



## Safety Data Sheet

### 1. Identification of the substance/mixture and of the company/undertaking

#### Product identifier:

Product name: 2-Dimethylaminoethanol

SDS No. : 2465E-3

#### Details of the supplier of the safety data sheet

Manufacturer/Supplier: KISHIDA CHEMICAL CO., LTD.

Address: 3-1, Honmachibashi, Chuo-ku, Osaka, JAPAN

Division: Safety Management Dept. of Chemicals

Telephone number: +81-6-6946-8061

FAX: +81-6-6946-1607

e-mail address: kagakuhinanzenkanri@kishida.co.jp

### 2. Hazards identification

#### GHS classification and label elements of the product

#### Classification of the substance or mixture

##### PHYSICAL AND CHEMICAL HAZARDS

Flammable liquids: Category 3

##### HEALTH HAZARDS

Acute toxicity (Inhalation): Category 3

Skin corrosion/irritation: Category 1

Serious eye damage/eye irritation: Category 1

Skin sensitization: Category 1

Specific target organ toxicity – repeated exposure: Category 2 (respiratory system)

##### ENVIRONMENT HAZARDS

Hazardous to the aquatic environment (Acute): Category 3

(Note) GHS classification without description: Not classified/Classification not possible

#### Label elements



Signal word: Danger

#### HAZARD STATEMENT

Flammable liquid and vapor

Toxic if inhaled

Causes severe skin burns and eye damage

Causes serious eye damage

May cause an allergic skin reaction

May cause damage to organs through prolonged or repeated exposure (respiratory system)

Harmful to aquatic life

#### PRECAUTIONARY STATEMENT

##### Prevention

Avoid release to the environment.

Keep away from heat/sparks/open flames/hot surfaces. – No smoking.

Keep container tightly closed.

Ground/bond container and receiving equipment.

Use explosion-proof electrical/ventilating/lighting equipment.

Use only non-sparking tools.



Take precautionary measures against static discharge.  
Do not breathe dust/fume/gas/mist/vapors/spray.  
Use only outdoors or in a well-ventilated area.  
Wash contaminated parts thoroughly after handling.  
Contaminated work clothing should not be allowed out of the workplace.  
Wear protective gloves/protective clothing/eye protection/face protection.

**Response**

In case of fire: Use appropriate media other than water for extinction.  
Get medical advice/attention if you feel unwell.  
IF INHALED: Remove person to fresh air and keep comfortable for breathing.  
IF ON SKIN: Wash with plenty of soap and water.  
IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.  
If skin irritation or rash occurs: Get medical advice/attention.  
Wash contaminated clothing before reuse.  
Take off contaminated clothing and wash it before reuse.  
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

**Storage**

Store in a well-ventilated place. Keep container tightly closed. Keep cool.

**Disposal**

Dispose of contents/container in accordance with local/national regulation.

**Specific Physical and Chemical hazards**

Flammable liquid. Vapor/air mixture may explode.

---

**3. Composition/information on ingredients****Mixture/Substance selection:****Substance**

Ingredient name: 2-Dimethylaminoethanol

Content (%): 99(min)

Chemical formula: C<sub>4</sub>H<sub>11</sub>NO

Chemicals No, Japan: 2-297; 2-353

CAS No.: 108-01-0

MW: 89.14

ECNO: 203-542-8

Note : The figures shown above are not the specifications of the product.

---

**4. First-aid measures****Descriptions of first-aid measures****General measures**

Get medical attention/advice if you feel unwell.

**IF INHALED**

Remove person to fresh air and keep comfortable for breathing.

Call a POISON CENTER or doctor/physician if you feel unwell.

**IF ON SKIN (or hair)**

Take off immediately all contaminated clothing. Rinse skin with water/shower.

Wash with plenty of soap and water.

If skin irritation or rash occurs: Get medical advice/attention.

**IF IN EYES**

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



If eye irritation persists: Get medical advice/attention.

**IF SWALLOWED**

Rinse mouth. Do NOT induce vomiting.

Call a POISON CENTER or doctor/physician if you feel unwell.

---

**5. Fire-fighting measures****Extinguishing media****Suitable extinguishing media**

In case of fire, use water mist, foam, dry powder, CO2 to extinguish.

**Unsuitable extinguishing media**

Indoor firefighting equipment or outdoor firefighting equipment

Sprinkler equipment

Dry-powder firefighting equipment – except for phosphate etc., hydrogen carbonate etc.

Straight stream water extinguisher

Water mist extinguisher

Reinforcing liquid jet extinguisher

Dry-powder extinguisher – except for phosphate etc., hydrogen carbonate etc.

Bucket of water or tank of water

**Specific hazards arising from the substance or mixture**

Containers may explode when heated.

Fire may produce irritating, corrosive and/or toxic gases.

**Advice for firefighters****Specific fire-fighting measures**

Evacuate non-essential personnel to safe area.

**Special protective equipment and precautions for fire-fighters**

Wear fire/flammable resistant/retardant clothing.

Wear protective gloves/protective clothing/eye protection/face protection.

Firefighters should wear self-contained breathing apparatus with full face piece operated positive pressure mode.

---

**6. Accidental release measures****Personnel precautions, protective equipment and emergency procedures**

Ventilate area until material pick up is complete.

Wear proper protective equipment.

**Environmental precautions**

Prevent spills from entering sewers, watercourses or low areas.

**Methods and materials for containment and cleaning up**

Absorb spill with inert material (dry sand, earth, et al), then place in a chemical waste container.

**Preventive measures for secondary accident**

Collect spillage.

---

**7. Handling and storage****Precautions for safe handling****Preventive measures**

(Exposure Control for handling personnel)

Do not breathe dust/fume/gas/mist/vapors/spray.

(Protective measures against fire and explosion)

Keep away from heat/sparks/open flames/hot surfaces. – No smoking.

Ground/bond container and receiving equipment.

Use explosion-proof electrical/ventilating/lighting equipment.



Use only non-sparking tools.

Take precautionary measures against static discharge.

(Exhaust/ventilator)

Exhaust/ventilator should be available.

(Safety treatments)

Avoid contact with skin.

Avoid contact with eyes.

#### Safety Measures

Use only outdoors or in a well-ventilated area.

Wear protective gloves/protective clothing/eye protection/face protection.

When using do not eat, drink or smoke.

#### Any incompatibilities

See "10.Stability and Reactivity"

#### Advice on general occupational hygiene

Wash contaminated parts thoroughly after handling.

Contaminated work clothing should not be allowed out of the workplace.

Take off contaminated clothing and wash it before reuse.

#### Storage

##### Conditions for safe storage

Keep container tightly closed.

Store in a cool, dry place. Do not store in direct sunlight.

Keep under lock and key.

##### Container and packaging materials for safe handling

Glass

Iron

---

## 8. Exposure controls/personal protection

### Control parameters

### Exposure controls

#### Appropriate engineering controls

Do not use in areas without adequate ventilation.

Eye wash station should be available.

Washing facilities should be available.

#### Individual protection measures

##### Respiratory protection

Wear respiratory protection.

##### Hand protection

Wear protective gloves.

##### Eye protection

Wear eye/face protection.

---

## 9. Physical and Chemical Properties

### Information on basic physical and chemical properties

Physical state: Liquid

Color: Colorless to pale yellow

Odor: Characteristic odor

Melting point/Freezing point: -59°C

Boiling point or initial boiling point: (2-Dimethylaminoethanol)135°C

Boiling range data is not available.

Flammability (gases, liquids and solids) data is not available.

Lower and upper explosion limit/flammability limit:

Lower explosion limit: 1.6 vol %



Upper explosion limit: 11.9 vol %  
Flash point: (2-Dimethylaminoethanol)(C.C.)38°C  
Auto-ignition temperature: (2-Dimethylaminoethanol)220°C  
Decomposition temperature data is not available.  
pH data is not available.  
Kinematic viscosity data is not available.  
Solubility:  
Solubility in water: Miscible  
n-Octanol/water partition coefficient: log Pow-0.55  
Vapor pressure: 612 Pa (20°C)  
Density and/or relative density: 0.89  
Relative vapor density (Air=1): 3.03  
No Particle characteristics data is not available.

---

## 10. Stability and Reactivity

### Reactivity

Not available.

### Chemical stability

Stable under normal storage/handling conditions.

### Possibility of hazardous reactions

Decomposes on burning. This produces toxic gases including nitrogen oxides. The substance is a medium strong base. Reacts violently with acids, acid chlorides, oxidants and isocyanates. This generates fire and explosion hazard. Attacks copper and its alloys. (ICSC 0654)

### Conditions to avoid

Contact with incompatible materials.

Contact with fire source.

### Incompatible materials

Acids, Oxidizing agents, Acid chlorides, Isocyanates

### Hazardous decomposition products

Carbon oxides, Nitrogen oxides

---

## 11. Toxicological Information

### Information on toxicological effects

#### Acute toxicity

##### Acute toxicity (Inhalation)

[GHS Cat. Japan, base data]

(2-Dimethylaminoethanol)

vapor: rat LC50=6mg/L/4hr (IUCLID, 2000)

#### Irritant properties

##### Skin corrosion/irritation

[GHS Cat. Japan, base data]

(2-Dimethylaminoethanol)

rabbit corrosive (IUCLID, 2000)

##### Serious eye damage/irritation

[GHS Cat. Japan, base data]

(2-Dimethylaminoethanol)

rabbit severe irritation (IUCLID, 2000)

#### Sensitization

##### Skin sensitization

[GHS Cat. Japan, base data]

(2-Dimethylaminoethanol)



cat. 1; IUCLID, 2000

Mutagenic effects data is not available.

Carcinogenic effects data is not available.

Reproductive toxicity data is not available.

#### STOT

STOT-single exposure data is not available.

STOT-repeated exposure

[cat.2]

[GHS Cat. Japan, base data]

(2-Dimethylaminoethanol)

respiratory system (IUCLID, 2000)

Aspiration hazard data is not available.

---

## 12. Ecological Information

### Ecotoxicity

#### Aquatic toxicity

Harmful to aquatic life

Hazardous to the aquatic environment (Acute)

[GHS Cat. Japan, base data]

(2-Dimethylaminoethanol)

Algae (*Scenedesmus* sp.) EC50=35mg/L/72hr (OECD SIDS, 1996)

#### Water solubility

(2-Dimethylaminoethanol)

miscible (ICSC, 2005)

#### Persistence and degradability

(2-Dimethylaminoethanol)

Degrade rapidly (BOD\_Degradation : 60.5% (CSCL DB, 1976))

#### Bioaccumulative potential

(2-Dimethylaminoethanol)

log Kow=-0.94 (EST, PHYSPROP DB, 2018)

#### Mobility in soil

Mobility in soil data is not available.

#### Other adverse effects

Ozone depleting chemical data is not available.

---

## 13. Disposal considerations

Description of waste residues and information on their safe handling and methods of disposal, including the disposal of any contaminated packaging

#### Waste treatment methods

Avoid release to the environment (- if this is not the intended use).

Dispose of contents/container in accordance with local/national regulation.

---

## 14. Transport Information

UN No. or ID No.: 2051

UN Proper Shipping Name :

2-DIMETHYLAMINOETHANOL

Class or division (Transport hazard class) : 8

Subsidiary hazard(s) : 3

Packing group : II

ERG GUIDE No.: 132

IMDG Code (International Maritime Dangerous Goods Regulations)



UN No.: 2051  
Proper Shipping Name :  
2-DIMETHYLAMINOETHANOL  
Class or division : 8  
Subsidiary hazard(s) : 3  
Packing group : II

**IATA Dangerous Goods Regulations**

UN No.: 2051  
Proper Shipping Name :  
2-DIMETHYLAMINOETHANOL  
Class or division : 8  
Subsidiary hazard(s) : 3  
Hazard labels : Corrosive & Flamm. liquid  
Packing group : II

**Environmental hazards**

MARPOL Annex III – Prevention of pollution by harmful substances

Marine pollutants (yes/no) : no

**Maritime transport in bulk according to IMO instruments**

Noxious Liquid ; Cat. Y  
2-Dimethylaminoethanol

---

**15. Regulatory Information**

Safety, health and environmental regulations/legislation specific for the substance or mixture

Chemicals listed in TSCA Inventory

2-Dimethylaminoethanol

**Other regulatory information**

Ensure this material in compliance with federal requirements and ensure conformity to local regulations.

---

**16. Other information****GHS classification and labelling**

Flam. Liq. 3: H226 Flammable liquid and vapor  
Acute Tox. 3: H331 Toxic if inhaled  
Skin Corr. 1: H314 Causes severe skin burns and eye damage  
Eye Dam. 1: H318 Causes serious eye damage  
Skin Sens. 1: H317 May cause an allergic skin reaction  
STOT RE 2: H373 May cause damage to organs through prolonged or repeated exposure  
Aquatic Acute 3: H402 Harmful to aquatic life

**Reference Book**

Globally Harmonized System of classification and labelling of chemicals, (7th revised edition, 2017), UN  
Recommendations on the TRANSPORT OF DANGEROUS GOODS 20th edit., 2017 UN  
IMDG Code, 2018 Edition (Incorporating Amendment 39-18)  
IATA Dangerous Goods Regulations (61th Edition) 2020  
Classification, labelling and packaging of substances and mixtures (Table 3 ECNO6182012)  
2016 EMERGENCY RESPONSE GUIDEBOOK (US DOT)  
2020 TLVs and BEIs. (ACGIH)  
<http://monographs.iarc.fr/ENG/Classification/index.php>  
Supplier's data/information

**General Disclaimer**

This data sheet was created based on the information we currently have and may be revised according to new information. In addition, the precautions apply only to normal handling,



and in the case of special handling, please make adequate countermeasure to maintain your safety.

The data given here is based on current knowledge and experience. The purpose of this Safety Data Sheet is to describe the products in terms of their safety requirements. The data does not signify any warranty with regard to the products' properties.

The GHS classification data given here is based on current Japan official data (NITE published in 2019).