

# Safety data sheet

## according to 1907/2006/EC, Article 31

Printing date 26.04.2024

Version number 7

Revision: 26.04.2024

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

- **1.1 Product identifier**
- **Trade name:** Tris(hydroxymethyl)aminomethane
- **Synonyma** Tris
- **Article number:** 37180
- **CAS Number:**  
77-86-1
- **EC number:**  
201-064-4
- **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:**  
The substance is not classified, according to the GB CLP regulation.
- **2.2 Label elements**
- **Labelling according to Regulation (EC) No 1272/2008:** Void
- **Hazard pictograms:** Void
- **Signal word:** Void
- **Hazard statements:** Void
- **Labelling of packages where the contents do not exceed 125 ml**
- **Hazard pictograms** Void
- **Signal word** Void
- **Hazard statements** Void
- **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.

### SECTION 3: Composition/information on ingredients

- **3.1 Substances**
- **CAS No. Description:**  
77-86-1 trometamol
- **Identification number(s):**
- **EC number:** 201-064-4

(Contd. on page 2)

GB

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(Contd. of page 1)

- **Description:**
- **Empirical formula:**  $C_4H_{11}NO_3$
- **MW:** 121.1

### SECTION 4: First aid measures

- **4.1 Description of first aid measures**
- **General information:** No special measures required.
- **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- **After skin contact:**  
Wash off immediately with soap and water and rinse thoroughly. In case of complaints, consult a doctor.
- **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:**  
Wash out mouth. Drink plenty of water and supply fresh air. Consult doctor if you feel unwell.
- **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:**  
 $CO_2$ , 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 (NOx)  
Carbon monoxide and carbon dioxide
- **5.3 Advice for firefighters**
- **Protective equipment:** Wear self-contained breathing apparatus.

### SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures**  
Wear protective clothing.  
Ensure adequate ventilation  
Avoid formation of dust.  
Do not inhale dusts.
- **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.  
Pick up mechanically.
- **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:** No special measures required.
- **Information about protection against explosions and fires:** Keep ignition sources away - Do not smoke.

(Contd. on page 3)

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(Contd. of page 2)

- **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:** Not required.
- **Further information about storage conditions:** Store containers tightly closed and dry.
- **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
  - Avoid contact with the eyes and skin.
  - Wash hands before breaks and at the end of work.
- **Breathing equipment:**
  - Short term filter device:
  - Filter P2.
- **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:**
  - Natural rubber, NR
  - Nitrile rubber, NBR
  - Chloroprene rubber, CR
- **Eye/face protection:** Safety glasses
- **Body protection:** Protective work clothing.

### SECTION 9: Physical and chemical properties

- **9.1 Information on basic physical and chemical properties**
- **General Information:**
- **Physical state:** Solid.
- **Colour:** White
- **Odour:** Characteristic
- **Odour threshold:** Not determined.
- **Melting point/freezing point:** 168-172 °C

(Contd. on page 4)

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(Contd. of page 3)

- **Boiling point or initial boiling point and boiling range:** 288 °C (decomposition)
- **Flammability:** No information available
- **Lower and upper explosion limit:**
- **Lower:** No information available
- **Upper:** No information available
- **Flash point:** No information available
- **Decomposition temperature:** No information available
- **pH:** 10-11.5
- **Viscosity:**
- **Kinematic viscosity:** No information available
- **Dynamic viscosity:** No information available
- **Solubility:**
- **Water at 20 °C:** 800 g/l
- **Partition coefficient n-octanol/water (log value):** No information available
- **Vapour pressure:** No information available
- **Density and/or relative density:**
- **Density at 20 °C:** 1.35 g/cm<sup>3</sup>
- **Relative density:** No information available
- **Particle characteristics** No information available

### · 9.2 Other information

- **Appearance:**
- **Form:** Crystalline
- **Important information on protection of health and environment, and on safety:**
- **Explosive properties:** The product is not explosive, but the formation of explosive dust/air mixtures is possible.
- **Molecular weight** 121.1 g/mol

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## 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 and stored according to specifications.
- **10.3 Possibility of hazardous reactions:** No further relevant information available.
- **10.4 Conditions to avoid:** High temperatures
- **10.5 Incompatible materials:**  
Avoid contact with:  
Oxidising agents  
Bases
- **10.6 Hazardous decomposition products:** In case of fire: see section 5

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## SECTION 11: Toxicological information

- **11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008:**
- **Acute toxicity:** Based on available data, the classification criteria are not met.

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

Oral	LD50	>5,000 mg/kg (rat)
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- **Skin corrosion/irritation:** Based on available data, the classification criteria are not met.
- **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.

(Contd. on page 5)

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(Contd. of page 4)

- **Reproductive toxicity:** Based on available data, the classification criteria are not met.
- **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:** Biodegradability: 89 % in 28 d (hydrochloride)
  - **Other information:** The product is readily biodegradable.
  - **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.
  - **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**

- |  |                 |
|--|-----------------|
| · <b>14.1 UN number or ID number</b>       |                 |
| · <b>ADR, ADN, IMDG, IATA</b>              | Void            |
| · <b>14.2 UN proper shipping name</b>      |                 |
| · <b>ADR, ADN, IMDG, IATA</b>              | Void            |
| · <b>14.3 Transport hazard class(es)</b>   |                 |
| · <b>ADR, ADN, IMDG, IATA</b>              |                 |
| · <b>Class:</b>                            | Void            |
| · <b>14.4 Packing group</b>                |                 |
| · <b>ADR, IMDG, IATA</b>                   | Void            |
| · <b>14.5 Environmental hazards</b>        |                 |
| · <b>Marine pollutant:</b>                 | No              |
| · <b>14.6 Special precautions for user</b> | Not applicable. |

(Contd. on page 6)

GB

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(Contd. of page 5)

- |   |  |
|---|--|
| <b>· 14.7 Maritime transport in bulk according to IMO instruments</b> | Not applicable.                                      |
| <b>· Transport/Additional information:</b>                            | Not dangerous according to the above specifications. |
| <b>· UN "Model Regulation":</b>                                       | Void   |

### 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.
- **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.
- **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:** 30.04.2020
- **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

(Contd. on page 7)

GB

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***Trade name: Tris(hydroxymethyl)aminomethane***

*PBT: Persistent, Bioaccumulative and Toxic*  
*vPvB: very Persistent and very Bioaccumulative*

(Contd. of page 6)

GB