

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

Printing date 19.12.2011

Version number 1

Revision: 19.12.2011

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

### 1.1. Product identifier

- Trade name: *Ethylmercury thiosalicylic acid-Na-salt*
- Synonyma *Merthiolat; Thimerosal; Thiomersal*

**SERVA**  
Electrophoresis

Article number: 11340

CAS Number:

54-64-8

EC number:

200-210-4

Index number:

080-004-00-7

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

- Application of the substance / the preparation *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: +49 6131 19240 (university hospital Mainz)

## 2 Hazards identification

### 2.1. Classification of the substance or mixture

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



GHS06

Acute Tox. 2 H300 Fatal if swallowed.

Acute Tox. 1 H310 Fatal in contact with skin.

Acute Tox. 1 H330 Fatal if inhaled.



GHS08

STOT RE 2 H373 May cause damage to organs through prolonged or repeated exposure.



GHS09

Aquatic Acute 1 H400 Very toxic to aquatic life.

Aquatic Chronic 1 H410 Very toxic to aquatic life with long lasting effects.

- Classification according to Directive 67/548/EEC or Directive 1999/45/EC



T+; Very toxic

R26/27/28: Very toxic by inhalation, in contact with skin and if swallowed.



N; Dangerous for the environment

R50/53: Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

(Contd. on page 2)

# Safety data sheet

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

Printing date 19.12.2011

Version number 1

Revision: 19.12.2011

**Trade name: Ethylmercury thiosalicylic acid-Na-salt**

(Contd. of page 1)

R33: *Danger of cumulative effects.*

· **Classification system:**

*The classification was made according to the latest editions of the EU-lists, and expanded upon from company and literature data.*

· **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** GHS06, GHS08, GHS09

· **Signal word** *Danger*

· **Hazard statements**

*H300 Fatal if swallowed.*

*H310 Fatal in contact with skin.*

*H330 Fatal if inhaled.*

*H373 May cause damage to organs through prolonged or repeated exposure.*

*H410 Very toxic to aquatic life with long lasting effects.*

· **Precautionary statements**

*P273 Avoid release to the environment.*

*P301+P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.*

*P304+P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.*

*P330 Rinse mouth.*

*P302+P350 IF ON SKIN: Gently wash with plenty of soap and water.*

*P314 Get medical advice/attention if you feel unwell.*

· **2.3. Other hazards**

· **Results of PBT and vPvB assessment**

· **PBT:** PBT - assessment not available.

· **vPvB:** vPvB - assessment not available.

### 3 Composition/information on ingredients

· **3.1. Chemical characterization: Substances**

· **CAS No. Description:**

*54-64-8 Thiomersal*

· **Identification number(s):**

· **EC number:** 200-210-4

· **Index number:** 080-004-00-7

· **Description:**

· **Empirical formula:**  $C_9H_9HgO_2SNa$

· **MW:** 404,8

### 4 First aid measures

· **4.1. Description of first aid measures**

· **General information**

*Remove contaminated clothing.*

*Remove breathing apparatus only after contaminated clothing have been completely removed.*

*In case of irregular breathing or respiratory arrest provide artificial respiration.*

· **After inhalation**

*Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist.*

*In case of unconsciousness place patient stably in side position for transportation.*

· **After skin contact** *Immediately wash with water and soap and rinse thoroughly.*

· **After eye contact** *Rinse opened eye for several minutes under running water. Then consult doctor.*

· **After swallowing** *Drink copious amounts of water and provide fresh air. Call for doctor immediately.*

(Contd. on page 3)

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

Printing date 19.12.2011

Version number 1

Revision: 19.12.2011

**Trade name: Ethylmercury thiosalicylic acid-Na-salt**

(Contd. of page 2)

- **Information for doctor**
- **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.

## 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 toxic gases is possible during heating or in case of fire.  
Sulphur dioxide (SO<sub>2</sub>)  
Carbon monoxide (CO)
- **5.3. Advice for firefighters**
- **Protective equipment:** Wear self-contained respiratory protective device.

## 6 Accidental release measures

- **6.1. Personal precautions, protective equipment and emergency procedures**  
Ensure adequate ventilation  
Avoid formation of dust.  
Wear protective clothing.
- **6.2. Environmental precautions:**  
Inform respective authorities in case of seepage into water course or sewage system.  
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 item 13.  
Ensure adequate ventilation.
- **6.4. Reference to other sections**  
See Section 8 for information on personal protection equipment.  
See Section 13 for disposal information.

## 7 Handling and storage

- **Handling**
- **7.1. Precautions for safe handling**  
Work only in fume cupboard.  
Thorough dedusting.  
Ensure good ventilation/exhaustion at the workplace.  
Open and handle receptacle with care.
- **Information about protection against explosions and fires:** Keep respiratory protective device available.
- **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 receptacle in a well ventilated area.  
Store in dry conditions.  
Store under lock and key and with access restricted to technical experts or their assistants only.  
Keep receptacle tightly sealed.
- **7.3. Specific end use(s)** No further relevant information available.

GB

(Contd. on page 4)

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

Printing date 19.12.2011

Version number 1

Revision: 19.12.2011

Trade name: Ethylmercury thiosalicylic acid-Na-salt

(Contd. of page 3)

## 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:** Not required.
- **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**  
Do not eat or drink while working.  
Use skin protection cream for skin protection.  
Keep away from foodstuffs, beverages and feed.  
Immediately remove all soiled and contaminated clothing  
Wash hands before breaks and at the end of work.  
Store protective clothing separately.  
Avoid contact with the eyes and skin.
- **Breathing equipment:**  
Short term filter device:  
Filter P3.
- **Protection of hands:**  
Protective 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:**  
Nitrile rubber, NBR  
Chloroprene rubber, CR
- **Eye protection:** Safety glasses
- **Body protection:** Protective work clothing.

## 9 Physical and chemical properties

- **9.1. Information on basic physical and chemical properties**
- **General Information**
- **Appearance:**

<b>Form:</b>	Crystalline powder
<b>Colour:</b>	White
<b>Odour:</b>	Recognizable
- **pH-value (10 g/l) at 20°C:** 6.0 - 8.0
- **Change in condition**

<b>Melting point/Melting range:</b>	< 232°C
<b>Boiling point/Boiling range:</b>	undetermined
- **Flash point:** Not applicable
- **Flammability (solid, gaseous)** Product is not flammable.

(Contd. on page 5)

GB

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

Printing date 19.12.2011

Version number 1

Revision: 19.12.2011

Trade name: Ethylmercury thiosalicylic acid-Na-salt

(Contd. of page 4)

· **Ignition temperature:****Decomposition temperature:** 232 - 234°C· **Danger of explosion:** Product does not present an explosion hazard.· **Density:** Not determined· **Solubility in / Miscibility with**· **Water at 20°C:** 625 g/l· **Alcohols at 20°C:** 125 g/l· **9.2. Other information** There are no more data available.**10 Stability and reactivity**

- **10.1. Reactivity**
- **10.2. Chemical stability**
- **Thermal decomposition / conditions to be avoided:** Stable up to melting point.
- **10.3. Possibility of hazardous reactions** No dangerous reactions known
- **10.4. Conditions to avoid** No further relevant information available.
- **10.5. Incompatible materials:** strong oxidants, strong acids and bases, aluminium, reducing agents
- **10.6. Hazardous decomposition products:** Hg, Hg(2+), Hg2(2+)
- **Additional information:** photosensitive

**11 Toxicological information**· **11.1. Information on toxicological effects**· **Acute toxicity:**· **LD/LC50 values that are relevant for classification:**

Oral LD50 75 mg/kg (rat)

· **Primary irritant effect:**· **on the skin:** No irritant effect.· **on the eye:** No irritating effect.· **Sensitization:** No sensitizing effects known.· **Additional toxicological information:** Danger through skin resorption.**12 Ecological information**· **12.1. Toxicity**· **Aquatic toxicity:** No further relevant information available.· **12.2. Persistence and degradability** No further relevant information available.· **Behaviour in environmental systems:**· **12.3. Bioaccumulative potential** No further relevant information available.· **12.4. Mobility in soil** No further relevant information available.· **Ecotoxicological effects:**· **Remark:** Very toxic for fish· **Additional ecological information:**· **General notes:**

Also poisonous for fish and plankton in water bodies.

Very toxic for aquatic organisms

Water danger class 3 (German Regulation) (Assessment by list): extremely hazardous for water.

Do not allow product to reach ground water, water course or sewage system, even in small quantities.

Danger to drinking water if even extremely small quantities leak into the ground.

· **12.5. Results of PBT and vPvB assessment**· **PBT:** PBT - assessment not available.· **vPvB:** vPvB - assessment not available.

(Contd. on page 6)

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

Printing date 19.12.2011

Version number 1

Revision: 19.12.2011

Trade name: Ethylmercury thiosalicylic acid-Na-salt

(Contd. of page 5)

· 12.6. Other adverse effects No further relevant information available.

### 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.

## · Uncleaned packagings:

· Recommendation: Disposal must be made according to official regulations.

· Recommended cleansing agent: Water, if necessary with cleansing agents.

### 14 Transport information

## · 14.1. UN-Number

· ADR, IMDG, IATA

UN2025

## · 14.2. UN proper shipping name

· ADR

2025 MERCURY COMPOUND, SOLID, N.O.S.  
(Thiomersal), ENVIRONMENTALLY HAZARDOUS

· IMDG

MERCURY COMPOUND, SOLID, N.O.S. (Thiomersal)

· IATA

Mercury compound, solid, n.o.s. (Thiomersal)

## · 14.3. Transport hazard class(es)

· ADR



· Class

6.1 Toxic substances.

· Label

6.1

· IMDG



· Class

6.1 Toxic substances.

· Label

6.1

· IATA



· Class

6.1 Toxic substances.

· Label

6.1

## · 14.4. Packing group

· ADR, IMDG, IATA

III

## · 14.5. Environmental hazards:

Environmentally hazardous substance, solid; Marine  
Pollutant

· Marine pollutant:

Symbol (fish and tree)

· Special marking (ADR):

Symbol (fish and tree)

## · 14.6. Special precautions for user

Warning: Toxic substances.

· Danger code (Kemler):

60

(Contd. on page 7)

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

Printing date 19.12.2011

Version number 1

Revision: 19.12.2011

**Trade name: Ethylmercury thiosalicilyc acid-Na-salt**

(Contd. of page 6)

· <b>EMS Number:</b>	F-A,S-A
· <b>Segregation groups</b>	Heavy metals and their salts (including their
· <b>14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</b>	Not applicable.
· <b>Transport/Additional information:</b>	
· <b>ADR</b>	
· <b>Tunnel restriction code</b>	E
· <b>UN "Model Regulation":</b>	UN2025, MERCURY COMPOUND, SOLID, N.O.S. (Thiomersal), ENVIRONMENTALLY HAZARDOUS, 6.1, III

### 15 Regulatory information

- **15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **National regulations**
- **Technical instructions (air):**

Class	Share in %
I	80-100

- **Water hazard class:** Water danger class 3 (Assessment by list): extremely hazardous for water.
- **15.2. Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

### 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 MSDS:** Product safety department
- **Contact:** +49 6221 13840-35
- **Abbreviations and acronyms:**  
 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)  
 RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)  
 IMDG: International Maritime Code for Dangerous Goods  
 IATA: International Air Transport Association  
 ICAO: International Civil Aviation Organization  
 GHS: Globally Harmonized 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
- **\* Data compared to the previous version altered.**

GB