

---

## SECTION 1: Identification

### 1.1 GHS Product identifier

**Product name** 2-(ethylmercuriothio)benzoic acid

### 1.2 Other means of identification

**Product number** -

**Other names** -

### 1.3 Recommended use of the chemical and restrictions on use

**Identified uses** Industrial and scientific research uses.

**Uses advised against** no data available

---

## SECTION 2: Hazard identification

### 2.1 Classification of the substance or mixture

no data available

### 2.2 GHS label elements, including precautionary statements

**Pictogram(s)** no data available

**Signal word** no data available

**Hazard statement(s)** no data available

**Precautionary statement(s)**

**Prevention** no data available

**Response** no data available

**Storage** no data available

**Disposal** no data available

### 2.3 Other hazards which do not result in classification

no data available

---

## SECTION 3: Composition/information on ingredients

### 3.1 Substances

| Chemical name                     | Common names and synonyms         | CAS number | EC number | Concentration |
|-----------------------------------|-----------------------------------|------------|-----------|---------------|
| 2-(ethylmercuriothio)benzoic acid | 2-(ethylmercuriothio)benzoic acid | 148-61-8   | 205-719-5 | 100%          |

---

## SECTION 4: First-aid measures

### 4.1 Description of necessary first-aid measures

#### If inhaled

Move the victim into fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration and consult a doctor immediately. Do not use mouth to mouth resuscitation if the victim ingested or inhaled the chemical.

#### Following skin contact

Take off contaminated clothing immediately. Wash off with soap and plenty of water. Consult a doctor.

#### Following eye contact

Rinse with pure water for at least 15 minutes. Consult a doctor.

#### Following ingestion

Rinse mouth with water. Do not induce vomiting. Never give anything by mouth to an unconscious person. Call a doctor or Poison Control Center immediately.

### 4.2 Most important symptoms/effects, acute and delayed

no data available

### 4.3 Indication of immediate medical attention and special treatment needed, if necessary

Basic treatment: Establish a patent airway. Suction if necessary. Watch for signs of respiratory insufficiency and assist ventilations if necessary. Administer oxygen by nonrebreather mask at 10 to 15 L/min. Monitor for pulmonary edema and treat if necessary. Monitor for shock and treat if necessary. Anticipate seizures and treat if necessary. For eye contamination, flush eyes immediately with available water. Irrigate each eye continuously with normal saline during transport. Do not use emetics. For ingestion, rinse mouth and administer 5 ml/kg up to 200 ml of water for dilution if the patient can swallow, has a strong gag reflex, and does not drool. Administer activated charcoal. Mercury and related compounds

---

## SECTION 5: Fire-fighting measures

### 5.1 Suitable extinguishing media

Use dry chemical, carbon dioxide or alcohol-resistant foam.

## 5.2 Specific hazards arising from the chemical

no data available

## 5.3 Special protective actions for fire-fighters

Wear self-contained breathing apparatus for firefighting if necessary.

---

# SECTION 6: Accidental release measures

## 6.1 Personal precautions, protective equipment and emergency procedures

Avoid dust formation. Avoid breathing mist, gas or vapours. Avoid contacting with skin and eye. Use personal protective equipment. Wear chemical impermeable gloves. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.

## 6.2 Environmental precautions

Prevent further spillage or leakage if it is safe to do so. Do not let the chemical enter drains. Discharge into the environment must be avoided.

## 6.3 Methods and materials for containment and cleaning up

Thimerosal (an organic mercury compound) is widely used in the pharmaceutical industry and hospitals. This study examines the removal of mercury (thimerosal and Hg (II)) from a pharmaceutical wastewater using F-400 granular activated carbon (GAC) at bench and pilot scales. Bench scale dynamic column tests are conducted with 30, 60, 90 and 120 min empty bed contact times (EBCTs). The pilot scale study is conducted using two GAC columns-in-series each of 30 min EBCT.

---

# SECTION 7: Handling and storage

## 7.1 Precautions for safe handling

Handling in a well ventilated place. Wear suitable protective clothing. Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Use non-sparking tools. Prevent fire caused by electrostatic discharge steam.

## 7.2 Conditions for safe storage, including any incompatibilities

Store the container tightly closed in a dry, cool and well-ventilated place. Store apart from foodstuff containers or incompatible materials.

---

# SECTION 8: Exposure controls/personal protection

## 8.1 Control parameters

### Occupational Exposure limit values

|           |                                                                                                                                                                                 |
|-----------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Component | 2-(ethylmercuriothio)benzoic acid                                                                                                                                               |
| CAS No.   | 148-61-8                                                                                                                                                                        |
|           | Recommended Exposure Limit: 10 Hr Time-Weighted Avg: 0.01 mg/cu m; 15 Min Short-Term Exposure Limit: 0.03 mg/cu m; Skin designation. /Mercury (organo) alkyl compounds (as Hg)/ |

### Biological limit values

no data available

## 8.2 Appropriate engineering controls

Ensure adequate ventilation. Handle in accordance with good industrial hygiene and safety practice. Set up emergency exits and the risk-elimination area.

## 8.3 Individual protection measures, such as personal protective equipment (PPE)

### Eye/face protection

Wear tightly fitting safety goggles with side-shields conforming to EN 166(EU) or NIOSH (US).

### Skin protection

Wear fire/flame resistant and impervious clothing. Handle with gloves. Gloves must be inspected prior to use. Wash and dry hands. The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

### Respiratory protection

If the exposure limits are exceeded, irritation or other symptoms are experienced, use a full-face respirator.

### Thermal hazards

no data available

---

# SECTION 9: Physical and chemical properties and safety characteristics

### Physical state

no data available

### Colour

Cream colored, crystalline powder

|                                                                 |                                                                                       |
|-----------------------------------------------------------------|---------------------------------------------------------------------------------------|
| <b>Odour</b>                                                    | Characteristic odor                                                                   |
| <b>Melting point/freezing point</b>                             | no data available                                                                     |
| <b>Boiling point or initial boiling point and boiling range</b> | no data available                                                                     |
| <b>Flammability</b>                                             | no data available                                                                     |
| <b>Lower and upper explosion limit/flammability limit</b>       | no data available                                                                     |
| <b>Flash point</b>                                              | no data available                                                                     |
| <b>Auto-ignition temperature</b>                                | no data available                                                                     |
| <b>Decomposition temperature</b>                                | no data available                                                                     |
| <b>pH</b>                                                       | pH (1% solution): 6.7                                                                 |
| <b>Kinematic viscosity</b>                                      | no data available                                                                     |
| <b>Solubility</b>                                               | 1 gram dissolves in about 8 ml of alcohol; practically insoluble in benzene and ether |
| <b>Partition coefficient n-octanol/water</b>                    | log Kow = -1.88 /Estimated/                                                           |
| <b>Vapour pressure</b>                                          | no data available                                                                     |
| <b>Density and/or relative density</b>                          | no data available                                                                     |
| <b>Relative vapour density</b>                                  | no data available                                                                     |
| <b>Particle characteristics</b>                                 | no data available                                                                     |

---

## SECTION 10: Stability and reactivity

### 10.1 Reactivity

2 mg/cu m (as Hg) Mercury (organo) alkyl compounds (as Hg)

### 10.2 Chemical stability

Stable in air, but not in sunlight.

### 10.3 Possibility of hazardous reactions

no data available

### 10.4 Conditions to avoid

no data available

### 10.5 Incompatible materials

A chemical interaction between thimerosal and aluminum electrodes caused skin burns in a woman following surgical procedure. Thimerosal acted as a catalyst that rapidly oxidized the aluminum electrode, generating heat and causing a subsequent thermal injury.

### 10.6 Hazardous decomposition products

When heated to decomposition it emits very toxic fumes of /mercury, sodium oxides, and sulfur oxides/.

---

## SECTION 11: Toxicological information

### Acute toxicity

- Oral: LD50 Mouse oral 91 mg/kg
- Inhalation: no data available
- Dermal: no data available

### Skin corrosion/irritation

no data available

### Serious eye damage/irritation

no data available

### Respiratory or skin sensitization

no data available

### Germ cell mutagenicity

no data available

### Carcinogenicity

no data available

### Reproductive toxicity

no data available

### STOT-single exposure

no data available

### STOT-repeated exposure

no data available

#### Aspiration hazard

no data available

---

## SECTION 12: Ecological information

### 12.1 Toxicity

- Toxicity to fish: no data available
- Toxicity to daphnia and other aquatic invertebrates: no data available
- Toxicity to algae: no data available
- Toxicity to microorganisms: no data available

### 12.2 Persistence and degradability

no data available

### 12.3 Bioaccumulative potential

no data available

### 12.4 Mobility in soil

no data available

### 12.5 Other adverse effects

no data available

---

## SECTION 13: Disposal considerations

### 13.1 Disposal methods

#### Product

The material can be disposed of by removal to a licensed chemical destruction plant or by controlled incineration with flue gas scrubbing. Do not contaminate water, foodstuffs, feed or seed by storage or disposal. Do not discharge to sewer systems.

#### Contaminated packaging

Containers can be triply rinsed (or equivalent) and offered for recycling or reconditioning. Alternatively, the packaging can be punctured to make it unusable for other purposes and then be disposed of in a sanitary landfill. Controlled incineration with flue gas scrubbing is possible for combustible packaging materials.

---

## SECTION 14: Transport information

### 14.1 UN Number

ADR/RID: no data available

IMDG: no data available

IATA: no data available

### 14.2 UN Proper Shipping Name

ADR/RID: no data available

IMDG: no data available

IATA: no data available

### 14.3 Transport hazard class(es)

ADR/RID: no data available

IMDG: no data available

IATA: no data available

### 14.4 Packing group, if applicable

ADR/RID: no data available

IMDG: no data available

IATA: no data available

### 14.5 Environmental hazards

ADR/RID: No

IMDG: No

IATA: No

### 14.6 Special precautions for user

no data available

### 14.7 Transport in bulk according to IMO instruments

no data available

---

## SECTION 15: Regulatory information

### 15.1 Safety, health and environmental regulations specific for the product in question

| Chemical name                                                          | Common names and synonyms         | CAS number | EC number |
|------------------------------------------------------------------------|-----------------------------------|------------|-----------|
| 2-(ethylmercuriothio)benzoic acid                                      | 2-(ethylmercuriothio)benzoic acid | 148-61-8   | 205-719-5 |
| European Inventory of Existing Commercial Chemical Substances (EINECS) |                                   |            | Listed.   |
| EC Inventory                                                           |                                   |            | Listed.   |

|                                                                                 |             |
|---------------------------------------------------------------------------------|-------------|
| <b>United States Toxic Substances Control Act (TSCA) Inventory</b>              | Not Listed. |
| <b>China Catalog of Hazardous chemicals 2015</b>                                | Not Listed. |
| <b>New Zealand Inventory of Chemicals (NZIoC)</b>                               | Not Listed. |
| <b>Philippines Inventory of Chemicals and Chemical Substances (PICCS)</b>       | Not Listed. |
| <b>Vietnam National Chemical Inventory</b>                                      | Not Listed. |
| <b>Chinese Chemical Inventory of Existing Chemical Substances (China IECSC)</b> | Not Listed. |
| <b>Korea Existing Chemicals List (KECL)</b>                                     | Not Listed. |

## SECTION 16: Other information

### Information on revision

**Creation Date** July 15, 2019  
**Revision Date** July 15, 2019

### Abbreviations and acronyms

- CAS: Chemical Abstracts Service
- ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road
- RID: Regulation concerning the International Carriage of Dangerous Goods by Rail
- IMDG: International Maritime Dangerous Goods
- IATA: International Air Transportation Association
- TWA: Time Weighted Average
- STEL: Short term exposure limit
- LC50: Lethal Concentration 50%
- LD50: Lethal Dose 50%
- EC50: Effective Concentration 50%

### References

- IPCS - The International Chemical Safety Cards (ICSC), website: <http://www.ilo.org/dyn/icsc/showcard.home>
- HSDB - Hazardous Substances Data Bank, website: <https://toxnet.nlm.nih.gov/newtoxnet/hsdb.htm>
- IARC - International Agency for Research on Cancer, website: <http://www.iarc.fr/>
- eChemPortal - The Global Portal to Information on Chemical Substances by OECD, website: [http://www.echemportal.org/echemportal/index?pageID=0&request\\_locale=en](http://www.echemportal.org/echemportal/index?pageID=0&request_locale=en)
- CAMEO Chemicals, website: <http://cameochemicals.noaa.gov/search/simple>
- ChemIDplus, website: <http://chem.sis.nlm.nih.gov/chemidplus/chemidlite.jsp>
- ERG - Emergency Response Guidebook by U.S. Department of Transportation, website: <http://www.phmsa.dot.gov/hazmat/library/erg>
- Germany GESTIS-database on hazard substance, website: <http://www.dguv.de/ifa/gestis/gestis-stoffdatenbank/index-2.jsp>
- ECHA - European Chemicals Agency, website: <https://echa.europa.eu/>