

1. PRODUCT AND COMPANY IDENTIFICATION

Product name : **Ethanolamine**

Product Number : 411000
Brand : Aldrich

Company : Sigma-Aldrich Canada, Ltd
2149 Winston Park Drive
OAKVILLE ON L6H 6J8
CANADA

Telephone : +1 9058299500
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2. COMPOSITION/INFORMATION ON INGREDIENTS

Synonyms : 2-Aminoethanol
2-Aminoethyl alcohol
Monoethanolamine

Formula : C₂H₇NO
Molecular Weight : 61.08 g/mol

CAS-No.	EC-No.	Index-No.	Concentration [%]
Ethanolamine			
141-43-5	205-483-3	603-030-00-8	-

3. HAZARDS IDENTIFICATION**Emergency Overview**

Target Organs
Liver, Heart, Lungs

WHMIS Classification

B3 Combustible Liquid
E Corrosive

HMIS Classification

Health Hazard: 3
Chronic Health Hazard: *
Flammability: 2
Physical hazards: 0

Potential Health Effects

Inhalation May be harmful if inhaled. May cause respiratory tract irritation. Material is extremely destructive to the tissue of the mucous membranes and upper

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Skin respiratory tract.
Eyes May be harmful if absorbed through skin. Causes skin burns.
Ingestion May cause eye irritation. Causes eye burns.
May be harmful if swallowed. Causes burns.

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

Take off contaminated clothing and shoes immediately. Wash off with soap and plenty of water. Consult a physician.

In case of eye contact

Continue rinsing eyes during transport to hospital. Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

If swallowed

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

5. FIRE-FIGHTING MEASURES**Flammable properties**

Flash point 93 °C (199 °F) - closed cup
Ignition temperature 780 °C (1,436 °F)

Suitable extinguishing media

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

Special protective equipment for fire-fighters

Wear self contained breathing apparatus for fire fighting if necessary.

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

Do not let product enter drains.

Methods for 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**Handling**

Avoid contact with skin and eyes. Avoid inhalation of vapour or mist.
Keep away from sources of ignition - No smoking. Take measures to prevent the build up of electrostatic charge.

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.

hygroscopic

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8. EXPOSURE CONTROLS / PERSONAL PROTECTION**Components with workplace control parameters**

Components	CAS-No.	Value	Control parameters	Update	Basis
Ethanolamine	141-43-5	TWA	3 ppm	2004-08-01	Canada. Worker's Compensation Act, Occupational Health and Safety Regulations (BC Reg 296/97 as amended), 7.2 [B.C. Reg. 382/2004, s.1]
		STEL	6 ppm	2004-08-01	Canada. Worker's Compensation Act, Occupational Health and Safety Regulations (BC Reg 296/97 as amended), 7.2 [B.C. Reg. 382/2004, s.1]
		TWA	3 ppm 7.5 mg/m ³	2005-02-03	Canada. Occupational Health and Safety Act [R.S.O. 1990, c.1], Industrial Establishments (R.R.O. 1990, Reg 851), 139
		STEL	6 ppm 15 mg/m ³	2005-02-03	Canada. Occupational Health and Safety Act [R.S.O. 1990, c.1], Industrial Establishments (R.R.O. 1990, Reg 851), 139
		TWA	3 ppm 7.5 mg/m ³	2004-04-30	Canada. Occupational Health and Safety Code 218
Remarks	Occupational exposure limit is based on irritation effects and its adjustment to compensate for unusual work schedules is not required.				
		STEL	6 ppm 15 mg/m ³	2004-04-30	Canada. Occupational Health and Safety Code 218
	Occupational exposure limit is based on irritation effects and its adjustment to compensate for unusual work schedules is not required.				
		TWA	3 ppm 7.5 mg/m ³	2004-04-30	Canada. Occupational Health and Safety Code 218
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		TWA	3 ppm 7.5 mg/m ³	2000-01-12	Canada. Act Respecting Occupational Health and Safety [R.S.Q., c.2.1], Regulation respecting Occupational Health and Safety (O.C.885-2001), Division XV, Sections 130-14
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		STEL	6 ppm 15 mg/m ³	2000-01-12	Canada. Act Respecting Occupational Health and Safety [R.S.Q., c.2.1], Regulation respecting Occupational Health and Safety (O.C.885-2001), Division XV, Sections 130-14
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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.

Eye protection

Safety glasses

Skin and body protection

Choose body protection according to the amount and concentration of the dangerous substance at the work place.

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**Appearance**

Form liquid, clear, viscous
Colour colourless

Safety data

pH no data available
Melting point 10 °C (50 °F)
Boiling point 69 - 70 °C (156 - 158 °F) at 13 hPa (10 mmHg)
170 °C (338 °F) at 1,013 hPa (760 mmHg)
Flash point 93 °C (199 °F) - closed cup
Ignition temperature 780 °C (1,436 °F)
Lower explosion limit 2.5 %(V)
Upper explosion limit 17 %(V)
Vapour pressure 0.3 hPa (0.2 mmHg) at 20 °C (68 °F)

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Density 1.015 g/cm³
Vapour solubility no data available
Vapour density 2.11
(Air = 1.0)

10. STABILITY AND REACTIVITY**Storage stability**

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

Conditions to avoid

Avoid moisture.

Materials to avoid

Iron, Oxidizing agents, Copper

Hazardous decomposition products

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

11. TOXICOLOGICAL INFORMATION**Acute toxicity**

LD50 Oral - rat - 1,720 mg/kg

Inhalation: Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract.

LD50 Dermal - rabbit - 1,015 mg/kg

Irritation and corrosion

Eyes - rabbit - Severe eye irritation

Sensitisation

no data available

Chronic exposure

no data available

Potential Health Effects

Inhalation May be harmful if inhaled. May cause respiratory tract irritation. Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract.
Skin May be harmful if absorbed through skin. Causes skin burns.
Eyes May cause eye irritation. Causes eye burns.
Ingestion May be harmful if swallowed. Causes burns.
Target Organs Liver, Heart, Lungs,

12. ECOLOGICAL INFORMATION**Elimination information (persistence and degradability)**

no data available

Ecotoxicity effects

Toxicity to fish LC50 - Pimephales promelas (fathead minnow) - 227 mg/l - 96 h

Toxicity to daphnia EC50 - Daphnia magna (Water flea) - 65 mg/l - 48 h

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and other aquatic invertebrates.

Toxicity to algae EC50 - Scenedesmus subspicatus - 15 mg/l - 72 h

Further information on ecology

no data available

13. DISPOSAL CONSIDERATIONS**Product**

This combustible material may be burned in a chemical incinerator equipped with an afterburner and scrubber. Observe all federal, state, and local environmental regulations. Contact a licensed professional waste disposal service to dispose of this material.

Contaminated packaging

Dispose of as unused product.

14. TRANSPORT INFORMATION**DOT (US)**

UN-Number: 2491 Class: 8 Packing group: III
Proper shipping name: Ethanolamine

IMDG

UN-Number: 2491 Class: 8 Packing group: III EMS-No: F-A, S-B
Proper shipping name: ETHANOLAMINE
Marine pollutant: No

IATA

UN-Number: 2491 Class: 8 Packing group: III
Proper shipping name: Ethanolamine

15. REGULATORY INFORMATION**TSCA Status**

On TSCA Inventory

DSL Status

All components of this product are on the Canadian DSL list.

WHMIS Classification

B3 Combustible Liquid
E Corrosive

16. OTHER INFORMATION**Further information**

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