

Sodium Hypophosphite MSDS

1. Product Name and Identification

Product Name: [Sodium Hypophosphite](#)

Chemical Name: Sodium Hypophosphite Monohydrate

CAS Number: 10039-56-2

Synonyms: Sodium hypophosphite hydrate

Molecular Formula: $\text{NaH}_2\text{PO}_2 \cdot \text{H}_2\text{O}$

2. Composition/Ingredients

Substance: Sodium Hypophosphite

- **Chemical Identity:** Sodium Hypophosphite Monohydrate
- **CAS Number:** 10039-56-2
- **Concentration:** 99% (approx.)

Other minor impurities may be present but are not known to contribute significant hazards.

3. Hazards Identification

Hazard Classification:

- Not classified as a flammable substance but may enhance the combustion of other materials.
- Potential irritant to the skin, eyes, and respiratory tract.

Hazard Statements:

- May cause eye and skin irritation.
- Dust or vapors may irritate the respiratory system.

Precautionary Statements:

- Avoid inhaling dust or vapors.

- Prevent contact with skin and eyes.

Environmental Hazards:

- Low risk to aquatic environments when managed properly.

4. First Aid Measures

Inhalation: Move the exposed individual to fresh air. If symptoms persist, seek medical attention.

Skin Contact: Wash affected area with plenty of soap and water. Remove any contaminated clothing. Seek medical advice for persistent irritation.

Eye Contact: Rinse eyes cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing. Consult a doctor if irritation persists.

Ingestion: Rinse mouth with water. Do not induce vomiting unless instructed by a medical professional. Seek immediate medical attention.

5. Handling and Storage

Handling:

- Use appropriate protective equipment when handling the product.
- Avoid generation and inhalation of dust.
- Wash hands thoroughly after handling.

Storage:

- Store in a cool, dry, well-ventilated area away from incompatible materials such as strong oxidizing agents.
- Keep container tightly closed when not in use.

6. Exposure Controls/Personal Protection

Exposure Limits: No exposure limits have been established for Sodium Hypophosphite.

Engineering Controls: Use adequate ventilation to minimize dust accumulation in the workspace.

Personal Protective Equipment (PPE):

- **Respiratory Protection:** Use appropriate respirators if ventilation is inadequate.
- **Skin Protection:** Wear chemical-resistant gloves and protective clothing.
- **Eye Protection:** Safety goggles or face shields are recommended.

7. Physical and Chemical Properties

- **Physical State:** Solid
- **Appearance:** White crystalline powder
- **Odor:** Odorless
- **Boiling Point:** Not applicable
- **Melting Point:** Decomposes above 200°C
- **Solubility:** Highly soluble in water
- **pH (in solution):** Neutral to slightly alkaline
- **Density:** Approx. 1.45 g/cm³

8. Stability and Reactivity

Reactivity: Can react with strong oxidizing agents.

Chemical Stability: Stable under normal conditions of use and storage.

Hazardous Reactions: May produce flammable hydrogen gas upon contact with strong acids.

Conditions to Avoid: Heat, moisture, and incompatible materials.

Incompatible Materials: Strong oxidizers, acids.

Decomposition Products: May produce toxic fumes of phosphorous oxides or sodium oxides when decomposed by heat.

9. Toxicological Information

Potential Health Effects:

- **Acute Toxicity:** May cause mild to moderate irritation to skin, eyes, and respiratory tract.

- **Chronic Effects:** Prolonged or repeated exposure may cause skin sensitization or dermatitis.

Routes of Exposure:

- **Inhalation:** Dust can irritate the respiratory tract.
- **Skin Contact:** Prolonged contact may result in irritation.
- **Eye Contact:** May cause irritation and redness.
- **Ingestion:** Harmful if swallowed in large quantities; may cause gastrointestinal irritation.

Carcinogenicity: No evidence of carcinogenic effects in humans.

10. Disposal Considerations

- Dispose of Sodium Hypophosphite in accordance with local, regional, and national regulations.
- Avoid release into the environment.
- Do not dispose of in waterways, soil, or sewers.
- Use a licensed waste disposal service when required.