

2-(DIMETHYLAMINO)-ETHANOL FOR SYNTHESIS MSDS



CAS-No.: 108-01-0 MSDS

MATERIAL SAFETY DATA SHEET (MSDS)

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product form : Substance
:
EC Index-No. : 603-047-00-0
EC-No. : 203-542-8
CAS-No. : 108-01-0
Product code : 3390D
Formula : C₄H₁₁NO
Synonyms : N,N-Dimethylethanolamine

1.2. Relevant identified uses of the substance or mixture and uses advised against

1.2.1. Relevant identified uses

Industrial/Professional use spec : Industrial
For professional use only

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

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SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Flammable liquids, H226
Category 3
Acute toxicity (oral), H302
Category 4
Acute toxicity (dermal), H312
Category 4
Acute toxicity (inhal.), H332
Category 4
Skin corrosion/irritation, H314
Category 1B

Full text of H statements : see section 16

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Classification according to Directive 67/548/EEC [DSD] or 1999/45/EC [DPD]

Xn; R20/21/22

C; R34

R10

Full text of R-phrases: see section 16

Adverse physicochemical, human health and environmental effects

No additional information available

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP) :



GHS02

GHS05

GHS07

Signal word (CLP) : Danger

Hazard statements (CLP) : H226 - Flammable liquid and vapour.
H302+H312+H332 - Harmful if swallowed, in contact with skin or if inhaled
H314 - Causes severe skin burns and eye damage.

Precautionary statements (CLP) : 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/doctor

2.3. Other hazards

No additional information available

SECTION 3: Composition/information on ingredients

3.1. Substances

Name : 2-(DIMETHYLAMINO)-ETHANOL FOR SYNTHESIS
CAS-No. : 108-01-0
EC-No. : 203-542-8
EC Index-No. : 603-047-00-0

Full text of R- and H-statements: see section 16

3.2. Mixtures

Not applicable

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SECTION 4: First aid measures

4.1. Description of first aid measures

| | |
|---------------------------------------|---|
| First-aid measures after inhalation | : Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/doctor. |
| First-aid measures after skin contact | : Immediately call a POISON CENTER/doctor. Wash with plenty of water/.... Wash contaminated clothing before reuse. |
| First-aid measures after eye contact | : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/doctor. |
| First-aid measures after ingestion | : Rinse mouth. Call a POISON CENTER/doctor if you feel unwell. Do NOT induce vomiting. |

4.2. Most important symptoms and effects, both acute and delayed

| | |
|-------------------------------------|--|
| Symptoms/effects | : Causes severe skin burns and eye damage. |
| Symptoms/effects after inhalation | : Harmful if inhaled. |
| Symptoms/effects after skin contact | : Harmful in contact with skin. |
| Symptoms/effects after ingestion | : Harmful if swallowed. |

4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

| | |
|--------------------------------|--|
| Suitable extinguishing media | : Carbon dioxide. Dry powder. Foam. Water spray. |
| Unsuitable extinguishing media | : Do not use a heavy water stream. |

5.2. Special hazards arising from the substance or mixture

| | |
|------------------|--|
| Fire hazard | : Flammable liquid and vapour. |
| Explosion hazard | : May form flammable/explosive vapour-air mixture. |

5.3. Advice for firefighters

| | |
|--------------------------------|---|
| Protection during firefighting | : Do not enter fire area without proper protective equipment, including respiratory protection. |
|--------------------------------|---|

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

| | |
|------------------|---|
| General measures | : Remove ignition sources. Use special care to avoid static electric charges. No open flames. No smoking. |
|------------------|---|

6.1.1. For non-emergency personnel

| | |
|----------------------|-----------------------------------|
| Emergency procedures | : Evacuate unnecessary personnel. |
|----------------------|-----------------------------------|

6.1.2. For emergency responders

| | |
|----------------------|--|
| Protective equipment | : Use personal protective equipment as required. |
| Emergency procedures | : Ventilate area. |

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

| | |
|-------------------------|--|
| Methods for cleaning up | : Collect spillage. On land, sweep or shovel into suitable containers. |
|-------------------------|--|

6.4. Reference to other sections

No additional information available

SECTION 7: Handling and storage

7.1. Precautions for safe handling

| | |
|-----------------------------------|---|
| Additional hazards when processed | : Handle empty containers with care because residual vapours are flammable. |
|-----------------------------------|---|

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| | |
|-------------------------------|---|
| Precautions for safe handling | : Avoid contact with skin and eyes. |
| Hygiene measures | : Do not eat, drink or smoke when using this product. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. |

7.2. Conditions for safe storage, including any incompatibilities

| | |
|------------------------|---|
| Technical measures | : Proper grounding procedures to avoid static electricity should be followed. Ground/bond container and receiving equipment. Use explosion-proof electrical/ventilating/lighting equipment. Comply with applicable regulations. |
| Storage conditions | : Keep container tightly closed. Store in a well-ventilated place. |
| Incompatible materials | : Heat sources. |

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

No additional information available

8.2. Exposure controls

| | |
|--------------------------|--|
| Hand protection | : Protective gloves |
| Eye protection | : Chemical goggles or face shield |
| Skin and body protection | : Wear suitable protective clothing |
| Respiratory protection | : [In case of inadequate ventilation] wear respiratory protection. |

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

| | |
|--|-----------------------------------|
| Physical state | : Liquid |
| Molecular mass | : 89.14 g/mol |
| Colour | : Clear Colorless. |
| Odour | : amine like. |
| Odour threshold | : No data available |
| pH | : 10.5 - 11.0 at 100 g/l at 20 °C |
| Relative evaporation rate (butylacetate=1) | : No data available |
| Melting point | : -70 °C |
| Freezing point | : No data available |
| Boiling point | : 134 - 136 °C |
| Flash point | : 39 °C |
| Auto-ignition temperature | : 295 °C |
| Decomposition temperature | : No data available |
| Flammability (solid, gas) | : Flammable liquid and vapour. |

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| | |
|----------------------------------|----------------------------|
| Vapour pressure | : 8.16 hPa at 20 °C |
| Relative vapour density at 20 °C | : 3.03 |
| Relative density | : No data available |
| Density | : 0.89 g/cm ³ |
| Solubility | : Water: Miscible in water |
| Log Pow | : 0.55 |
| Viscosity, kinematic | : No data available |
| Viscosity, dynamic | : No data available |
| Explosive properties | : No data available |
| Oxidising properties | : No data available |
| Explosive limits | : 0.014 - 0.122 vol % |

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

No additional information available

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No additional information available

10.4. Conditions to avoid

Open flame. Heat. Sparks.

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

No additional information available

SECTION 11: Toxicological information

11.1. Information on toxicological effects

| | |
|-----------------------------------|---|
| Acute toxicity | : Oral: Harmful if swallowed. Dermal: Harmful in contact with skin. Inhalation: Harmful if inhaled. |
| Skin corrosion/irritation | : Causes severe skin burns and eye damage. pH: 10.5 - 11.0 at 100 g/l at 20 °C |
| Serious eye damage/irritation | : Serious eye damage, category 1, implicit pH: 10.5 - 11.0 at 100 g/l at 20 °C |
| Respiratory or skin sensitisation | : Not classified |
| Germ cell mutagenicity | : Not classified |
| Carcinogenicity | : Not classified |

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Reproductive toxicity : Not classified
STOT-single exposure : Not classified

STOT-repeated exposure : Not classified

Aspiration hazard : Not classified

Potential adverse human health effects and symptoms : Harmful if swallowed. Harmful in contact with skin.

SECTION 12: Ecological information

12.1. Toxicity

No additional information available

12.2. Persistence and degradability

No additional information available

12.3. Bioaccumulative potential

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|--|------|
| Log Pow | 0.55 |

12.4. Mobility in soil

No additional information available

12.5. Results of PBT and vPvB assessment

No additional information available

12.6. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Product/Packaging disposal recommendations : Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.
Additional information : Handle empty containers with care because residual vapours are flammable.

SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

14.1. UN number

UN-No. (ADR) : 2051
UN-No. (IMDG) : 2051
UN-No. (IATA) : 2051

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UN-No. (ADN) : 2051
UN-No. (RID) : 2051

14.2. UN proper shipping name

Proper Shipping Name (ADR) : 2-DIMETHYLAMINOETHANOL
Proper Shipping Name (IMDG) : 2-DIMETHYLAMINOETHANOL
Proper Shipping Name (IATA) : 2-Dimethylaminoethanol
Proper Shipping Name (ADN) : 2-DIMETHYLAMINOETHANOL
Proper Shipping Name (RID) : 2-DIMETHYLAMINOETHANOL
Transport document description (ADR) : UN 2051 2-DIMETHYLAMINOETHANOL, 8 (3), II, (D/E)
Transport document description (IMDG) : UN 2051 2-DIMETHYLAMINOETHANOL, 8 (3), II (31°C o.c.)
Transport document description (IATA) : UN 2051 2-Dimethylaminoethanol, 8 (3), II
Transport document description (ADN) : UN 2051 2-DIMETHYLAMINOETHANOL, 8 (3), II
Transport document description (RID) : UN 2051 2-DIMETHYLAMINOETHANOL, 8 (3), II

14.3. Transport hazard class(es)

ADR

Transport hazard class(es) (ADR) : 8 (3)
Danger labels (ADR) : 8, 3



IMDG

Transport hazard class(es) (IMDG) : 8 (3)
Danger labels (IMDG) : 8, 3



IATA

Transport hazard class(es) (IATA) : 8 (3)
Hazard labels (IATA) : 8, 3



ADN

Transport hazard class(es) (ADN) : 8 (3)
Danger labels (ADN) : 8, 3



RID

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Transport hazard class(es) (RID) : 8 (3)
Danger labels (RID) : 8, 3



14.4. Packing group

Packing group (ADR) : II
Packing group (IMDG) : II
Packing group (IATA) : II
Packing group (ADN) : II
Packing group (RID) : II

14.5. Environmental hazards

Dangerous for the environment : No
Marine pollutant : No
Other information : No supplementary information available

14.6. Special precautions for user

- Overland transport

Classification code (ADR) : CF1
Limited quantities (ADR) : 1I
Excepted quantities (ADR) : E2
Packing instructions (ADR) : P001, IBC02
Mixed packing provisions (ADR) : MP15
Portable tank and bulk container instructions (ADR) : T7
Portable tank and bulk container special provisions (ADR) : TP2
Tank code (ADR) : L4BN
Vehicle for tank carriage : FL
Transport category (ADR) : 2
Special provisions for carriage - Operation (ADR) : S2
Hazard identification number (Kemler No.) : 83
Orange plates :



Tunnel restriction code (ADR) : D/E
EAC code : •2W
APP code : A(fl)

- Transport by sea

Packing instructions (IMDG) : P001
IBC packing instructions (IMDG) : IBC02
Tank instructions (IMDG) : T7
Tank special provisions (IMDG) : TP2
EmS-No. (Fire) : F-E
EmS-No. (Spillage) : S-C
Stowage category (IMDG) : A
Flash point (IMDG) : 31°C o.c.

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Properties and observations (IMDG) : Colourless, flammable liquid with a fishy odour. Flashpoint: 31°C o.c. Miscible with water. Causes burns to skin, eyes and mucous membranes.

MFAG-No : 132

- Air transport

PCA Excepted quantities (IATA) : E2
PCA Limited quantities (IATA) : Y840
PCA limited quantity max net quantity (IATA) : 0.5L
PCA packing instructions (IATA) : 851
PCA max net quantity (IATA) : 1L
CAO packing instructions (IATA) : 855
CAO max net quantity (IATA) : 30L
ERG code (IATA) : 8F

- Inland waterway transport

Classification code (ADN) : CF1
Limited quantities (ADN) : 1 L
Excepted quantities (ADN) : E2
Carriage permitted (ADN) : T
Equipment required (ADN) : PP, EP, EX, A
Ventilation (ADN) : VE01
Number of blue cones/lights (ADN) : 1

- Rail transport

Classification code (RID) : CF1
Limited quantities (RID) : 1L
Excepted quantities (RID) : E2
Packing instructions (RID) : P001, IBC02
Mixed packing provisions (RID) : MP15
Portable tank and bulk container instructions (RID) : T7
Portable tank and bulk container special provisions (RID) : TP2
Tank codes for RID tanks (RID) : L4BN
Transport category (RID) : 2
Colis express (express parcels) (RID) : CE6
Hazard identification number (RID) : 83

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

SECTION 15: Regulatory information

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

15.1.1. EU-Regulations

No REACH Annex XVII restrictions

2-(DIMETHYLAMINO)-ETHANOL FOR SYNTHESIS is not on the REACH Candidate List

2-(DIMETHYLAMINO)-ETHANOL FOR SYNTHESIS is not on the REACH Annex XIV List

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15.1.2. National regulations

Germany

Reference to AwSV : Water hazard class (WGK) 1, low hazard to water (Classification according to AwSV; ID No. 738)

12th Ordinance Implementing the Federal Immission Control Act - 12.BImSchV : Is not subject of the 12. BImSchV (Hazardous Incident Ordinance)

Netherlands

SZW-lijst van kankerverwekkende stoffen : The substance is not listed

SZW-lijst van mutagene stoffen : The substance is not listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Borstvoeding : The substance is not listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Vruchtbaarheid : The substance is not listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Ontwikkeling : The substance is not listed

Denmark

Class for fire hazard : Class II-1

Store unit : 5 liter

Classification remarks : R10 <H226;H302+H312+H332;H314>; Emergency management guidelines for the storage of flammable liquids must be followed

Recommendations Danish Regulation : Young people below the age of 18 years are not allowed to use the product
Pregnant/breastfeeding women working with the product must not be in direct contact with the product

15.2. Chemical safety assessment

No additional information available

SECTION 16: Other information

Full text of R-, H- and EUH-statements:

| | |
|---------------------------|--|
| Acute Tox. 4 (Dermal) | Acute toxicity (dermal), Category 4 |
| Acute Tox. 4 (Inhalation) | Acute toxicity (inhal.), Category 4 |
| Acute Tox. 4 (Oral) | Acute toxicity (oral), Category 4 |
| Flam. Liq. 3 | Flammable liquids, Category 3 |
| Skin Corr. 1B | Skin corrosion/irritation, Category 1B |
| H226 | Flammable liquid and vapour. |
| H302 | Harmful if swallowed. |
| H312 | Harmful in contact with skin. |
| H314 | Causes severe skin burns and eye damage. |
| H332 | Harmful if inhaled. |
| R10 | Flammable |
| R20/21/22 | Harmful by inhalation, in contact with skin and if swallowed |
| R34 | Causes burns |
| C | Corrosive |

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| | |
|----|---------|
| Xn | Harmful |
|----|---------|

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product