

Material Safety Data Sheet

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Version 1.3

According to 91/155/EEC

Classified as Hazardous according to the criteria of EU Annex 1 and NOHSC.

1 - Product and Company Information

Product Name	ETHYLMERCURITHIOSALICYLIC ACID, SODIUM SALT
Product Number	E35257
Company	Sigma-Aldrich Pty, Ltd Unit 2, 14 Anella Avenue Castle Hill NSW 1765 Australia
Technical Phone #	+61 2 9841 0555
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2 - Composition/Information on Ingredients

Product Name	CAS #	EC no	Annex I Index Number
THIMEROSAL	54-64-8	200-210-4	080-004-00-7

Formula	C ₉ H ₉ HgO ₂ S.Na
Molecular Weight	404.81 AMU
Synonyms	((o-Carboxyphenyl)thio)ethylmercury sodium salt * Elicide * Ethyl(2-mercaptobenzoato-S)mercury sodium salt * o-(Ethylmercurithio)benzoic acid sodium salt * Ethylmercurithiosalicylic acid sodium salt * Ethylmerkurithiosalicylan sodny (Czech) * Ethyl (sodium o-mercaptobenzoato)mercury * Mercurate(1-), ethyl(2-mercaptobenzoate(2-)-O,S)-, sodium salt * Mercurothiolate * Mercury, ethyl(2-mercaptobenzoate-S)-, sodium sal * Merfamin * Merthiolate * Merthiolate sodium * Mertorgan * Merzonin * Merzonin sodium * SET * Sodium ethylmercuric thiosalicylate * Sodium o-(ethylmercurithio)benzoate * Sodium ethylmercurithiosalicylate * Sodium merthiolate * Thimerosal * Thimerosalate * Thiomersal * Thiomersalate

3 - Hazards Identification

SPECIAL INDICATION OF HAZARDS TO HUMANS AND THE ENVIRONMENT

Very toxic by inhalation, in contact with skin and if swallowed.
Danger of cumulative effects. Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

4 - First Aid Measures

AFTER INHALATION

If inhaled, remove to fresh air. If not breathing give artificial respiration. If breathing is difficult, give oxygen.

AFTER SKIN CONTACT

In case of skin contact, flush with copious amounts of water for at least 15 minutes. Remove contaminated clothing and shoes. Call a physician.

AFTER EYE CONTACT

In case of contact with eyes, flush with copious amounts of water for at least 15 minutes. Assure adequate flushing by separating the eyelids with fingers. Call a physician.

AFTER INGESTION

If swallowed, wash out mouth with water provided person is conscious. Call a physician immediately.

5 - Fire Fighting Measures

EXPLOSION DATA

Dust Potential: This material, like most materials in powder form, is capable of creating a dust explosion.

EXTINGUISHING MEDIA

Suitable: Water spray. Carbon dioxide, dry chemical powder, or appropriate foam.

SPECIAL RISKS

Specific Hazard(s): Emits toxic fumes under fire conditions.

SPECIAL PROTECTIVE EQUIPMENT FOR FIREFIGHTERS

Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.

6 - Accidental Release Measures

PERSONAL PRECAUTION PROCEDURES TO BE FOLLOWED IN CASE OF LEAK OR SPILL
Evacuate area.

PROCEDURE(S) OF PERSONAL PRECAUTION(S)

Wear self-contained breathing apparatus, rubber boots, and heavy rubber gloves.

METHODS FOR CLEANING UP

Sweep up, place in a bag and hold for waste disposal. Avoid raising dust. Ventilate area and wash spill site after material pickup is complete.

7 - Handling and Storage

HANDLING

Directions for Safe Handling: Do not breathe dust. Do not get in eyes, on skin, on clothing. Avoid prolonged or repeated exposure.

STORAGE

Conditions of Storage: Keep tightly closed.

8 - Exposure Controls / Personal Protection

ENGINEERING CONTROLS

Safety shower and eye bath. Use only in a chemical fume hood.

GENERAL HYGIENE MEASURES

Wash contaminated clothing before reuse. Wash thoroughly after handling.

EXPOSURE LIMITS - DENMARK

Source	Type	Value
OEL	TWA	0.05 mg/m ³

Remarks: SKIN

EXPOSURE LIMITS - UNITED KINGDOM

Source	Type	Value
OEL	LTEL	0.05 MG(HG)/M ³
OEL	STEL	0.15 mg(Hg)/m ³

PERSONAL PROTECTIVE EQUIPMENT

Respiratory Protection: Government approved respirator.

Hand Protection: Compatible chemical-resistant gloves.

Eye Protection: Chemical safety goggles.

9 - Physical and Chemical Properties

Appearance	Physical State: Solid Color: Slightly beige Form: Powder	
Property	Value	At Temperature or Pressure
pH	6.7 - 8.2	20 °C Concentration: 10 g/l
BP/BP Range	N/A	
MP/MP Range	234 °C	
Flash Point	250 °C	Method: closed cup
Flammability	N/A	
Autoignition Temp	N/A	
Oxidizing Properties	N/A	
Explosive Properties	N/A	
Explosion Limits	N/A	
Vapor Pressure	N/A	
SG/Density	0.5 g/cm ³	
Partition Coefficient	N/A	
Viscosity	N/A	
Vapor Density	N/A	
Saturated Vapor Conc.	N/A	
Evaporation Rate	N/A	
Bulk Density	500 kg/l	
Decomposition Temp.	N/A	
Solvent Content	N/A	
Water Content	N/A	
Surface Tension	N/A	
Conductivity	N/A	
Miscellaneous Data	N/A	
Solubility	Solvent: 0.1 g/ml MeOH Clear	

10 - Stability and Reactivity

STABILITY

Stable: Stable.

Conditions of Instability: May discolor on exposure to light.

Materials to Avoid: Strong oxidizing agents, Strong acids, Strong bases.

HAZARDOUS DECOMPOSITION PRODUCTS

Hazardous Decomposition Products: Carbon monoxide, Carbon dioxide
Mercury/mercury oxides., Sulfur oxides

HAZARDOUS POLYMERIZATION

Hazardous Polymerization: Will not occur

11 - Toxicological Information

RTECS NUMBER: OV8400000

ACUTE TOXICITY

LD50
Oral
Rat
98 mg/kg

LDLO
Intraaural
Child
60 MG/KG
4W-I

Remarks: Behavioral:Ataxia. Gastrointestinal:Nausea or vomiting.
Nutritional and Gross Metabolic:Changes in:Metabolic acidosis.

LD50
Oral
Rat
75 mg/kg

LD50
Subcutaneous
Rat
98 MG/KG

LD50
Oral
Mouse
91 mg/kg

LD50
Intraperitoneal
Mouse
54 MG/KG

LD50
Subcutaneous
Mouse
66 MG/KG

LD50
Intravenous
Mouse
45 MG/KG
Remarks: Kidney, Ureter, Bladder:Changes in tubules (including
acute renal failure, acute tubular necrosis).

IRRITATION DATA

Eyes
Rabbit
0.008 mg

Remarks: Mild irritation effect

SENSITIZATION

Sensitization: Prolonged or repeated exposure may cause allergic reactions in certain sensitive individuals.

SIGNS AND SYMPTOMS OF EXPOSURE

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

ROUTE OF EXPOSURE

Skin Contact: May cause skin irritation.

Skin Absorption: May be fatal if absorbed through skin.

Eye Contact: May cause eye irritation.

Inhalation: May be fatal if inhaled. Material may be irritating to mucous membranes and upper respiratory tract.

Ingestion: May be fatal if swallowed.

TARGET ORGAN INFORMATION

Nerves. Kidneys.

CHRONIC EXPOSURE - CARCINOGEN

Rat

Route of Application: Subcutaneous

Exposure Time: 1Y

Result: Tumorigenic:Neoplastic by RTECS criteria. Tumorigenic Effects: Uterine tumors Tumorigenic:Tumors at site or application.

CHRONIC EXPOSURE - MUTAGEN

Human

9 MG/L

Cell Type: lymphocyte

SLN

Mouse

45 MG/KG

Intraperitoneal

Micronucleus test

Mouse

45 MG/KG

Intraperitoneal

SLN

Hamster

125 UG/L

Cell Type: lung

Micronucleus test

Hamster

900 UG/L

Cell Type: Embryo

Other mutation test systems

Hamster

450 UG/L

Cell Type: Embryo

SLN

Hamster
125 UG/L
Cell Type: lung
SLN

CHRONIC EXPOSURE - TERATOGEN

Species: Rat
Dose: 1300 MG/KG
Route of Application: Intraperitoneal
Exposure Time: (6-18D PREG)
Result: Effects on Embryo or Fetus: Fetal death.

Species: Rabbit
Dose: 112 MG/KG
Route of Application: Ocular
Exposure Time: (6-18D PREG)
Result: Effects on Embryo or Fetus: Fetal death.

Species: Rabbit
Dose: 65 UG/KG
Route of Application: Ocular
Exposure Time: (6-18D PREG)
Result: Effects on Embryo or Fetus: Fetal death.

CHRONIC EXPOSURE - REPRODUCTIVE HAZARD

Species: Rat
Dose: 130 MG/KG
Route of Application: Intraperitoneal
Exposure Time: (6-18D PREG)
Result: Effects on Fertility: Post-implantation mortality (e.g., dead and/or resorbed implants per total number of implants).
Effects on Fertility: Abortion.

12 - Ecological Information

No data available.

13 - Disposal Considerations

SUBSTANCE DISPOSAL

Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber. Observe all federal, state, and local environmental regulations.

14 - Transport Information

RID/ADR

UN#: 2025
Class: 6.1
PG: III
Proper Shipping Name: Mercury compound, solid, n.o.s.

IMDG

UN#: 2025
Class: 6.1
PG: III
Proper Shipping Name: MERCURY COMPOUND, SOLID, N.O.S.
Marine Pollutant: No

Severe Marine Pollutant: Yes
Technical Name: Required

IATA

UN#: 2025
Class: 6.1
PG: III
Proper Shipping Name: Mercury compound, solid, n.o.s.
Inhalation Packing Group I: No
Technical Name: Required

15 - Regulatory Information

CLASSIFICATION AND LABELING ACCORDING TO EU DIRECTIVES

ANNEX I INDEX NUMBER: 080-004-00-7

NOTA: A, 1

INDICATION OF DANGER: T+ N

Very toxic. Dangerous for the environment.

R-PHRASES: 26/27/28 33 50/53

Very toxic by inhalation, in contact with skin and if swallowed. Danger of cumulative effects. Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

S-PHRASES: 13 28 36 45 60 61

Keep away from food, drink, and animal feedingstuffs. After contact with skin, wash immediately with plenty of soap-suds. Wear suitable protective clothing. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). This material and its container must be disposed of as hazardous waste. Avoid release to the environment. Refer to special instructions/safety data sheets.

COUNTRY SPECIFIC INFORMATION

Germany

WGK: 3

16 - Other Information

WARRANTY

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Sigma-Aldrich Inc., shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale. Copyright 2005 Sigma-Aldrich Co. License granted to make unlimited paper copies for internal use only.

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