

## Safety Data Sheet

according to Regulation (EC) No 1907/2006 (REACH)  
Classifications according to Regulation (EC) No 1272/2008.  
Printdate 20 Jan 2025

## 1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

### 1.1. Product name:

N-Methyldiethanolamine

### 1.1. Catalog No.:

686914

### 1.2. Relevant identified uses of the substance or mixture

Identified: Laboratory chemical  
uses: R&D

### 1.3. Uses advised against:

HPC Standards GmbH  
Am Wieseneck 7

04451 Cunnersdorf  
Deutschland

Tel. +49 34291 3372-36  
Fax. +49 34291 3372-39  
contact@hpc-standards.com

### 1.4. Emergency telephone number

HPC Standards Tel. +49 34291 3372-36  
This number is only available during office hours.

## 2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture  
Classification according to Regulation (EC) No 1272/2008  
Eye irritation (Category 2), H319

### 2.2. Label elements

#### 2.2.1. Pictogram



#### 2.2.2.

2.2 Label elements  
Labelling according Regulation (EC) No 1272/2008  
Pictogram Signal word Warning Hazard statement(s)  
H319 Causes serious eye irritation.  
Precautionary statement(s)  
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes.

Remove contact lenses, if present and easy to do. Continue rinsing.

Supplemental Hazard Statements

none

2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

Synonyms : 2,2'-Methyliminodiethanol

MDEA

N,N-Diethanolmethylamin

N,N-Bis(2-hydroxyethyl)methylamine

Formula : C<sub>5</sub>H<sub>13</sub>NO<sub>2</sub>

Molecular weight : 119.16 g/mol

CAS-No. : 105-59-9

EC-No. : 203-312-7

Index-No. : 603-079-00-5

Component Classification Concentration

N-Methyldiethanolamine

Eye Irrit. 2; H319 <= 100 %

#### 3.1.1. Formula

C<sub>5</sub>H<sub>13</sub>NO<sub>2</sub>

#### 3.1.2. Molecular Weight (g/mol)

119.16

#### 3.1.3. CAS-No.

105-59-9

#### 4. FIRST AID MEASURES

##### 4.1 Description of first aid measures

###### General advice

Consult a physician. Show this safety data sheet to the doctor in attendance.

###### If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration.

###### Consult a physician.

###### In case of skin contact

Wash off with soap and plenty of water. Consult a physician.

###### In case of eye contact

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

###### If swallowed

Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult

a physician 4.2 Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

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

No data available

#### 5. FIRE-FIGHTING MEASURES

##### 5.1 Extinguishing media

###### Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

##### 5.2 Special hazards arising from the substance or mixture

Carbon oxides, Nitrogen oxides (NO<sub>x</sub>)

##### 5.3 Advice for firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

##### 5.4 Further information

No data available

#### 6. ACCIDENTAL RELEASE MEASURES

##### 6.1 Personal precautions, protective equipment and emergency procedures

Use personal protective equipment. Avoid breathing vapours, mist or gas. Ensure adequate ventilation.

For personal protection see section 8.

##### 6.2 Environmental precautions

Do not let product enter drains.

##### 6.3 Methods and materials for containment and cleaning up

Soak up with inert absorbent material and dispose of as hazardous waste. Keep in suitable, closed containers for disposal.

##### 6.4 Reference to other sections

For disposal see section 13

#### 7. HANDLING AND STORAGE

##### 7.1 Precautions for safe handling

Avoid contact with skin and eyes. Avoid inhalation of vapour or mist.

For precautions see section 2.2.

7.2 Conditions for safe storage, including any incompatibilities

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

7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

## 9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

a) Appearance Form: clear, viscous liquid

Colour: light yellow

b) Odour ammoniacal

c) Odour Threshold No data available

d) pH 11.5 at 100 g/l at 20 °C

e) Melting

point/freezing point

Melting point/range: -21.3 °C

f) Initial boiling point

and boiling range

246 - 248 °C - lit.

g) Flash point 127 °C - closed cup

h) Evaporation rate No data available

i) Flammability (solid,

gas)

No data available

j) Upper/lower

flammability or

explosive limits

Upper explosion limit: 8.8 %(V)

Lower explosion limit: 1.4 %(V)

k) Vapour pressure 0.01 hPa at 20 °C

l) Vapour density 4.11 - (Air = 1.0)

m) Relative density 1.038 g/cm<sup>3</sup> at 25 °C

n) Water solubility completely miscible

o) Partition coefficient:

n-octanol/water

log Pow: -1.08

p) Auto-ignition

temperature

280 °C

at 1,013 hPa

q) Decomposition

temperature

No data available

r) Viscosity No data available

s) Explosive properties No data available

t) Oxidizing properties No data available 9.2 Other safety information

Dissociation constant 8.52 at 25 °C

Relative vapour

density

4.11 - (Air = 1.0)

## 10. STABILITY AND REACTIVITY

- 10.1 Reactivity  
No data available
- 10.2 Chemical stability  
Stable under recommended storage conditions.
- 10.3 Possibility of hazardous reactions  
No data available
- 10.4 Conditions to avoid  
No data available
- 10.5 Incompatible materials  
Oxidizing agents, Do not store near acids.
- 10.6 Hazardous decomposition products  
Hazardous decomposition products formed under fire conditions. - Carbon oxides, Nitrogen oxides (NOx)  
Other decomposition products - No data available  
In the event of fire: see section 5

## 11. TOXICOLOGICAL INFORMATION

- 11.1 Information on toxicological effects
  - Acute toxicity  
LD50 Oral - Rat - male and female - 4,680 mg/kg  
(OECD Test Guideline 401)
  - Skin corrosion/irritation  
Skin - Rabbit  
Result: No skin irritation  
(OECD Test Guideline 404)
  - Serious eye damage/eye irritation  
Eyes - Rabbit  
Result: Irritating to eyes.  
(OECD Test Guideline 405)
  - Respiratory or skin sensitisation  
Maximisation Test - Guinea pig  
Did not cause sensitisation on laboratory animals.  
(OECD Test Guideline 406)
  - Germ cell mutagenicity  
in vitro assay  
S. typhimurium  
Result: negative
  - Mutagenicity (micronucleus test)  
Mouse - male and female  
Result: negative
  - 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.
  - Reproductive toxicity  
Specific target organ toxicity - single exposure  
No data available
  - Specific target organ toxicity - repeated exposure  
No data available
  - Aspiration hazard  
No data available
  - Additional Information  
RTECS: Not available  
Cough, Shortness of breath, Headache, Nausea, Vomiting, To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

## 12. ECOLOGICAL INFORMATION

- 12.1 Toxicity
  - Toxicity to fish static test LC50 - Leuciscus idus (Golden orfe) - 1,466 mg/l - 96 h
  - Toxicity to daphnia

and other aquatic  
invertebrates

static test EC50 - Daphnia magna (Water flea) - 233 mg/l - 48 h

Toxicity to algae static test EC50 - Desmodesmus subspicatus (green algae) - > 100  
mg/l - 72 h

12.2 Persistence and degradability

Biodegradability aerobic - Exposure time 28 d

Result: 7 % - Not biodegradable

(OECD Test Guideline 301C)

12.3 Bioaccumulative potential

No data available

12.4 Mobility in soil

No data available

12.5 Results of PBT and vPvB assessment

This substance/mixture contains no components considered to be either persistent,  
bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at  
levels of 0.1% or higher.

12.6 Other adverse effects

No data available

### 13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Product

Offer surplus and non-recyclable solutions to a licensed disposal company.

Contaminated packaging

Dispose of as unused product.

### 14. TRANSPORT INFORMATION

14.1 UN number

ADR/RID: - IMDG: - IATA: -

14.2 UN proper shipping name

ADR/RID: Not dangerous goods

IMDG: Not dangerous goods

IATA: Not dangerous goods 14.3 Transport hazard class(es)

ADR/RID: - IMDG: - IATA: -

14.4 Packaging group

ADR/RID: - IMDG: - IATA: -

14.5 Environmental hazards

ADR/RID: no IMDG Marine pollutant: no IATA: no

14.6 Special precautions for user

No data available

### 15. REGULATORY INFORMATION

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

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

Authorisations and/or restrictions on use

International Chemical Weapons Convention  
(CWC) Schedules of Toxic Chemicals and  
Precursors

: N-Methyldiethanolamine

REACH - Restrictions on the manufacture,  
placing on the market and use of certain  
dangerous substances, preparations and articles  
(Annex XVII)

: Neither banned nor restricted

Regulation (EC) No 649/2012 of the European  
Parliament and the Council concerning the  
export and import of dangerous chemicals

: Neither banned nor restricted

REACH - Candidate List of Substances of Very  
High Concern for Authorisation (Article 59).

: This product does not contain  
substances of very high concern  
(Regulation (EC) No

1907/2006 (REACH), Article 57).

This product contains a substance listed on Annex XIV of the REACH Regulation (EC) Nr.  
1907/2006.

Listed substance / Sunset Date:

After the sunset date the use of this substance requires either an authorization or can only  
be used for exempted uses, e.g. use in scientific research and development which includes  
routine analytics or use as intermediate.

Regulation (EC) No 1005/2009 on substances  
that deplete the ozone layer

: Neither banned nor restricted

Regulation (EC) No 850/2004 on persistent  
organic pollutants

: Neither banned nor restricted

15.2 Chemical safety assessment

For this product a chemical safety assessment was not carried out

## 16. OTHER INFORMATION

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide.  
The information in this document is based on the present state of our knowledge and is applicable to the product with  
regard to appropriate safety precautions. It does not represent any  
guarantee of the properties of the product. For lab use only!