautions for safe handling

Avoid contact with skin and eyes. Avoid inhalation of vapor or mist.

Conditions for safe storage

Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Air sensitive. Store at room temperature.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Components	CAS-No.	Value	Control parameters	Basis
Diethanolamine	111-42-2	TWA	3 ppm 15 mg/m ³	USA. OSHA - TABLE Z-1 Limits for Air Contaminants - 1910.1000
		TWA	1 mg/m ³	USA. ACGIH Threshold Limit Values (TLV)
Remarks	Liver & kidney damage Confirmed animal carcinogen with unknown relevance to humans Danger of cutaneous absorption			
		TWA	3 ppm 15 mg/m ³	USA. NIOSH Recommended Exposure Limits

Personal protective equipment

Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Hand protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Eye protection

Tightly fitting safety goggles. Faceshield (8-inch minimum). Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin and body protection

Complete suit protecting against chemicals, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Hygiene measures

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

9. PHYSICAL AND CHEMICAL PROPERTIES

Form	liquid	Melting point/freezing point	28 °C lit.
Flash point	138 °C closed cup	Ignition temperature	365 °C
Autoignition temperature	no data available	Lower explosion limit	1.6 %(V)
Upper explosion limit	10.6 %(V)	Vapor pressure	no data available
Density	1.097 g/mL at 25 °C	Relative vapor density	3.63 - (Air = 1.0)
Odor	no data available	Odor Threshold	no data available
Evaporation rate	no data available	Boiling point	217°C at 200 hPa lit.
pH	11-12 at 105 g/l at 25°C	Partition coefficient:	log Pow: -2.18
Water solubility	105 g/l at 20 °C completely soluble	n-octanol/water	

10. STABILITY AND REACTIVITY

Chemical stability

Absorbs carbon dioxide (CO₂) from air. Stable under recommended storage conditions.

Possibility of hazardous reactions

no data available

Conditions to avoid

no data available

Materials to avoid

Oxidizing agents, Copper, Zinc, Iron

Hazardous decomposition products

Hazardous decomposition products formed under fire conditions - Carbon oxides, nitrogen oxides (NO_x)

Other decomposition products

no data available

11. TOXICOLOGICAL INFORMATION**Acute toxicity**

Oral LD50 LD50 Oral - rat - 710 mg/kg

Inhalation LC50 no data available

Dermal LD50 LD50 Dermal - rabbit - 12,200 mg/kg

Other information on acute toxicity

LD50 Intraperitoneal - rat - 120 mg/kg

LD50 Intravenous - rat - 778 mg/kg

Skin corrosion/irritation

Skin - rabbit - Mild skin irritation - 24 h - Draize Test

Serious eye damage/eye irritation

Eyes - rabbit - Severe eye irritation - 24 h

Respiratory or skin sensitization

no data available

Germ cell mutagenicity

no data available

Carcinogenicity

IARC: 3 - Group 3: Not classifiable as to its carcinogenicity to humans (Diethanolamine)

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Reproductive toxicity

no data available

Teratogenicity

no data available

Specific target organ toxicity - single exposure (Globally Harmonized System)

no data available

Specific target organ toxicity - repeated exposure (Globally Harmonized System)

no data available

Aspiration hazard

no data available

Potential health effects

Inhalation May be harmful if inhaled. Causes respiratory tract irritation.

Ingestion Harmful if swallowed.

Skin Harmful if absorbed through skin. Causes skin irritation.

Eyes Causes eye irritation.

Signs and Symptoms of Exposure

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Synergistic effects

no data available

Additional Information

RTECS: KL2975000

12. ECOLOGICAL INFORMATION**Toxicity****Toxicity to fish mortality**

NOEC - Cyprinodon variegatus (sheepshead minnow) - 540 mg/l - 96 h

LC50 - Pimephales promelas (fathead minnow) - 1,460 mg/l - 96 h

Toxicity to daphnia and other aquatic invertebrates

mortality NOEC - Daphnia magna (Water flea) - < 4.2 mg/l - 11 d

EC50 - Daphnia magna (Water flea) - 55 mg/l - 48 h

Persistence and degradability

Biodegradability Result: > 90 % - Readily biodegradable.

Bioaccumulative potential

no data available

Mobility in soil

no data available

PBT and vPvB assessment

no data available

Other adverse effects

An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

Harmful to aquatic life.

13. DISPOSAL CONSIDERATIONS

Product

Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

Contaminated packaging

Dispose of as unused product.

14. TRANSPORT INFORMATION

DOT (US)

UN number: 3077

Class: 9

Packing group: III

Proper shipping name: Environmentally hazardous substances, solid, n.o.s. (Diethanolamine)

Reportable Quantity (RQ): 100 lbs

Marine pollutant: No

Poison Inhalation Hazard: No

IMDG

Not dangerous goods

IATA

UN number: 3077

Class: 9

Packing group: III

Proper shipping name: Environmentally hazardous substances, solid, n.o.s. (Diethanolamine)

15. REGULATORY INFORMATION

OSHA Hazards

Target Organ Effect, Harmful by ingestion., Irritant, Carcinogen

SARA 302 Components

SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 Components

The following components are subject to reporting levels established by SARA Title III, Section 313:

Diethanolamine

CAS-No.111-42-2

SARA 311/312 Hazards

Acute Health Hazard, Chronic Health Hazard

Massachusetts Right To Know Components

Diethanolamine

CAS-No.111-42-2

Pennsylvania Right To Know Components

Diethanolamine

CAS-No.111-42-2

New Jersey Right To Know Components

Diethanolamine

CAS-No.111-42-2

California Prop. 65 Components

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

16. OTHER INFORMATION

The above information is believed to be correct but does not purport to be complete and should be used only as a guide. The burden of safe use of this material rests entirely with the user.

12/31/2013