

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

1.1. Product identifier

Product form	: Substance
Trade name	: Dimethylaminoethanol (DMAE)
EC Index-No.	: 603-047-00-0
EC-No.	: 203-542-8
CAS-No.	: 108-01-0
Product code	: 01458
Formula	: C ₄ H ₁₁ NO
Synonyms	: Deanol / Dimethylaminoethanol / N,N-Dimethylethanolamine / Dimethylethanolamine / Ethanol, 2-(dimethylamino)- / Ethanol, 2-dimethylamino- / Ethanolamine, N,N-dimethyl- / N,N-Dimethylamino-2-ethanol / 2-Dimethylaminoethanol / DIMETHYL MEA / Dimethylaminoethanol, 2- / N,N-Dimethylaminoethanol
Product group	: Substance

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

1.2.1. Relevant identified uses

No additional information available

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

Supplier

Polysciences Inc
400 Valley Road
18976 Warrington, PA - United States
T (215)-343-6484 - F (215)-343-0214
info@polysciences.com - www.polysciences.com

1.4. Emergency telephone number

Emergency number : (215)-378-4526

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

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

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

Full text of H statements : see section 16

Specific concentration limits:

(C >= 5)

STOT SE 3, H335

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 - Harmful if swallowed
H312 - Harmful in contact with skin

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Precautionary statements (CLP)	: H332 - Harmful if inhaled H314 - Causes severe skin burns and eye damage P233 - Keep container tightly closed P210 - Keep away from heat/sparks/open flames/hot surfaces. - No smoking P240 - Ground/bond container and receiving equipment P241 - Use explosion-proof electrical/ventilating/lighting equipment P242 - Use only non-sparking tools P243 - Take precautionary measures against static discharge P271 - Use only outdoors or in a well-ventilated area P280 - Wear protective gloves/protective clothing/eye protection/face protection P260 - Do not breathe dust/fume/gas/mist/vapours/spray P264 - Wash hands, forearms and face thoroughly after handling P270 - Do not eat, drink or smoke when using this product P304+P340 - IF INHALED: remove victim to fresh air and keep at rest in a position comfortable for breathing P312 - Call a POISON CENTER or doctor/physician if you feel unwell P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing P302+P352 - IF ON SKIN: Wash with plenty of soap and water P310 - Immediately call a POISON CENTER or doctor/physician P303+P361+P353 - IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower P362+P364 - Take off contaminated clothing and wash it before reuse P301+P312 - IF SWALLOWED: call a POISON CENTER or doctor/physician if you feel unwell P301+P330+P331 - IF SWALLOWED: rinse mouth. Do NOT induce vomiting P321 - Specific treatment (see supplemental first aid instruction on this label) P330 - Rinse mouth P370+P378 - In case of fire: Use ... for extinction P403+P235 - Store in a well-ventilated place. Keep cool P405 - Store locked up P501 - Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation
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2.3. Other hazards

No additional information available

SECTION 3: Composition/information on ingredients

3.1. Substances

Substance type : Substance

Name	Product identifier	%
Dimethylaminoethanol (DMAE)	(CAS-No.) 108-01-0 (EC-No.) 203-542-8 (EC Index-No.) 603-047-00-0	<= 100

Full text of H-statements: see section 16

3.2. Mixtures

Not applicable

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general	: Call a physician immediately.
First-aid measures after inhalation	: Remove person to fresh air and keep comfortable for breathing. Call a poison center or a doctor if you feel unwell. Move the affected person away from the contaminated area and into the fresh air.
First-aid measures after skin contact	: After contact with skin, take off immediately all contaminated clothing, and wash immediately with plenty of water. Get immediate medical advice/attention. Rinse skin with water/shower. Remove/Take off immediately all contaminated clothing. Call a physician immediately.
First-aid measures after eye contact	: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Remove contact lenses, if present and easy to do. Continue rinsing. Rinse cautiously with water for several minutes. Call a physician immediately.
First-aid measures after ingestion	: Rinse mouth out with water. Do NOT induce vomiting. Get immediate medical advice/attention. Rinse mouth. Do not induce vomiting. Call a physician immediately.

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

Symptoms/effects after skin contact	: Burns.
Symptoms/effects after eye contact	: Serious damage to eyes.
Symptoms/effects after ingestion	: Burns.

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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 : dry chemical powder, alcohol-resistant foam, carbon dioxide (CO₂). Sand/earth. Water spray. Dry powder. Foam. Carbon dioxide.

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.

Hazardous decomposition products in case of fire : Toxic fumes may be released.

5.3. Advice for firefighters

Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Eliminate every possible source of ignition. Notify authorities if product enters sewers or public waters. Avoid contact with skin and eyes. Do not handle until all safety precautions have been read and understood. Clean up any spills as soon as possible, using an absorbent material to collect it.

6.1.1. For non-emergency personnel

Protective equipment : Wear recommended personal protective equipment.

Emergency procedures : Only qualified personnel equipped with suitable protective equipment may intervene. Do not breathe dust, fume, gas, mist, spray, vapours. Do not get in eyes, on skin, or on clothing. No open flames, no sparks, and no smoking.

6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

6.2. Environmental precautions

Prevent liquid from entering sewers, watercourses, underground or low areas. Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Take up liquid spill into absorbent material. Notify authorities if product enters sewers or public waters.

Other information : Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

For further information refer to section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Ground/bond container and receiving equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Flammable vapours may accumulate in the container. Use explosion-proof equipment. Wear personal protective equipment. Use only outdoors or in a well-ventilated area. Do not get in eyes, on skin, or on clothing. Do not breathe dust, fume, gas, mist, spray, vapours.

Hygiene measures : Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Ground/bond container and receiving equipment.

Storage conditions : Store in a well-ventilated place. Keep cool. Keep container tightly closed. Store locked up.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Dimethylaminoethanol (DMAE) (108-01-0)		
Croatia	GVI (granična vrijednost izloženosti) (mg/m ³)	7.4 mg/m ³

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Dimethylaminoethanol (DMAE) (108-01-0)		
Croatia	GVI (granična vrijednost izloženosti) (ppm)	2 ppm
Croatia	KGVI (kratkotrajna granična vrijednost izloženosti) (mg/m ³)	22 mg/m ³
Croatia	KGVI (kratkotrajna granična vrijednost izloženosti) (ppm)	6 ppm
Latvia	OEL TWA (mg/m ³)	5 mg/m ³
United Kingdom	WEL TWA (mg/m ³)	7.4 mg/m ³
United Kingdom	WEL TWA (ppm)	2 ppm
United Kingdom	WEL STEL (mg/m ³)	22 mg/m ³
United Kingdom	WEL STEL (ppm)	6 ppm
Australia	TWA (mg/m ³)	7.4 mg/m ³
Australia	TWA (ppm)	2 ppm
Australia	STEL (mg/m ³)	22 mg/m ³
Australia	STEL (ppm)	6 ppm

8.2. Exposure controls

Appropriate engineering controls:

Ensure good ventilation of the work station.

Hand protection:

Protective gloves

Eye protection:

Safety glasses

Skin and body protection:

Wear suitable protective clothing

Respiratory protection:

Wear respiratory protection

Environmental exposure controls:

Avoid release to the environment.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Appearance	: Colorless liquid.
Colour	: Colourless.
Odour	: ammonia-like.
Odour threshold	: No data available
pH	: 11 - 12 (conc: 10 % (solution))
Relative evaporation rate (butylacetate=1)	: 0.48
Melting point	: -59 °C
Freezing point	: No data available
Boiling point	: 135 °C (at 758 mmHg)
Flash point	: 41 °C (open cup)
Auto-ignition temperature	: 295 °C
Decomposition temperature	: No data available
Flammability (solid, gas)	: Not applicable
Vapour pressure	: 4 mm Hg (at 20 °C)
Relative vapour density at 20 °C	: No data available
Relative density	: No data available
Density	: 0.886 g/cm ³ (at 20 °C)
Solubility	: No data available
Log Pow	: -0.55 (at 23 °C)
Viscosity, kinematic	: No data available

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Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidising properties	: No data available
Explosive limits	: No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

Flammable liquid and vapour.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

Avoid contact with hot surfaces. Heat. No flames, no sparks. Eliminate all sources of ignition.

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

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.

Dimethylaminoethanol (DMAE) (108-01-0)	
LD50 oral rat	1803 mg/kg
LD50 dermal rabbit	1220 mg/kg
LC50 inhalation rat (ppm)	1641 ppm/4h

Skin corrosion/irritation : Causes severe skin burns and eye damage.

pH: 11 - 12 (conc: 10 % (solution))

Serious eye damage/irritation : Serious eye damage, category 1, implicit

pH: 11 - 12 (conc: 10 % (solution))

Respiratory or skin sensitisation : Not classified

Germ cell mutagenicity : Not classified

Carcinogenicity : Not classified

Reproductive toxicity : Not classified

STOT-single exposure : Not classified

STOT-repeated exposure : Not classified

Aspiration hazard : Not classified

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : Before neutralisation, the product may represent a danger to aquatic organisms.

Dimethylaminoethanol (DMAE) (108-01-0)	
LC50 fish 1	81 mg/l (Exposure time: 96 h - Species: Pimephales promelas [static])
EC50 Daphnia 1	98.77 mg/l (Exposure time: 48 h - Species: Daphnia magna)
EC50 72h algae (1)	35 mg/l (Species: Desmodesmus subspicatus)

12.2. Persistence and degradability

No additional information available

12.3. Bioaccumulative potential

Dimethylaminoethanol (DMAE) (108-01-0)	
Log Pow	-0.55 (at 23 °C)

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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

Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.
Additional information : Flammable vapours may accumulate in the container.

SECTION 14: Transport information

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

14.1. UN number

UN-No. (ADR) : Not applicable
UN-No. (IMDG) : 2051
UN-No. (IATA) : 2051
UN-No. (ADN) : Not applicable
UN-No. (RID) : Not applicable

14.2. UN proper shipping name

Proper Shipping Name (ADR) : Not applicable
Proper Shipping Name (IMDG) : 2-DIMETHYLAMINOETHANOL
Proper Shipping Name (IATA) : 2-Dimethylaminoethanol
Proper Shipping Name (ADN) : Not applicable
Proper Shipping Name (RID) : Not applicable
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) (3), II

14.3. Transport hazard class(es)

ADR

Transport hazard class(es) (ADR) : Not applicable

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) : Not applicable

RID

Transport hazard class(es) (RID) : Not applicable

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14.4. Packing group

Packing group (ADR)	: Not applicable
Packing group (IMDG)	: II
Packing group (IATA)	: II
Packing group (ADN)	: Not applicable
Packing group (RID)	: Not applicable

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

Not applicable

- Transport by sea

Limited quantities (IMDG)	: 1 L
Excepted quantities (IMDG)	: E2
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.
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.

- 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

Not applicable

- Rail transport

Not applicable

14.7. Transport in bulk according to Annex II of Marpol 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

Dimethylaminoethanol (DMAE) is not on the REACH Candidate List

Dimethylaminoethanol (DMAE) is not on the REACH Annex XIV List

15.1.2. National regulations

Listed on the AICS (Australian Inventory of Chemical Substances)

Listed on the Canadian DSL (Domestic Substances List)

Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)

Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

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Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory
Listed on the Japanese ISHL (Industrial Safety and Health Law)
Listed on the Korean ECL (Existing Chemicals List)
Listed on NZIoC (New Zealand Inventory of Chemicals)
Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)
Listed on the United States TSCA (Toxic Substances Control Act) inventory
Listed on INSQ (Mexican National Inventory of Chemical Substances)
Listed on Turkish inventory of chemical
Taiwan Chemical Substance Inventory

Germany

VwVwS Annex reference : Water hazard class (WGK) 1, low hazard to waters (Classification according to VwVwS, Annex 1 or 2; 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 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

SDS EU (REACH Annex II)

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