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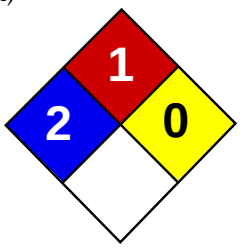

Health	2
Fire	1
Reactivity	0
Personal Protection	E

Material Safety Data Sheet
Thimerosal MSDS

Section 1: Chemical Product and Company Identification

Product Name: Thimerosal

Catalog Codes: SLT1411

CAS#: 54-64-8

RTECS: OV8400000

TSCA: TSCA 8(b) inventory: Thimerosal

CI#: Not available.

Synonym: Ethylmercurithiosalicylic acid sodium salt; Merthiolate

Chemical Name: Thimerosal

Chemical Formula: C9H9HgNaO2S

Contact Information:

Sciencelab.com, Inc.
14025 Smith Rd.
Houston, Texas 77396

US Sales: **1-800-901-7247**
International Sales: **1-281-441-4400**

Order Online: ScienceLab.com

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Section 2: Composition and Information on Ingredients

Composition:

Name	CAS #	% by Weight
Thimerosal	54-64-8	100

Toxicological Data on Ingredients: Thimerosal: ORAL (LD50): Acute: 75 mg/kg [Rat]. 91 mg/kg [Mouse].

Section 3: Hazards Identification

Potential Acute Health Effects:
Hazardous in case of skin contact (irritant), of ingestion, of inhalation. Slightly hazardous in case of eye contact (irritant). Severe over-exposure can result in death.

Potential Chronic Health Effects:
CARCINOGENIC EFFECTS: Not available. MUTAGENIC EFFECTS: Mutagenic for mammalian somatic cells. TERATOGENIC EFFECTS: Not available. DEVELOPMENTAL TOXICITY: Not available. The substance may be toxic to kidneys, liver, spleen, bone marrow, central nervous system (CNS). Repeated or prolonged exposure to the substance can produce target organs damage. Repeated exposure to a highly toxic material may produce general deterioration of health by an accumulation in one or many human organs.

Section 4: First Aid Measures

Eye Contact:
Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Cold water may be used. Get medical attention if irritation occurs.

Skin Contact:
In case of contact, immediately flush skin with plenty of water. Cover the irritated skin with an emollient. Remove contaminated clothing and shoes. Cold water may be used.Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention.

Serious Skin Contact:
Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream. Seek immediate medical attention.

Inhalation:
If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

Serious Inhalation:
Evacuate the victim to a safe area as soon as possible. Loosen tight clothing such as a collar, tie, belt or waistband. Seek medical attention.

Ingestion:
If swallowed, do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention immediately.

Serious Ingestion: Not available.

Section 5: Fire and Explosion Data

Flammability of the Product: May be combustible at high temperature.

Auto-Ignition Temperature: Not available.

Flash Points: CLOSED CUP: >250°C (482°F).

Flammable Limits: Not available.

Products of Combustion: These products are carbon oxides (CO, CO2). Some metallic oxides.

Fire Hazards in Presence of Various Substances:
Slightly flammable to flammable in presence of heat. Non-flammable in presence of shocks.

Explosion Hazards in Presence of Various Substances:
Slightly explosive in presence of open flames and sparks. Non-explosive in presence of shocks.

Fire Fighting Media and Instructions:
SMALL FIRE: Use DRY chemical powder. LARGE FIRE: Use water spray, fog or foam. Do not use water jet.

Special Remarks on Fire Hazards: As with most organic solids, fire is possible at elevated temperatures

Special Remarks on Explosion Hazards:
Fine dust dispersed in air in sufficient concentrations, and in the presences of an ignition source is a potential dust explosion hazard.

Section 6: Accidental Release Measures

Small Spill: Use appropriate tools to put the spilled solid in a convenient waste disposal container.

Large Spill:
Poisonous solid. Stop leak if without risk. Do not get water inside container. Do not touch spilled material. Use water spray to reduce vapors. Prevent entry into sewers, basements or confined areas; dike if needed. Eliminate all ignition sources. Call for assistance on disposal. Be careful that the product is not present at a concentration level above TLV. Check TLV on the MSDS and with local authorities.

Section 7: Handling and Storage

Precautions:
Keep away from heat. Keep away from sources of ignition. Do not ingest. Do not breathe dust. Avoid contact with skin. Wear suitable protective clothing. In case of insufficient ventilation, wear suitable respiratory equipment. If ingested, seek medical advice immediately and show the container or the label.

Storage:
Keep container tightly closed. Keep container in a cool, well-ventilated area. Sensitive to light. Store in light-resistant containers.

Section 8: Exposure Controls/Personal Protection

Engineering Controls:
Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

Personal Protection: Safety glasses. Lab coat. Dust respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.

Personal Protection in Case of a Large Spill:
Splash goggles. Full suit. Dust respirator. Boots. Gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

Exposure Limits:
TWA: 0.1 from ACGIH (TLV) [United States] [1995] Consult local authorities for acceptable exposure limits.

Section 9: Physical and Chemical Properties

Physical state and appearance: Solid. (crystalline powder.)

Odor: Not available.

Taste: Not available.

Molecular Weight: 404.82 g/mole

Color: Off-white. White.

pH (1% soln/water): 6.7 [Neutral.]

Boiling Point: Not available

Melting Point: Decomposition temperature: 232°C (449.6°F)

Critical Temperature: Not available.

Specific Gravity: Not available.

Vapor Pressure: Not applicable.

Vapor Density: Not available.

Volatility: Not available.

Odor Threshold: Not available.

Water/Oil Dist. Coeff.: Not available.

Ionicity (in Water): Not available.

Dispersion Properties: See solubility in water.

Solubility:
Easily soluble in cold water, hot water. Insoluble in diethyl ether. 1 gram dissolves in about 1 ml of water. 1 gram dissolves in about 8 ml of alcohol. Practically insoluble in benzene

Section 10: Stability and Reactivity Data

Stability: The product is stable.

Instability Temperature: Not available.

Conditions of Instability: Excess heat, light, dust generation, incompatible materials

Incompatibility with various substances: Reactive with oxidizing agents, acids, alkalis.

Corrosivity: Non-corrosive in presence of glass.

Special Remarks on Reactivity: Light sensitive.

Special Remarks on Corrosivity: Not available.

Polymerization: Will not occur.

Section 11: Toxicological Information

Routes of Entry: Inhalation. Ingestion.

Toxicity to Animals: Acute oral toxicity (LD50): 75 mg/kg [Rat].

Chronic Effects on Humans:
MUTAGENIC EFFECTS: Mutagenic for mammalian somatic cells. May cause damage to the following organs: kidneys, liver, spleen, bone marrow, central nervous system (CNS).

Other Toxic Effects on Humans: Hazardous in case of skin contact (irritant), of ingestion, of inhalation.

Special Remarks on Toxicity to Animals: Not available.

Special Remarks on Chronic Effects on Humans:
May cause cancer based on animal data. No human data found. May cause adverse reproductive effects(female fertility - post implanation mortality, fetotoxicity)and birth defects. May affect genetic material

Special Remarks on other Toxic Effects on Humans:
Acute Potential Health Effects: Skin: Causes skin irritation. Eyes: Causes eye irritation. May cause chemical conjunctivitis. Inhalation: Causes respiratory tract irritation. May cause allergic respiratory tract irritation. Exposures to high concentrations may produce unconsciousness with cyanosis(a bluish discoloration of the skin due to deficient oxygenation of the blood) and cold extremities and may also affect the cardiovascular system (rapid pulse). Acute exposure to high concentrations of mercury vapors may also cause kidney damage and affect behavior/central nervous system, peripheral nervous system and autonomic nervous system, and liver and cause gastrointestinal effects (nausea, abdominal pain, vomiting). Ingestion: Harmful if swallowed. May cause gastrointestinal tract irritation with nausea, vomiting and diarrhea, headache. Exposure to high concentrations may affect respiration and cardiovascular system which may produce unconciousness with cyanosis, cold extremities and rapid pulse. May also cause central nervous system effects and/or neurological effects, and may affect the urinary system (kidneys),and liver. Chronic Potential Health Effects: Skin: Prolonged or repeated skin contact may cause skin sensitization, an allergic reaction. Inhalation and Ingestion: Repeated or prolonged exposure may cause cause kidney damage, and may affect the liver, and bone marrow. Chronic exposure to mercury vaporsbehavior/central nervous system and peripheral nervous system (depression, irritability, nervousness, weakness, ataxia, fatigue, tremor, jerky gait, limb spasms, personality changes), metabolism (anorexia, weight loss) and cause gastrointestinal disturbances which is collectively referred to as "aesthenic-vegetative syndrome." Chronic ingestion may cause accumulation of mercury in body tissues and may result in salicylism which is characterized by nausea, vomiting, gastric ulcers, and hemorrhagic strokes.

Section 12: Ecological Information

Ecotoxicity: Not available.

BOD5 and COD: Not available.

Products of Biodegradation:
Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.

Toxicity of the Products of Biodegradation: The products of degradation are less toxic than the product itself.

Special Remarks on the Products of Biodegradation: Not available.

Section 13: Disposal Considerations

Waste Disposal:
Waste must be disposed of in accordance with federal, state and local environmental control regulations.

Section 14: Transport Information

DOT Classification: CLASS 6.1: Poisonous material.

Identification: : Mercury compound, solid, n.o.s. (Thimerosal) UNNA: 2025 PG: III

Special Provisions for Transport: Not available.

Section 15: Other Regulatory Information

Federal and State Regulations:
California prop. 65: This product contains the following ingredients for which the State of California has found to cause cancer, birth defects or other reproductive harm, which would require a warning under the statute: Thimerosal California prop. 65: This product contains the following ingredients for which the State of California has found to cause birth defects which would require a warning under the statute: Thimerosal TSCA 8(b) inventory: Thimerosal SARA 313 toxic chemical notification and release reporting: Thimerosal CERCLA: Hazardous substances.: Thimerosal

Other Regulations:
OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200). EINECS: This product is on the European Inventory of Existing Commercial Chemical Substances.

Other Classifications:

WHMIS (Canada):
CLASS D-1B: Material causing immediate and serious toxic effects (TOXIC). CLASS D-2A: Material causing other toxic effects (VERY TOXIC).

DSCL (EEC):

HMIS (U.S.A.):

Health Hazard: 2

Fire Hazard: 1

Reactivity: 0

Personal Protection: E

National Fire Protection Association (U.S.A.):

Health: 2

Flammability: 1

Reactivity: 0

Specific hazard:

Protective Equipment:
Gloves. Lab coat. Dust respirator. Be sure to use an approved/certified respirator or equivalent. Safety glasses.

Section 16: Other Information

References: Not available.

Other Special Considerations:
Thimerosal is a Mercury compound. It is on the Prop. 65 list as a Mercury compound. Under Prop. 65, Mercury and Mercury compounds are listed as "Chemicals known to the State of California to Cause Reproductive Toxicity."

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