

### 1. PRODUCT AND COMPANY IDENTIFICATION

Product name : 2-Dimethylaminoethanol

Product Number : 471453  
Brand : Aldrich

Supplier : Sigma-Aldrich  
3050 Spruce Street  
SAINT LOUIS MO 63103  
USA

Telephone : +1 800-325-5832  
Fax : +1 800-325-5052  
Emergency Phone # (For both supplier and manufacturer) : (314) 776-6555

Preparation Information : Sigma-Aldrich Corporation  
Product Safety - Americas Region  
1-800-521-8956

### 2. HAZARDS IDENTIFICATION

#### Emergency Overview

##### OSHA Hazards

Combustible Liquid, Target Organ Effect, Harmful by ingestion., Harmful by skin absorption., Corrosive

##### Target Organs

Central nervous system

##### Other hazards which do not result in classification

Lachrymator.

##### GHS Classification

Flammable liquids (Category 3)  
Acute toxicity, Oral (Category 4)  
Acute toxicity, Inhalation (Category 3)  
Acute toxicity, Dermal (Category 4)  
Skin corrosion (Category 1B)  
Serious eye damage (Category 1)  
Acute aquatic toxicity (Category 3)

##### GHS Label elements, including precautionary statements

Pictogram



Signal word

Danger

Hazard statement(s)

H226 Flammable liquid and vapour.  
H302 + H312 Harmful if swallowed or in contact with skin  
H314 Causes severe skin burns and eye damage.  
H331 Toxic if inhaled.  
H402 Harmful to aquatic life.

Precautionary statement(s)

P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.

P280 Wear protective gloves/ protective clothing/ 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.  
P310 Immediately call a POISON CENTER or doctor/ physician.

#### HMIS Classification

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

#### NFPA Rating

Health hazard: 3  
Fire: 2  
Reactivity Hazard: 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.

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### 3. COMPOSITION/INFORMATION ON INGREDIENTS

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

Formula : C<sub>4</sub>H<sub>11</sub>NO  
Molecular Weight : 89.14 g/mol

Component	Concentration
<b>2-Dimethylaminoethanol</b>	
CAS-No.	108-01-0
EC-No.	203-542-8
Index-No.	603-047-00-0
	<=100%

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### 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. Take victim immediately to hospital. Consult a physician.

#### In case of eye contact

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

#### If swallowed

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

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### 5. FIREFIGHTING MEASURES

#### Conditions of flammability

Flammable in the presence of a source of ignition when the temperature is above the flash point. Keep away from heat/sparks/open flame/hot surface. No smoking.

**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 (NOx)

**Further information**

Use water spray to cool unopened containers.

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**6. ACCIDENTAL RELEASE MEASURES****Personal precautions**

Wear respiratory protection. Avoid breathing vapours, 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**

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**

Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations (see section 13).

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**7. HANDLING AND STORAGE****Precautions for safe 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.

**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.

Handle and store under inert gas.

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**8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

Contains no substances with occupational exposure limit values.

**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.

**Splash contact**

Material: Nitrile rubber

Minimum layer thickness: 0.2 mm

Break through time: 47 min

Material tested: Dermatrill® P (KCL 743 / Aldrich Z677388, Size M)

data source: KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 87300, e-mail sales@kcl.de, test method: EN374  
If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

**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, Flame retardant antistatic protective clothing, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

**Hygiene measures**

Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.

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**9. PHYSICAL AND CHEMICAL PROPERTIES****Appearance**

Form	clear, liquid
Colour	light yellow

**Safety data**

pH	10.5 - 11.0 at 100 g/l at 20 °C (68 °F)
Melting point/freezing point	Melting point/range: -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)
Auto-ignition temperature	no data available
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/cm <sup>3</sup> 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)
Odour	amine-like
Odour Threshold	no data available
Evaporation rate	no data available

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**10. STABILITY AND REACTIVITY****Chemical stability**

Stable under recommended storage conditions.

**Possibility of hazardous reactions**

no data available

**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)

Other decomposition products - no data available

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## **11. TOXICOLOGICAL INFORMATION**

### **Acute toxicity**

#### **Oral LD50**

LD50 Oral - rat - 2,000 mg/kg

#### **Inhalation LC50**

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.

#### **Dermal LD50**

LD50 Dermal - rabbit - 1,214 mg/kg

#### **Other information on acute toxicity**

no data available

### **Skin corrosion/irritation**

Skin - rabbit - Severe skin irritation

### **Serious eye damage/eye irritation**

Eyes - rabbit - Severe eye irritation

### **Respiratory or skin sensitisation**

no data available

### **Germ cell mutagenicity**

no data available

### **Carcinogenicity**

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.

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

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. Material is extremely destructive to the tissue of the mucous

**Ingestion** membranes and upper respiratory tract.  
Harmful if swallowed.  
**Skin** Harmful if absorbed through skin. Causes skin burns.  
**Eyes** Causes eye burns.

**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

**Synergistic effects**

no data available

**Additional Information**

RTECS: KK6125000

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**12. ECOLOGICAL INFORMATION**

**Toxicity**

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

**Persistence and degradability**

Biodegradability

**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.

no data available

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**13. DISPOSAL CONSIDERATIONS**

**Product**

Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material.

**Contaminated packaging**

Dispose of as unused product.

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**14. TRANSPORT INFORMATION**

**DOT (US)**

UN number: 2051 Class: 8 (3) Packing group: II  
Proper shipping name: 2-Dimethylaminoethanol  
Reportable Quantity (RQ):  
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

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**15. REGULATORY INFORMATION****OSHA Hazards**

Combustible Liquid, Target Organ Effect, Harmful by ingestion., Harmful by skin absorption., Corrosive

**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**

SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

**SARA 311/312 Hazards**

Fire Hazard, Acute Health Hazard, Chronic Health Hazard

**Massachusetts Right To Know Components**

	CAS-No.	Revision Date
2-Dimethylaminoethanol	108-01-0	1993-04-24

**Pennsylvania Right To Know Components**

	CAS-No.	Revision Date
2-Dimethylaminoethanol	108-01-0	1993-04-24

**New Jersey Right To Know Components**

	CAS-No.	Revision Date
2-Dimethylaminoethanol	108-01-0	1993-04-24

**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.

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**16. OTHER INFORMATION****Further information**

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