

Safety Data Sheet

acc. to OSHA HCS

Printing date 11/20/2024

Reviewed on 11/20/2024

1 Identification

- **Product identifier**
- **Trade name:** Ethylmercury thiosalicylic acid-Na-salt
- **Article number:** 11340
- **CAS Number:**
54-64-8
- **EC number:**
200-210-4
- **Index number:**
080-004-00-7
- **Application of the substance / the mixture:** Laboratory chemicals
- **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:** Security Department Phone: +49 6221 13840-35
- **Emergency telephone number:**
Emergency medical information in case of poisoning
Poison Information Center Mainz-Tel: +49 (0) 6131 19240
(Advice in German and English)



2 Hazard(s) identification

- **Classification of the substance or mixture**



GHS06

Acute Toxicity - Oral 3

H301 Toxic if swallowed.

Acute Toxicity - Dermal 1

H310 Fatal in contact with skin.

Acute Toxicity - Inhalation 2

H330 Fatal if inhaled.



GHS08

Specific Target Organ Toxicity - Repeated Exposure 2 H373 May cause damage to organs through prolonged or repeated exposure.

- **Label elements**
- **GHS label elements**
The substance is classified and labeled according to the Globally Harmonized System (GHS).
- **Hazard pictograms:** GHS06, GHS08
- **Signal word:** Danger
- **Hazard statements:**
Toxic if swallowed.
Fatal in contact with skin or if inhaled.
May cause damage to organs through prolonged or repeated exposure.
- **Precautionary statements**
Avoid release to the environment.
Wear protective gloves/protective clothing/eye protection/face protection.

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If swallowed: Immediately call a poison center/doctor.

If on skin: Wash with plenty of soap and water.

IF INHALED: Remove person to fresh air and keep comfortable for breathing.

Get medical advice/attention if you feel unwell.

· **Classification system:**

· **NFPA ratings (scale 0 - 4)**



Health = 4

Fire = 0

Reactivity = 0

· **HMIS-ratings (scale 0 - 4)**



Health = 4

Fire = 0

Reactivity = 0

· **Other hazards**

· **Results of PBT and vPvB assessment:**

· **PBT:** Concentration of substances classified as PBT: < 0,1%

· **vPvB:** concentration of substances classified as vPvB: < 0,1%

3 Composition/information on ingredients

· **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

· **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.

Immediately remove any clothing soiled by the product.

Seek medical treatment.

· **After inhalation:**

Supply fresh air and to be sure call for a doctor.

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

· **After skin contact:**

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

· **After eye contact:**

Rinse opened eye for several minutes with running water. Remove existing contact lenses, if possible, and continue rinsing. Consult an ophthalmologist immediately.

· **After swallowing:** Rinse out mouth. Call a doctor immediately.

· **Most important symptoms and effects, both acute and delayed** No further relevant information available.

· **Indication of any immediate medical attention and special treatment needed**

No further relevant information available.

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5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:**
CO₂ extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **Special hazards arising from the substance or mixture**
In case of fire, formation of hazardous fire gases or vapors possible.
In case of fire, the following can be released:
Sulfur oxides (SO_x)
Mercury vapours
Carbon monoxide and carbon dioxide
- **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.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
Wear protective clothing.
Ensure adequate ventilation
Avoid formation of dust.
Avoid contact with eyes and skin.
- **Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up**
Dispose contaminated material as waste according to section 13.
Pick up mechanically.
- **Protective Action Criteria for Chemicals**
- **PAC-1:** Substance is not listed.
- **PAC-2:** Substance is not listed.
- **PAC-3:** Substance is not listed.
- **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.

7 Handling and storage

- **Precautions for safe handling:**
Ensure good ventilation/exhaustion at the workplace.
Open and handle receptacle with care.
Prevent formation of dust.
- **Information about protection against explosions and fires:** Keep ignition sources away - Do not smoke.
- **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:** Store away from oxidizing agents.
- **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.
Store container tightly closed and dry.

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

8 Exposure controls/personal protection

· **Control parameters**

· **Components with limit values that require monitoring at the workplace:**

54-64-8 Thiomersal (80-100%)

PEL	Long-term value: 0.1 mg/m ³ as Hg; see OSHA standard interpretation memo
REL	Ceiling limit value: 0.1 mg/m ³ as Hg; Skin
TLV	Long-term value: 0.1 mg/m ³ as Hg; Skin

· **Additional information:** The lists that were valid during the creation were used as basis.

· **Exposure controls**

· **Additional information about design of technical systems:** No further data; see section 7.

· **Personal protective equipment:**

· **General protective and hygienic measures:**

Use skin protection cream for skin protection.

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing.

Store protective clothing separately.

Avoid contact with the eyes and skin.

Wash hands before breaks and at the end of work.

· **Breathing equipment:**

Short term filter device:

Hg-P3

· **Protection of hands:**

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

· **Information on basic physical and chemical properties**

· **General Information:**

· **Color:**

white or almost white

· **Odor:**

Recognizable

· **Odor threshold:**

not determined.

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· Melting point/Melting range:	234 °C (decomposition)
· Boiling point/Boiling range:	not applicable (decomposition)
· Flammability (solid, gaseous):	No information available
· Explosion limits:	
· Lower:	No information available
· Upper:	No information available
· Flash point:	No information available
· Decomposition temperature:	234 °C
· pH-value:	6-8
· Viscosity:	
· Kinematic viscosity:	No information available
· Dynamic viscosity:	No information available
· Solubility in / Miscibility with:	
· Water:	Soluble.
· Partition coefficient (n-octanol/water):	No information available
· Vapor pressure:	No information available
· Vapor pressure:	
· Density:	No information available
· Relative density:	No information available
· Other information	Further physicochemical data are not available.
· Appearance:	
· Form:	Crystalline powder
· Important information on protection of health and environment, and on safety:	
· Danger of explosion:	The product is not explosive, but the formation of explosive dust/air mixtures is possible.
· Molecular weight	404.81 g/mol

10 Stability and reactivity

- **Reactivity:** No further relevant information available.
- **Chemical stability:**
- **Thermal decomposition / conditions to be avoided:**
No decomposition if used and stored according to specifications.
- **Possibility of hazardous reactions:** No further relevant information available.
- **Conditions to avoid:**
High temperatures
Exposure to light
- **Incompatible materials:** strong oxidants, strong acids and bases, aluminium, reducing agents
- **Hazardous decomposition products:**
In case of fire: see section 5
Hg, Hg(2+), Hg2(2+)
- **Additional information:** photosensitive

11 Toxicological information

- **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)
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- **Specific target organ toxicity - repeated exposure:**
May cause damage to organs through prolonged or repeated exposure.

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- **Additional toxicological information:**
- **Carcinogenic categories**
- **IARC (International Agency for Research on Cancer)** Substance is not listed.
- **NTP (National Toxicology Program)** Substance is not listed.
- **OSHA-Ca (Occupational Safety & Health Administration)** Substance is not listed.

12 Ecological information

- **Toxicity:**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability:** No further relevant information available.
- **Bioaccumulative potential:** No further relevant information available.
- **Mobility in soil:** No further relevant information available.
- **Results of PBT and vPvB assessment:**
- **PBT:** Concentration of substances classified as PBT: < 0,1%
- **vPvB:** Concentration of substances classified as vPvB: < 0.1%
- **Other adverse effects:**
- **Additional ecological information:**
- **General notes:**
Very toxic for aquatic organisms
Water hazard class 3 (Assessment by list): extremely hazardous for water

13 Disposal considerations

- **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.

14 Transport information

- | | |
|----------------------------------|--|
| · UN-Number | |
| · DOT, ADR, IMDG, IATA | UN2025 |
| · UN proper shipping name | |
| · DOT | Mercury compound, solid, n.o.s. (Thiomersal) |
| · ADR | 2025 MERCURY COMPOUND, SOLID, N.O.S. (Thiomersal), ENVIRONMENTALLY HAZARDOUS |
| · IMDG | MERCURY COMPOUND, SOLID, N.O.S. (Thiomersal), MARINE POLLUTANT |
| · IATA | MERCURY COMPOUND, SOLID, N.O.S. (Thiomersal) |

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· **Transport hazard class(es)**· **DOT**· **Class**

6.1 Toxic substances

· **Label**

6.1

· **ADR, IMDG**· **Class:**

6.1 Toxic substances

· **Label:**

6.1

· **IATA**· **Class**

6.1 Toxic substances

· **Label**

6.1

· **Packing group**· **DOT, ADR, IMDG, IATA**

II

· **Environmental hazards**

Environmentally hazardous substance, solid; Marine Pollutant

· **Marine pollutant:**

Yes (DOT)

Symbol (fish and tree)

· **Special marking (ADR):**

Symbol (fish and tree)

· **Special precautions for user**

Warning: Toxic substances

· **Hazard identification number (Kemler code):** 60· **EMS Number:**

F-A,S-A

· **Segregation groups**

(SGG7) Heavy metals and their salts (including their organometallic compounds), (SGG11) mercury and mercury compounds

· **Stowage Category**

A

· **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code**

Not applicable.

· **Transport/Additional information:**· **DOT**· **Remarks:**

Special marking with the symbol (fish and tree).

· **ADR**· **Excepted quantities (EQ)**

Code: E4

Maximum net quantity per inner packaging: 1 g

Maximum net quantity per outer packaging: 500 g

· **IMDG**· **Limited quantities (LQ)**

500 g

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· Excepted quantities (EQ)	Code: E4 Maximum net quantity per inner packaging: 1 g Maximum net quantity per outer packaging: 500 g
· UN "Model Regulation":	UN 2025 MERCURY COMPOUND, SOLID, N.O.S. (THIOMERSAL), 6.1, II, ENVIRONMENTALLY HAZARDOUS

15 Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**
No further relevant information available.
- **Section 355 (extremely hazardous substances):** Substance is not listed.
- **Section 313 (Specific toxic chemical listings):** Substance is not listed.
- **TSCA (Toxic Substances Control Act):** ACTIVE
- **Hazardous Air Pollutants** Substance is listed.
- **Proposition 65** Substance is not listed.
- **Chemicals known to cause cancer:** Substance is not listed.
- **Chemicals known to cause reproductive toxicity for females:** Substance is not listed.
- **Chemicals known to cause reproductive toxicity for males:** Substance is not listed.
- **Chemicals known to cause developmental toxicity:** Substance is listed.
- **Carcinogenicity categories**
- **EPA (Environmental Protection Agency)** Substance is not listed.
- **TLV (Threshold Limit Value)** Substance is not listed.
- **NIOSH-Ca (National Institute for Occupational Safety and Health)** Substance is not listed.
- **GHS label elements**
The substance is classified and labeled according to the Globally Harmonized System (GHS).
- **Hazard pictograms** GHS06, GHS08
- **Signal word** Danger
- **Hazard statements**
Toxic if swallowed.
Fatal in contact with skin or if inhaled.
May cause damage to organs through prolonged or repeated exposure.
- **Precautionary statements**
Avoid release to the environment.
Wear protective gloves/protective clothing/eye protection/face protection.
If swallowed: Immediately call a poison center/doctor.
If on skin: Wash with plenty of soap and water.
IF INHALED: Remove person to fresh air and keep comfortable for breathing.
Get medical advice/attention if you feel unwell.
- **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 SDS:** Product Safety Department
- **Contact:** +49 6221 13840-35
- **Date of preparation / last revision** 11/20/2024 / -
- **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

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*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**DOT: US Department of Transportation**IATA: International Air Transport Association**EINECS: European Inventory of Existing Commercial Chemical Substances**CAS: Chemical Abstracts Service (division of the American Chemical Society)**NFPA: National Fire Protection Association (USA)**HMIS: Hazardous Materials Identification System (USA)**LC50: Lethal concentration, 50 percent**LD50: Lethal dose, 50 percent**PBT: Persistent, Bioaccumulative and Toxic**vPvB: very Persistent and very Bioaccumulative**NIOSH: National Institute for Occupational Safety**OSHA: Occupational Safety & Health**TLV: Threshold Limit Value**PEL: Permissible Exposure Limit**REL: Recommended Exposure Limit**Acute Toxicity - Oral 3: Acute toxicity – Category 3**Acute Toxicity - Dermal 1: Acute toxicity – Category 1**Acute Toxicity - Inhalation 2: Acute toxicity – Category 2**Specific Target Organ Toxicity - Repeated Exposure 2: Specific target organ toxicity (repeated exposure) – Category 2*

US