

# Safety data sheet

## according to Regulation (EC) No 1907/2006, Article 31

Printing date 29.07.2024

Version number 6

Revision: 29.07.2024

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

#### 1.1 Product identifier

- Trade name: N,N,N',N'-Tetramethyl-ethylenediamine
- Synonyma TEMED; TD



Article number: 35925

CAS Number:

110-18-9

EC number:

203-744-6

Index number:

612-103-00-3

#### 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:

Emergency medical information in case of poisoning

Poison Information Centre Mainz-Tel: +49 (0) 6131 19240

(Counselling in German and English)

### SECTION 2: Hazards identification

#### 2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008:



GHS02

Flam. Liq. 2 H225 Highly flammable liquid and vapour.



GHS05

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



GHS07

Acute Tox. 4 H302 Harmful if swallowed.

Acute Tox. 4 H332 Harmful if inhaled.

#### 2.2 Label elements

Labelling according to Regulation (EC) No 1272/2008:

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

Hazard pictograms: GHS02, GHS05, GHS07

Signal word: Danger

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**· Hazard statements:**

- H225 Highly flammable liquid and vapour.  
 H302+H332 Harmful if swallowed or if inhaled.  
 H314 Causes severe skin burns and eye damage.

**· Precautionary statements**

- P243 Take action to prevent static discharges.  
 P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.  
 P301+P330+P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.  
 P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].  
 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, GHS07**
**· Signal word Danger**
**· Hazard statements**

- H314 Causes severe skin burns and eye damage.

**· Precautionary statements**

- P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.  
 P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].  
 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.

**· Determination of endocrine-disrupting properties** No further relevant information available.

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**SECTION 3: Composition/information on ingredients**
**· 3.1 Substances**
**· CAS No. Description:**

110-18-9 N,N,N',N'-tetramethylethylenediamine

**· Identification number(s):**

· **EC number:** 203-744-6

· **Index number:** 612-103-00-3

**· Description:**

· **Empirical formula:** C<sub>6</sub>H<sub>16</sub>N<sub>2</sub>

· **MW:** 116.21

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**SECTION 4: First aid measures**
**· 4.1 Description of first aid measures**
**· General information:**

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

Remove contaminated clothing.

· **After inhalation:** Supply fresh air; consult doctor in case of complaints.

**· After skin contact:**

Wash off immediately with plenty of soap and water; rinse thoroughly; seek medical attention.

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- **After eye contact:**  
*Rinse opened eye for several minutes with running water. Remove contact lenses if possible and continue rinsing. Consult an ophthalmologist immediately.*
- **After swallowing:**  
*Rinse out mouth and consult a doctor.  
Do not induce vomiting!*
- **4.2 Most important symptoms and effects, both acute and delayed**  
*No further relevant information available.*
- **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:**  
*CO<sub>2</sub>, 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:**  
*Formation of hazardous vapours and gases possible during heating or in case of fire.  
In case of fire, the following can be formed, but not limited to:  
Nitrogen oxides (NO<sub>x</sub>)  
Carbon monoxide and carbon dioxide*
- **5.3 Advice for firefighters**
- **Protective equipment:** *Wear self-contained breathing apparatus.*
- **Additional information**  
*Collect contaminated fire fighting water separately. It must not enter the sewage system.  
Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.*

### SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures**  
*Wear protective clothing.  
Ensure adequate ventilation  
Avoid contact with eyes and skin.*
- **6.2 Environmental precautions:** *Do not allow to enter sewers/ surface or ground water.*
- **6.3 Methods and material for containment and cleaning up**  
*Dispose contaminated material as waste according to section 13.  
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).*
- **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:**  
*Protect against electrostatic charges.  
Keep ignition sources away - Do not smoke.*
- **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:** *Do not store together with oxidizing materials.*
- **Further information about storage conditions:** *Store containers tightly closed and dry.*

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· **7.3 Specific end use(s):** *No further relevant information available.*

### SECTION 8: Exposure controls/personal protection

- **8.1 Control parameters**
- **Components with limit values that require monitoring at the workplace:** *Not required.*
- **Additional information:** *The lists that were valid during the creation were used as basis.*
- **8.2 Exposure controls**
- **Appropriate engineering controls:** *No further data; see section 7.*
- **Individual protection measures, such as 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 P3.*
  - In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.*
- **Hand protection:**
  - 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:**
  - Neoprene gloves*
  - Nitrile rubber, NBR*
  - Natural rubber, NR*
- **Eye/face 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:**
- **Physical state:** *Fluid*
- **Colour:** *colorless to slightly yellowish*
- **Odour:** *Amine-like*
- **Odour threshold:** *Not determined.*
- **Melting point/freezing point:** *-55 °C*
- **Boiling point or initial boiling point and boiling range:** *121 °C*
- **Flammability:** *Highly flammable liquid and vapour according to GB CLP Regulation (EU) No 1272/2008: Flam. Liq. 2 H225*

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· <b>Lower and upper explosion limit:</b>	
· <b>Lower:</b>	No information available
· <b>Upper:</b>	No information available
· <b>Flash point:</b>	17 °C
· <b>Decomposition temperature:</b>	No information available
· <b>pH:</b>	No information available
· <b>Viscosity:</b>	
· <b>Kinematic viscosity:</b>	No information available
· <b>Dynamic viscosity:</b>	No information available
· <b>Solubility:</b>	
· <b>Water:</b>	Fully miscible
· <b>Partition coefficient n-octanol/water (log value):</b>	No information available
· <b>Vapour pressure:</b>	No information available
· <b>Density and/or relative density:</b>	
· <b>Density at 20 °C:</b>	0.77 g/cm <sup>3</sup>
· <b>Relative density:</b>	No information available
· <b>9.2 Other information</b>	
· <b>Appearance:</b>	
· <b>Form:</b>	Liquid
· <b>Important information on protection of health and environment, and on safety:</b>	
· <b>Explosive properties:</b>	Product is not explosive. However, formation of explosive air/vapour mixtures are possible.
· <b>Molecular weight</b>	116.21 g/mol

### 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 may form flammable and explosive mixtures with air.
- **10.4 Conditions to avoid:**
  - Heating
  - Ignition sources
  - Humidity
- **10.5 Incompatible materials:**
  - Avoid contact with:
  - Strong oxidizers
  - Acids
- **10.6 Hazardous decomposition products:** In case of fire: see section 5

### SECTION 11: Toxicological information

- **11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008:**
- **Acute toxicity:** Harmful if swallowed or if inhaled.

#### · LD/LC50 values that are relevant for classification:

Oral	LD50	1,580 mg/kg (rat)
Dermal	LD50	5,390 mg/kg (rabbit)

- **Skin corrosion/irritation:** Causes severe skin burns and eye damage.
- **Serious eye damage/irritation:** Based on available data, the classification criteria are not met.
- **Respiratory or skin sensitisation:** Based on available data, the classification criteria are not met.
- **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.

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- **STOT-single exposure:** Based on available data, the classification criteria are not met.
- **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.
- **11.2 Information on other hazards:**
- **Endocrine disrupting properties:** No relevant information available


### SECTION 12: Ecological information

- **12.1 Toxicity:**
- **Aquatic toxicity:** No further relevant information available.
- **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.
- **12.5 Results of PBT and vPvB assessment:**
- **PBT:** PBT - assessment not available.
- **vPvB:** vPvB - assessment not available.
- **12.6 Endocrine disrupting properties:** For information on endocrine disrupting properties see section 11.
- **12.7 Other adverse effects:**
- **Additional ecological information:**
- **General notes:**
- Do not allow product to reach ground water, water course or sewage system.
- Water hazard class 1 (German Regulation) (Assessment by list): slightly hazardous for water.

### SECTION 13: Disposal considerations

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

### SECTION 14: Transport information

- |  |  |
|--|--|
| <ul style="list-style-type: none"> <li>· <b>14.1 UN number or ID number</b></li> <li>· <b>ADR, IMDG, IATA</b></li> </ul>                   | <p>UN2372</p>  |
| <ul style="list-style-type: none"> <li>· <b>14.2 UN proper shipping name</b></li> <li>· <b>ADR</b></li> <li>· <b>IMDG, IATA</b></li> </ul> | <p>2372 1,2-DI-(DIMETHYLAMINO) ETHANE<br/>1,2-DI-(DIMETHYLAMINO) ETHANE</p>  |
| <ul style="list-style-type: none"> <li>· <b>14.3 Transport hazard class(es)</b></li> <li>· <b>ADR, IMDG, IATA</b></li> </ul>               | <div style="text-align: center;">  </div> <p>· <b>Class:</b></p> <p>· <b>Label:</b></p> |

3 Flammable liquids.  
3

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· <b>14.4 Packing group</b> · <b>ADR, IMDG, IATA</b>	<i>II</i>
· <b>14.5 Environmental hazards</b> · <b>Marine pollutant:</b>	<i>No</i>
· <b>14.6 Special precautions for user</b> · <b>Hazard identification number (Kemler code):</b> · <b>EMS Number:</b> · <b>Stowage Category</b>	<i>Warning: Flammable liquids.</i> <i>33</i> <i>F-E,S-D</i> <i>B</i>
· <b>14.7 Maritime transport in bulk according to IMO instruments</b>	<i>Not applicable.</i>
· <b>Transport/Additional information:</b>	
· <b>ADR</b> · <b>Limited quantities (LQ)</b> · <b>Excepted quantities (EQ)</b>	<i>1L</i> <i>Code: E2</i> <i>Maximum net quantity per inner packaging: 30 ml</i> <i>Maximum net quantity per outer packaging: 500 ml</i>
· <b>Transport category</b> · <b>Tunnel restriction code</b>	<i>2</i> <i>D/E</i>
· <b>IMDG</b> · <b>Limited quantities (LQ)</b> · <b>Excepted quantities (EQ)</b>	<i>1L</i> <i>Code: E2</i> <i>Maximum net quantity per inner packaging: 30 ml</i> <i>Maximum net quantity per outer packaging: 500 ml</i>
· <b>UN "Model Regulation":</b>	<i>UN 2372 1,2-DI-(DIMETHYLAMINO) ETHANE, 3, II</i>

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### SECTION 15: Regulatory information

- **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **Poisons Act**
- **Regulated explosives precursors** *Substance is not listed.*
- **Regulated poisons** *Substance is not listed.*
- **Reportable explosives precursors** *Substance is not listed.*
- **Reportable poisons** *Substance is not listed.*
- **Directive 2012/18/EU**
- **Named dangerous substances - ANNEX I** *Substance is not listed.*
- **Seveso category P5c FLAMMABLE LIQUIDS**
- **Qualifying quantity (tonnes) for the application of lower-tier requirements** *5,000 t*
- **Qualifying quantity (tonnes) for the application of upper-tier requirements** *50,000 t*
- **REGULATION (EC) No 1907/2006 ANNEX XVII** *Conditions of restriction: 3, 40, 75*
- **DIRECTIVE 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment – Annex II**  
*Substance is not listed.*
- **REGULATION (EU) 2019/1148**
- **Annex I - RESTRICTED EXPLOSIVES PRECURSORS (Upper limit value for the purpose of licensing under Article 5(3))**  
*Substance is not listed.*
- **Annex II - REPORTABLE EXPLOSIVES PRECURSORS** *Substance is not listed.*
- **Regulation (EC) No 273/2004 on drug precursors** *Substance is not listed.*
- **Regulation (EC) No 111/2005 laying down rules for the monitoring of trade between the Community and third countries in drug precursors**  
*Substance is not listed.*

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- **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*
- **Date of previous version:** *02.05.2018*
- **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 (UK REACH)*
  - vPvB: very persistent, very bioaccumulative substance (UK REACH)*
  - UK REACH: Regulation concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals*
  - GB CLP: Regulation on classification, labelling and packaging of substances and mixtures*
  - bw: body weight*
  - ADR: Accord relatif au transport international 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)*
  - LC50: Lethal concentration, 50 percent*
  - LD50: Lethal dose, 50 percent*
  - PBT: Persistent, Bioaccumulative and Toxic*
  - vPvB: very Persistent and very Bioaccumulative*
  - Flam. Liq. 2: Flammable liquids – Category 2*
  - Acute Tox. 4: Acute toxicity – Category 4*
  - Skin Corr. 1B: Skin corrosion/irritation – Category 1B*

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