

Sodium Chlorite MSDS

1. Product Name and Identification

Product Name: [Sodium Chlorite](#)

Synonyms: Chlorous acid, sodium salt

Chemical Formula: NaClO₂

Molecular Weight: 90.44 g/mol

CAS Number: 7758-19-2

Intended Use: Bleaching agent, water treatment, oxidizing agent

2. Composition/Ingredients

| Substance | CAS Number | Proportion (%) |
|-------------------------------|------------|----------------|
| Sodium Chlorite | 7758-19-2 | ≥80% |
| Impurities (inert matter) --- | | ≤20% |

3. Hazards Identification

Classification:

- Classified as hazardous under GHS guidelines.
- Oxidizer. Harmful if swallowed or inhaled. May cause irritation to skin and eyes.

Potential Hazards:

- **Health Hazards:** Irritating to skin, eyes, and respiratory system. Harmful if ingested or inhaled in significant amounts. Exposure to high concentrations can cause nausea, vomiting, or respiratory discomfort.
- **Environmental Hazards:** Toxic to aquatic life with long-lasting effects.

GHS Label Elements:

- **Pictogram:**
⚠ (Warning), ☹ (Oxidizer)
- **Signal Word:** Danger
- **Hazard Statements:**
 - H271 - May cause fire or explosion; strong oxidizer.
 - H302 - Harmful if swallowed.
 - H315 - Causes skin irritation.
 - H319 - Causes serious eye irritation.
 - H335 - May cause respiratory irritation.
- **Precautionary Statements:**

- Keep away from heat and combustible materials.
- Use protective gloves and eye/face protection.
- Avoid inhalation of vapors or dust.

4. First Aid Measures

Skin Contact:

Remove contaminated clothing. Wash affected area thoroughly with soap and running water for at least 15 minutes. If irritation persists, consult a physician.

Eye Contact:

Flush eyes with plenty of water for at least 15 minutes, lifting eyelids to ensure thorough rinsing. Seek medical attention if irritation continues or worsens.

Inhalation:

Remove the individual to fresh air immediately. If breathing difficulty occurs, provide oxygen and seek medical attention promptly.

Ingestion:

Do not induce vomiting. Rinse mouth with water and drink plenty of water if conscious. Seek immediate medical attention.

5. Handling and Storage

Handling:

- Ensure adequate ventilation when handling. Avoid dust generation.
- Keep away from heat, sparks, and incompatible materials, particularly organic matter or reducing agents.
- Wear personal protective equipment (PPE) including gloves and safety goggles.

Storage:

- Store in a cool, dry, and well-ventilated area.
- Keep in a tightly sealed container, away from strong acids, reducing agents, and flammable substances.
- Avoid contact with combustible materials.

6. Exposure Controls/Personal Protection

Engineering Controls:

Maintain proper ventilation during handling and storage. Use local exhaust systems to minimize inhalation risk.

Personal Protection Equipment (PPE):

- **Eye Protection:** Use safety goggles or face shields.
- **Skin Protection:** Wear chemical-resistant gloves and protective clothing.
- **Respiratory Protection:** Use a respirator suitable for oxidizing agents if dust or vapors are generated during handling.

Exposure Limits:

Follow OSHA PEL or local regulatory guidelines for exposure to oxidizers.

7. Physical and Chemical Properties

| Property | Value |
|--------------------|----------------------------------|
| Form | Crystalline solid |
| Color | White or slightly yellow |
| Odor | Odorless to slight chlorine odor |
| pH (1% solution) | 9.0-11.0 |
| Boiling Point | Not applicable |
| Melting Point | ~200°C (decomposes) |
| Solubility (Water) | Highly soluble |
| Specific Gravity | ~2.5 |
| Flash Point | Non-flammable |

8. Stability and Reactivity

Stability: Stable under recommended storage conditions.

Conditions to Avoid:

- Exposure to heat or flame
- Contact with combustibles or organic materials
- High humidity or prolonged moisture contact

Materials to Avoid: Strong reducing agents, acids, and flammable materials.

Decomposition Products:

Releases chlorine dioxide, chlorine gas, and oxygen during decomposition.

9. Toxicological Information

Routes of Exposure: Skin contact, eye contact, inhalation, ingestion.

Toxic Effects:

- Harmful if swallowed, leading to nausea, digestive irritation, or abdominal pain.
- Causes irritation to eyes and respiratory system upon exposure.
- Prolonged skin contact can lead to mild burns or sensitivity.

Chronic Effects:

- Long-term exposure to low levels may cause respiratory irritation or sensitization.

LD50 Data:

- Oral (rat): ~1,650 mg/kg

10. Disposal Considerations

Dispose in accordance with all local, state, and federal regulations. Do not release into sewers or natural water systems.

Disposal Recommendations:

Small amounts can be neutralized with strong reducing agents under controlled conditions. Larger quantities must be handled by licensed waste disposal facilities. Ensure waste management minimizes environmental risks.
