Material Safety Data Sheet (MSDS)

Thiophenol

Revision Date: 22-September-2025
Version: 1.0

Section 1: Product Identification

- **Product Name:** Thiophenol
- **Chemical Formula:** C6H6S
- **CAS No:** 108-98-5
- **Synonyms:** Benzenethiol; Phenyl mercaptan
- **Recommended Use**: Laboratory chemical; intermediate in organic synthesis.

Section 2: Hazards Identification

- **Classification (GHS):** Flammable liquids (Category 3); Acute toxicity, Oral (Category 3); Acute toxicity, Inhalation (Category 3); Skin corrosion/irritation (Category 1B); Serious eye damage (Category 1).
- **Signal Word:** Danger
- **Hazard Statements:**

- Toxic if swallowed or inhaled
- Causes severe skin burns and eye damage
- Flammable liquid and vapor
- Keep away from heat/sparks/open flames. No smoking
- Wear protective gloves, protective clothing, eye and face protection
- IF INHALED: Remove to fresh air and immediately call a POISON CENTER/doctor

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Section 3: Composition / Information on Ingredients

• **Concentration:** 100%

Section 4: First Aid Measures

• **Inhalation:** Remove victim to fresh air. If not breathing, give artificial respiration. Immediately call a POISON CENTER/doctor.

• **Skin Contact:** Remove contaminated clothing. Rinse skin with plenty of water/shower for at least 15 minutes. Get immediate medical attention.

• **Eye Contact:** Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing. Get immediate medical attention.

• **Ingestion:** Rinse mouth. Do NOT induce vomiting. Immediately call a POISON CENTER/doctor.

Section 5: Fire-Fighting Measures

• **Suitable Extinguishing Media:** Dry chemical, alcohol-resistant foam, carbon dioxide (CO2); water spray.

• **Specific Hazards:** Flammable liquid and vapor. Vapors are heavier than air and may travel to ignition source. Emits toxic fumes of sulfur oxides and carbon oxides when burning.

• **Protective Equipment:** Firefighters should wear self-contained breathing apparatus and full protective clothing.

Section 6: Accidental Release Measures

• **Personal Precautions:** Evacuate area. Use personal protective equipment. Eliminate ignition sources. Ensure adequate ventilation. Avoid breathing vapors.

• **Environmental Precautions:** Prevent entry into drains and waterways. Very toxic to aquatic life.

• **Cleanup Methods:** Absorb spill with inert material (sand, earth). Collect into suitable container for disposal. Clean contaminated surface thoroughly.

Section 7: Handling and Storage

• **Handling:** Handle in fume hood. Avoid inhalation of vapors. Avoid contact with skin and eyes. Ground/bond containers. Keep away from ignition sources.

• **Storage:** Store in a cool, dry, well-ventilated place away from heat and oxidizing agents. Keep container tightly closed.

Section 8: Exposure Controls / Personal Protection

• **Exposure Limits:** OSHA PEL: 0.1 ppm (0.5 mg/m^3) TWA.

• **Engineering Controls:** Use only in fume hood with adequate ventilation.

• **Personal Protective Equipment:** Chemical-resistant gloves, impervious clothing, safety goggles/face shield, respirator with organic vapor cartridge if exposure limits are exceeded.

Section 9: Physical and Chemical Properties

• **Appearance:** Colorless to pale yellow liquid

• **Odor:** unpleasant

• **Boiling Point:** 169 °C

• **Flash Point:** 49 °C (closed cup)

• **Solubility:** Slightly soluble in water; miscible with ethanol, ether, chloroform

• **Molecular Weight:** 110.18 g/mol

Section 10: Stability and Reactivity

- **Stability:** Stable under recommended storage conditions.
- **Incompatible Materials:** Strong oxidizing agents, bases, metals.
- **Hazardous Decomposition Products:** Carbon oxides, sulfur oxides under fire conditions.

Section 11: Toxicological Information

- **Routes of Exposure:** Inhalation, ingestion, skin and eye contact.
- **Acute Effects:** Toxic if swallowed or inhaled. Causes severe burns to skin and eyes. May cause respiratory irritation.
- **Chronic Effects:** Prolonged exposure may cause damage to liver, kidneys, blood system. Suspected mutagenicity based on animal data.

Section 12: Ecological Information

- **Ecotoxicity:** Very toxic to aquatic life.
- **Persistence and Degradability:** May degrade slowly in the environment.
- **Bioaccumulative Potential:** High potential due to lipophilicity.

Section 13: Disposal Considerations

• Dispose of contents/container in accordance with local/regional/national regulations. Do not release into the environment. Incinerate in chemical waste facility.

Section 14: Transport Information

• **UN Number**: UN2337

• **Proper Shipping Name:** Thiophenol

• **Hazard Class:** 6.1 (3)

• **Packing Group:** I

Section 15: Regulatory Information

• Complies with Indian chemical safety regulations and listed under international chemical inventories (TSCA, EINECS, etc.).

• Classified as hazardous substance as per GHS.

Section 16: Other Information

- **Disclaimer:** The above information is believed to be correct but does not claim to be exhaustive. Users are responsible for verifying suitability under actual conditions of use. **Triveni chemicals** disclaims any liability for damage resulting from handling or contact.