

Material Safety Data Sheet

Version 3.0
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1. PRODUCT AND COMPANY IDENTIFICATION

Product name : 2-Dimethylaminoethanol

Product Number : 15448
Brand : Riedel

Company : Sigma-Aldrich Canada, Ltd
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CANADA

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2. COMPOSITION/INFORMATION ON INGREDIENTS

Synonyms : *N,N*-Dimethyl-2-hydroxyethylamine
N,N-Dimethylethanolamine

Formula : $C_4H_{11}NO$
Molecular Weight : 89.14 g/mol

CAS-No.	EC-No.	Index-No.	Concentration
2-Dimethylaminoethanol			
108-01-0	203-542-8	603-047-00-0	-

3. HAZARDS IDENTIFICATION**Emergency Overview****Target Organs**

Central nervous system

Other hazards which do not result in classification

Lachrymator.

WHMIS Classification

B3 Combustible Liquid
D1B
D2B
E

Combustible Liquid
Toxic by inhalation.
Moderate eye irritant
Corrosive

HMIS Classification

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

Potential Health Effects

Inhalation	May be harmful if inhaled. Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract.
Skin	Harmful if absorbed through skin. Causes skin burns.
Eyes	Causes eye burns.
Ingestion	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 39 °C (102 °F) - closed cup

Ignition temperature 245 °C (473 °F)

Suitable extinguishing media

For small (incipient) fires, use media such as "alcohol" foam, dry chemical, or carbon dioxide. For large fires, apply water from as far as possible. Use very large quantities (flooding) of water applied as a mist or spray; solid streams of water may be ineffective. Cool all affected containers with flooding quantities of water.

Special protective equipment for fire-fighters

Wear self contained breathing apparatus for fire fighting if necessary.

Further information

Use water spray to cool unopened containers.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions

Use personal protective equipment. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.

Environmental precautions

Do not let product enter drains.

Methods for cleaning up

Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13). 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. Store in cool place.

Handle and store under inert gas.

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

Components	CAS-No.	Value	Control parameters	Update	Basis
2-Dimethylaminoethanol	108-01-0	TWAE V	3 ppm 11 mg/m ³	2005-12-17	Canada. Ontario OELs
		STEV	6 ppm 22 mg/m ³	2005-12-17	Canada. Ontario OELs

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

Tightly fitting safety goggles. Faceshield (8-inch minimum).

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 clear, liquid

Colour light yellow

Odour amine-like

Safety data

pH 10.5 - 11.0 at 100 g/l at 20 °C (68 °F)

Melting point -70 °C (-94 °F) - lit.

Boiling point 134 - 136 °C (273 - 277 °F) - lit.

Flash point 39 °C (102 °F) - closed cup

Ignition temperature	245 °C (473 °F)
Lower explosion limit	1.4 %(V)
Upper explosion limit	12.2 %(V)
Vapour pressure	8.16 hPa (6.12 mmHg) at 20 °C (68 °F)
Density	0.886 g/mL at 20 °C (68 °F)
Water solubility	soluble
Partition coefficient: n-octanol/water	log Pow: 0.55
Relative vapour density	3.08 - (Air = 1.0)

10. STABILITY AND REACTIVITY

Storage stability

Stable under recommended storage conditions.

Conditions to avoid

Heat, flames and sparks.

Materials to avoid

Oxidizing agents, Copper, Zinc, Iron, Do not store near acids.

Hazardous decomposition products

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

Hazardous reactions

Vapours may form explosive mixture with air.

11. TOXICOLOGICAL INFORMATION

Acute toxicity

LD50 Oral - rat - 2,000 mg/kg

LC50 Inhalation - rat - 4 h - 1641 ppm

Remarks: Sense Organs and Special Senses (Nose, Eye, Ear, and Taste):Eye:Lacrimation. Behavioral:Ataxia. Lungs, Thorax, or Respiration:Dyspnea.

LC50 Inhalation - mouse - 3,250 mg/m³

Remarks: Brain and Coverings:Recordings from specific areas of CNS. Sense Organs and Special Senses (Nose, Eye, Ear, and Taste):Eye:Conjunctive irritation. Behavioral:Convulsions or effect on seizure threshold.

LD50 Dermal - rabbit - 1,214 mg/kg

Irritation and corrosion

Skin - rabbit - Severe skin irritation

Eyes - rabbit - Severe eye irritation

Sensitisation

no data available

Chronic exposure

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

Signs and Symptoms of Exposure

Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin.,
Cough, Shortness of breath, Headache, Nausea

Potential Health Effects

Inhalation	May be harmful if inhaled. Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract.
Skin	Harmful if absorbed through skin. Causes skin burns.
Eyes	Causes eye burns.
Ingestion	Harmful if swallowed. Causes burns.
Target Organs	Central nervous system,

Additional Information

RTECS: KK6125000

12. ECOLOGICAL INFORMATION

Elimination information (persistence and degradability)

Biodegradability

Ecotoxicity effects

Toxicity to fish LC50 - Leuciscus idus (Golden orfe) - > 100 - 220 mg/l - 96 h

Toxicity to daphnia EC50 - Daphnia - 98.37 mg/l - 48 h
and other aquatic
invertebrates.

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: 2051 Class: 8 (3) Packing group: II

Proper shipping name: 2-Dimethylaminoethanol

Marine pollutant: No

Poison Inhalation Hazard: No

IMDG

UN-Number: 2051 Class: 8 (3) Packing group: II

EMS-No: F-E, S-C

Proper shipping name: 2-DIMETHYLAMINOETHANOL

Marine pollutant: No

IATA

UN-Number: 2051 Class: 8 (3) Packing group: II

Proper shipping name: 2-Dimethylaminoethanol

15. REGULATORY INFORMATION

DSL Status

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

WHMIS Classification

B3 Combustible Liquid
D1B
D2B
E

Combustible Liquid
Toxic by inhalation.
Moderate eye irritant
Corrosive

16. OTHER INFORMATION

Further information

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