

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 03.05.2018

Version number 3

Revision: 28.08.2017

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

1.1 Product identifier

- **Trade name:** Dimethylaminoethanol
- **Synonyma** DMAE; N,N-Dimethylethanolamine



- **Article number:** 20130
- **CAS Number:**
108-01-0
- **EC number:**
203-542-8
- **Index number:**
603-047-00-0

- **1.2 Relevant identified uses of the substance or mixture and uses advised against**
No further relevant information available.

- **Application of the substance / the mixture** Laboratory chemicals

1.3 Details of the supplier of the safety data sheet

- **Manufacturer/Supplier:**
SERVA Electrophoresis GmbH
Carl-Benz-Str. 7
D-69115 Heidelberg
Tel.: +49 6221 13840-0
FAX: +49 6221 13840-10
msds.info@serva.de

- **Information department:** Product Safety department Tel.: +49 6221 13840-35

1.4 Emergency telephone number:

Medical Emergency Information in case of poisoning:
Poison Information Center Mainz - Phone: +49 (0) 6131 19240
(advisory service in German or English language)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

- **Classification according to Regulation (EC) No 1272/2008**



GHS02

Flam. Liq. 3 H226 Flammable liquid and vapour.



GHS06

Acute Tox. 3 H331 Toxic if inhaled.



GHS05

Skin Corr. 1B H314 Causes severe skin burns and eye damage.



GHS07

Acute Tox. 4 H302 Harmful if swallowed.

Acute Tox. 4 H312 Harmful in contact with skin.

(Contd. on page 2)

GB

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 03.05.2018

Version number 3

Revision: 28.08.2017

Trade name: Dimethylaminoethanol

(Contd. of page 1)

STOT SE 3 H335 May cause respiratory irritation.

2.2 Label elements**Labelling according to Regulation (EC) No 1272/2008**

The substance is classified and labelled according to the CLP regulation.

· **Hazard pictograms** GHS02, GHS05, GHS06· **Signal word** Danger**Hazard statements**

H226 Flammable liquid and vapour.

H302+H312 Harmful if swallowed or in contact with skin.

H331 Toxic if inhaled.

H314 Causes severe skin burns and eye damage.

H335 May cause respiratory irritation.

Precautionary statements

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P301+P330+P331 IF SWALLOWED: rinse mouth. Do NOT induce vomiting.

P302+P352 IF ON SKIN: Wash with plenty of soap and water.

P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Labelling of packages where the contents do not exceed 125 ml· **Hazard pictograms** GHS02, GHS05, GHS06· **Signal word** Danger**Hazard statements**

H331 Toxic if inhaled.

H314 Causes severe skin burns and eye damage.

Precautionary statements

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P301+P330+P331 IF SWALLOWED: rinse mouth. Do NOT induce vomiting.

P302+P352 IF ON SKIN: Wash with plenty of soap and water.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

2.3 Other hazards**Results of PBT and vPvB assessment**· **PBT:** PBT - assessment not available.· **vPvB:** vPvB - assessment not available.**SECTION 3: Composition/information on ingredients****3.1 Chemical characterisation: Substances****CAS No. Description:**

108-01-0 2-dimethylaminoethanol

Identification number(s):· **EC number:** 203-542-8· **Index number:** 603-047-00-0**Description:**· **Empirical formula:** C₄H₁₁N O· **MW:** 89.10

GB

(Contd. on page 3)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 03.05.2018

Version number 3

Revision: 28.08.2017

Trade name: Dimethylaminoethanol

(Contd. of page 2)

SECTION 4: First aid measures

- **4.1 Description of first aid measures**
- **General information**
Remove contaminated clothing.
Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
- **After inhalation** Supply fresh air and to be sure call for a doctor.
- **After skin contact**
Immediately wash with water and soap and rinse thoroughly. Consult doctor if you feel unwell.
- **After eye contact**
Rinse opened eye for several minutes under running water. Remove present contact lenses, if easy to do, and continue rinsing. Consult ophthalmologist immediately.
- **After swallowing**
Drink copious amounts of water and provide fresh air. Call for doctor immediately.
Do not induce vomiting - risk of chemical burns!
- **4.2 Most important symptoms and effects, both acute and delayed**
Breathing difficulty
Coughing
- **4.3 Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

SECTION 5: Firefighting measures

- **5.1 Extinguishing media**
- **Suitable extinguishing agents**
CO₂, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **5.2 Special hazards arising from the substance or mixture**
Vapours can form flammable and explosive mixtures with air.
In case of fire, the following can be formed, but not limited to:
Nitrogen oxides (NO_x)
Carbon monoxide and carbon dioxide
- **5.3 Advice for firefighters**
- **Protective equipment:** Wear self-contained respiratory protective device.

SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures**
Wear protective clothing.
Ensure adequate ventilation
- **6.2 Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
- **6.3 Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Dispose contaminated material as waste according to item 13.
- **6.4 Reference to other sections**
See Section 7 for information on safe handling
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

SECTION 7: Handling and storage

- **7.1 Precautions for safe handling** Ensure good ventilation/exhaustion at the workplace.
- **Information about protection against explosions and fires:**
Keep ignition sources away - Do not smoke.
Protect against electrostatic charges.

(Contd. on page 4)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 03.05.2018

Version number 3

Revision: 28.08.2017

Trade name: **Dimethylaminoethanol**

(Contd. of page 3)

- **7.2 Conditions for safe storage, including any incompatibilities**
- **Storage**
- **Requirements to be met by storerooms and receptacles:** Store only in the original receptacle.
- **Information about storage in one common storage facility:** Store away from oxidising agents.
- **Further information about storage conditions:**
Keep receptacle tightly sealed.
Store under lock and key and with access restricted to technical experts or their assistants only.
- **7.3 Specific end use(s)** No further relevant information available.

SECTION 8: Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see item 7.

8.1 Control parameters

- **Components with limit values that require monitoring at the workplace:**

108-01-0 2-dimethylaminoethanol (80-100%)

WEL Short-term value: 22 mg/m³, 6 ppmLong-term value: 7.4 mg/m³, 2 ppm

· DNELs

Worker: Long term exposition - systemic effect, inhalation: 7,4 mg/m³

workers: long term exposure-systemic effects, dermal: 1,04 mg/kg

· PNECs

PNEC fresh water: 0,0661 mg/l

PNEC fresh water sediment: 0,0529 mg/kg

PNEC marine water: 0,00661 mg/l

PNEC soil: 0,0177 mg/kg

PNEC sewage plant: 10 mg/l

- **Additional information:** The lists that were valid during the creation were used as basis.

8.2 Exposure controls

· Personal protective equipment

· General protective and hygienic measures

Keep away from foodstuffs, beverages and feed.

Store protective clothing separately.

Immediately remove all soiled and contaminated clothing

Wash hands before breaks and at the end of work.

Avoid contact with the eyes and skin.

· Breathing equipment:

Short term filter device:

Filter A/P2.

· Protection of hands:

Rubber gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

· Material of gloves

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

· Penetration time of glove material

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

- **For the permanent contact of a maximum of 15 minutes gloves made of the following materials are suitable:**

Butyl rubber, BR

(Contd. on page 5)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 03.05.2018

Version number 3

Revision: 28.08.2017

Trade name: Dimethylaminoethanol

(Contd. of page 4)

Nitrile rubber, NBR

- **Eye protection:** Tightly sealed goggles.
- **Body protection:** Protective work clothing.

SECTION 9: Physical and chemical properties

· 9.1 Information on basic physical and chemical properties

· General Information

· Appearance:

Form:	Liquid
Colour:	Colourless
Odour:	Amine-like

· pH-value (100 g/l) at 20 °C: 10.5-11.0

· Change in condition

Melting point/freezing point:	-59 °C
Initial boiling point and boiling range:	132 °C

· Flash point: 31 - 39 °C

· Ignition temperature: 245 °C

· Explosive properties: Product is not explosive. However, formation of explosive air/vapour mixtures are possible.

· Explosion limits:

Lower:	1.6 Vol %
Upper:	11.9 Vol %

· Vapour pressure at 20 °C: 6.12 hPa

· Density at 20 °C: 0.89 g/cm³

· Solubility in / Miscibility with

Water: Fully miscible

· Viscosity:

dynamic at 20 °C:	3.85 mPas
kinematic:	Not determined.

· 9.2 Other information: No further relevant information available.

SECTION 10: Stability and reactivity

- 10.1 Reactivity: No further relevant information available.
- 10.2 Chemical stability
- Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.
- 10.3 Possibility of hazardous reactions: Vapours can form flammable and explosive mixtures with air.
- 10.4 Conditions to avoid: Avoid high temperatures, flames, sparks
- 10.5 Incompatible materials: Acids, strong oxidising agents, isocyanates.
- 10.6 Hazardous decomposition products: In case of fire: See Section 5

SECTION 11: Toxicological information

· 11.1 Information on toxicological effects

· Acute toxicity

Harmful if swallowed or in contact with skin.
Toxic if inhaled.

(Contd. on page 6)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 03.05.2018

Version number 3

Revision: 28.08.2017

Trade name: Dimethylaminoethanol

(Contd. of page 5)

· LD/LC50 values that are relevant for classification:

Oral	LD50	2000 mg/kg (rat)
Dermal	LD50	1220 mg/kg (rbt)
Inhalative	LC50/4h	6 mg/l (rat)
	LC50/96h (static)	> 100 mg/l (Forelle)

- **Primary irritant effect:**
- **Skin corrosion/irritation**
Causes severe skin burns and eye damage.
- **Serious eye damage/irritation**
Causes severe skin burns and eye damage.
- **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.
- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**
- **Germ cell mutagenicity** Based on available data, the classification criteria are not met.
- **Carcinogenicity** Based on available data, the classification criteria are not met.
- **Reproductive toxicity** Based on available data, the classification criteria are not met.
- **STOT-single exposure**
May cause respiratory irritation.
- **STOT-repeated exposure** Based on available data, the classification criteria are not met.
- **Aspiration hazard** Based on available data, the classification criteria are not met.

SECTION 12: Ecological information**· 12.1 Toxicity****· Aquatic toxicity:**

EC50/48h	> 50 mg/l (Daphnia magna)
EC50/72h	> 10 mg/l (Scenedesmus subspicatus)

- **12.2 Persistence and degradability** No further relevant information available.
- **12.3 Bioaccumulative potential** No further relevant information available.
- **12.4 Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:**
Water hazard class 1 (German Regulation) (Assessment by list): slightly hazardous for water.
Do not allow product to reach ground water, water course or sewage system.
- **12.5 Results of PBT and vPvB assessment**
- **PBT:** PBT - assessment not available.
- **vPvB:** vPvB - assessment not available.
- **12.6 Other adverse effects** No further relevant information available.

SECTION 13: Disposal considerations

- **13.1 Waste treatment methods**
- **Recommendation**
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
Disposal must be made according to official regulations.
- **Uncleaned packagings:**
- **Recommendation:**
Disposal of uncleaned packagings must be made according to official regulations in the same manner as the product.
- **Recommended cleansing agent:** Water, if necessary with cleansing agents.

GB

(Contd. on page 7)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 03.05.2018







Version number 3

Revision: 28.08.2017

Trade name: Dimethylaminoethanol

(Contd. of page 6)

SECTION 14: Transport information

· 14.1 UN-Number · ADR, IMDG, IATA	UN2051
· 14.2 UN proper shipping name · ADR · IMDG · IATA	2051 2-DIMETHYLAMINOETHANOL 2-DIMETHYLAMINOETHANOL 2-Dimethylaminoethanol
· 14.3 Transport hazard class(es) · ADR	
 	
· Class · Label	8 Corrosive substances. 8+3
· IMDG	
 	
· Class · Label	8 Corrosive substances. 8/3
· IATA	
 	
· Class · Label	8 Corrosive substances. 8 (3)
· 14.4 Packing group · ADR, IMDG, IATA	II
· 14.5 Environmental hazards: · Marine pollutant:	No
· 14.6 Special precautions for user · Danger code (Kemler): · EMS Number: · Stowage Category	Warning: Corrosive substances. 83 F-E,S-C A
· 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code	Not applicable.
· Transport/Additional information:	
· ADR · Limited quantities (LQ) · Excepted quantities (EQ)	1L Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· Transport category · Tunnel restriction code	2 D/E

(Contd. on page 8)

GB

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 03.05.2018

Version number 3

Revision: 28.08.2017

Trade name: Dimethylaminoethanol

(Contd. of page 7)

- | | |
|-----------------------------------|--|
| · IMDG | |
| · Limited quantities (LQ) | 1L |
| · Excepted quantities (EQ) | Code: E2 |
| | Maximum net quantity per inner packaging: 30 ml |
| | Maximum net quantity per outer packaging: 500 ml |
| · UN "Model Regulation": | UN2051, -DIMETHYLAMINOETHANOL, 8 (3), II |

SECTION 15: Regulatory information

- **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **REGULATION (EC) No 1907/2006 ANNEX XVII Conditions of restriction: 3, 40**
- **National regulations**
- **Water hazard class: Water hazard class 1 (Assessment by list): slightly hazardous for water.**
- **15.2 Chemical safety assessment: A Chemical Safety Assessment has not been carried out.**

SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- **Department issuing SDS: Product safety department**
- **Contact: +49 6221 13840-35**
- **Abbreviations and acronyms:**
RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
ICAO: International Civil Aviation Organisation
PBT: persistent, bioaccumulative, toxic substance (REACH)
vPvB: very persistent, very bioaccumulative substance (REACH)
REACH: Regulation concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals
CLP: Regulation on classification, labelling and packaging of substances and mixtures
ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
GHS: Globally Harmonised System of Classification and Labelling of Chemicals
EINECS: European Inventory of Existing Commercial Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
DNEL: Derived No-Effect Level (REACH)
PNEC: Predicted No-Effect Concentration (REACH)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
Flam. Liq. 3: Flammable liquids – Category 3
Acute Tox. 4: Acute toxicity – Category 4
Acute Tox. 3: Acute toxicity – Category 3
Skin Corr. 1B: Skin corrosion/irritation – Category 1B
STOT SE 3: Specific target organ toxicity (single exposure) – Category 3
- *** Data compared to the previous version altered.**