

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

Printing date 26.04.2018

Version number 4

Revision: 24.01.2018

SECTION 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

· **Registration number**

A REACH Registration Number is not available for this product as the product or its use are exempted from registration according to Article 2 REACH Regulation (EC) No 1907/2006, the annual tonnage does not require a registration or the registration is envisaged for a later registration deadline.

· **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**



GHS06

Acute Tox. 3

H301 Toxic 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.

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

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**

H301 Toxic if swallowed.

H310+H330 Fatal in contact with skin or 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.

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

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

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.

P314 Get medical advice/attention if you feel unwell.

· **Labelling of packages where the contents do not exceed 125 ml**

· **Hazard pictograms** GHS06, GHS08, GHS09

· **Signal word** Danger

· **Hazard statements**

H301 Toxic if swallowed.

H310+H330 Fatal in contact with skin or if inhaled.

· **Precautionary statements**

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

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

· **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:**

54-64-8 Thiomersal

· **Identification number(s):**

· **EC number:** 200-210-4

· **Index number:** 080-004-00-7

· **Description:**

· **Empirical formula:** C₉H₉HgO₂SNa

· **MW:** 404,8

SECTION 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 or oxygen; call for doctor.

Do not use mouth to mouth or mouth to nose resuscitation.

Use a respiration bag or breathing device.

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- **After skin contact**
Immediate wash with copious amounts of water and soap; rinse thoroughly; seek medical advice.
- **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** *Wash out mouth. Call a doctor immediately.*
- **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**
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**
*Formation of dangerous gases or vapours is possible in case of fire.
In case of fire, the following can be formed, but not limited to:
Sulphur oxides (SO_x)
Mercury vapours
Carbon monoxide and carbon dioxide*
- **5.3 Advice for firefighters**
- **Protective equipment:** *Wear self-contained respiratory protective device.*
- **Additional information**
Collect contaminated fire fighting water separately. It must not enter the sewage system.

SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures**
*Ensure adequate ventilation
Avoid formation of dust.
Wear protective clothing.
Avoid contact with the eyes and skin.*
- **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 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**
*Work only in fume cupboard.
Thorough dedusting.
Ensure good ventilation/exhaustion at the workplace.
Open and handle receptacle with care.
Only handle and refill product in closed systems.*
- **Information about protection against explosions and fires:** *Keep respiratory protective device available.*

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- **7.2 Conditions for safe storage, including any incompatibilities**
- **Storage**
- **Requirements to be met by storerooms and receptacles:**
 - Store only in the original receptacle.
 - Store at dry places in tightly closed receptacles.
- **Information about storage in one common storage facility:**
 - Store away from oxidising agents.
 - Do not store together with flammable solids.
- **Further information about storage conditions:**
 - Store under lock and key and with access restricted to technical experts or their assistants only.
 - Store receptacle in a well ventilated area.
 - Protect from exposure to the light.
- **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:** 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:
 - Hg-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.
- **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

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· **Body protection:** Protective work clothing.

SECTION 9: Physical and chemical properties

· 9.1 Information on basic physical and chemical properties

· General Information

· Appearance:

| | |
|---------------------------|-----------------------|
| · Form: | Crystalline powder |
| · Colour: | white or almost white |
| · Odour: | Recognisable |
| · Odour threshold: | Not determined. |

| | |
|--------------------------------------|-----------|
| · pH-value (10 g/l) at 20 °C: | 6.0 - 8.0 |
|--------------------------------------|-----------|

· Change in condition

| | |
|---|--------------|
| · Melting point/freezing point: | 232-233 °C |
| · Initial boiling point and boiling range: | undetermined |

| | |
|-----------------------|--------------------------|
| · Flash point: | no information available |
|-----------------------|--------------------------|

| | |
|--|-----------------|
| · Flammability (solid, gaseous) | Not determined. |
|--|-----------------|

· Ignition temperature:

| | |
|-------------------------------------|-----------------|
| · Decomposition temperature: | Not determined. |
|-------------------------------------|-----------------|

| | |
|-------------------------|-----------------|
| · Self igniting: | Not determined. |
|-------------------------|-----------------|

| | |
|--------------------------------|---|
| · Explosive properties: | Product does not present an explosion hazard. |
|--------------------------------|---|

· Explosion limits:

| | |
|-----------------|-----------------|
| · Lower: | Not determined. |
| · Upper: | Not determined. |

| | |
|---------------------------|-----------------|
| · Vapour pressure: | Not applicable. |
|---------------------------|-----------------|

| | |
|---------------------------|-----------------|
| · Density: | Not determined |
| · Relative density | Not determined. |
| · Vapour density | Not applicable. |
| · Evaporation rate | Not applicable. |

· Solubility in / Miscibility with

| | |
|-----------------------------|----------|
| · Water at 20 °C: | 1000 g/l |
| · Alcohols at 20 °C: | 125 g/l |

| | |
|--|-----------------|
| · Partition coefficient: n-octanol/water: | Not determined. |
|--|-----------------|

· Viscosity:

| | |
|---------------------|-----------------|
| · dynamic: | Not applicable. |
| · kinematic: | Not applicable. |

| | |
|--------------------------------|-----------------------------------|
| · 9.2 Other information | There are no more data 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 and stored according to specifications.

| | |
|--|---|
| · 10.3 Possibility of hazardous reactions | No further relevant informations available. |
|--|---|

· 10.4 Conditions to avoid

high temperatures
exposure to the light

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- **10.5 Incompatible materials:** strong oxidants, strong acids and bases, aluminium, reducing agents
- **10.6 Hazardous decomposition products:** In case of fire: See Section 5

SECTION 11: Toxicological information

· **11.1 Information on toxicological effects**

· **Acute toxicity**

Toxic if swallowed.

Fatal in contact with skin or if inhaled.

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

| | | |
|------|------|----------------|
| Oral | LD50 | 75 mg/kg (rat) |
|------|------|----------------|

· **Primary irritant effect:**

· **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.

· **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** Based on available data, the classification criteria are not met.

· **STOT-repeated exposure**

May cause damage to organs through prolonged or repeated exposure.

· **Aspiration hazard** Based on available data, the classification criteria are not met.

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.

· **Ecotoxicological effects:**

· **Remark:** Very toxic for fish

· **Additional ecological information:**

· **General notes:**

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.

Very toxic for aquatic organisms

· **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**

Disposal must be made according to official regulations.

Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

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- **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.

SECTION 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, 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
· **Special marking (ADR):** Symbol (fish and tree)
- **14.6 Special precautions for user** Warning: Toxic substances.
· **Danger code (Kemler):** 60
· **EMS Number:** F-A,S-A
· **Segregation groups** Heavy metals and their salts (including their organometallic compounds), mercury and mercury compounds
- **Stowage Category** 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)** 5 kg
 - **Excepted quantities (EQ)** Code: E1
Maximum net quantity per inner packaging: 30 g
Maximum net quantity per outer packaging: 1000 g

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| | |
|-----------------------------------|--|
| · Transport category | 2 |
| · Tunnel restriction code | E |
| <hr/> | |
| · IMDG | |
| · Limited quantities (LQ) | 5 kg |
| · Excepted quantities (EQ) | Code: E1 Maximum net quantity per inner packaging: 30 g Maximum net quantity per outer packaging: 1000 g |
| · UN "Model Regulation": | UN2025, MERCURY COMPOUND, SOLID, N.O.S. (Thiomersal), ENVIRONMENTALLY HAZARDOUS, 6.1, III |

SECTION 15: Regulatory information

- **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
- Directive 2012/18/EU
- **Qualifying quantity (tonnes) for the application of lower-tier requirements** 5 t
- **Qualifying quantity (tonnes) for the application of upper-tier requirements** 20 t
- **REGULATION (EC) No 1907/2006 ANNEX XVII Conditions of restriction:** 18

- **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.

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:**

Safety Department
Carl-Benz-Str. 7
D-69115 Heidelberg

- **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)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
Acute Tox. 3: Acute toxicity – Category 3
Acute Tox. 1: Acute toxicity – Category 1
STOT RE 2: Specific target organ toxicity (repeated exposure) – Category 2

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Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard – Category 1
Aquatic Chronic 1: Hazardous to the aquatic environment - long-term aquatic hazard – Category 1
· *** Data compared to the previous version altered.**

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