

Sodium Chloride MSDS (Material Safety Data Sheet)

Section 1: Product Name and Identification

- **Product Name:** [Sodium Chloride](#)
- **Chemical Name:** Sodium Chloride
- **Synonyms:** Table Salt, Halite, Common Salt
- **CAS Number:** 7647-14-5
- **Use of Product:** Food additive, industrial chemical, water treatment, laboratory reagent

Section 2: Composition/Ingredients

- **Chemical Composition:**
 - Sodium Chloride (NaCl) - $\geq 99\%$
- **Molecular Formula:** NaCl
- **Molecular Weight:** 58.44 g/mol
- **Impurities or Additives:** Trace minerals, if naturally sourced

Section 3: Hazards Identification

- **GHS Classification:** Not classified as hazardous under GHS standards.
- **Hazard Statements:**
 - Non-hazardous under normal conditions of use.
- **Precautionary Statements:**
 - Avoid creating or breathing dust.
 - Handle in accordance with good hygiene and safety practices.

Section 4: First Aid Measures

- **Eye Contact:** Rinse eyes thoroughly with water for several minutes. Remove contact lenses if present and easy to do. Seek medical attention if irritation persists.
- **Skin Contact:** Wash exposed areas with soap and water. Discontinue use if skin irritation occurs.
- **Inhalation:** Move to fresh air. If discomfort persists or breathing becomes difficult, seek medical attention.
- **Ingestion:** Rinse mouth with water. Drink water to dilute. Seek medical advice if large quantities are ingested or discomfort occurs.

Section 5: Handling and Storage

- **Handling:**

- Avoid generating dust during handling.
- Use in well-ventilated areas.
- Wash hands thoroughly after handling.
- **Storage:**
 - Store in a cool, dry place away from moisture and contaminants.
 - Keep container tightly sealed when not in use to prevent caking.

Section 6: Exposure Controls/Personal Protection

- **Exposure Limits:** No occupational exposure limits are established.
- **Engineering Controls:**
 - Ensure good ventilation in areas where dust may be generated.
- **Personal Protective Equipment (PPE):**
 - **Eye Protection:** Safety goggles recommended if handling large quantities or generating dust.
 - **Hand Protection:** Protective gloves optional but recommended for prolonged handling.
 - **Skin Protection:** Normal clothing is sufficient under typical use conditions.
 - **Respiratory Protection:** Use a dust mask if significant dust is produced.

Section 7: Physical and Chemical Properties

- **Appearance:** White crystalline solid
- **Odor:** Odorless
- **Melting Point:** 801°C (1474°F)
- **Boiling Point:** 1413°C (2575°F)
- **Flashpoint:** Not applicable
- **pH:** Neutral (7) in water solution
- **Solubility:** Completely soluble in water (36g/100ml at 20°C)
- **Density:** 2.16 g/cm³
- **Vapor Pressure:** Not applicable
- **Auto-ignition Temperature:** Not applicable

Section 8: Stability and Reactivity

- **Stability:** Stable under normal conditions of use and storage.
- **Conditions to Avoid:** Avoid exposure to excessive moisture, which can cause caking.
- **Materials to Avoid:** Strong acids may release hydrogen chloride gas.
- **Hazardous Decomposition Products:** May release chlorine and sodium oxides upon extreme heating.

Section 9: Toxicological Information

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

- **Acute Toxicity:**
 - LD50 (Oral - Rat): 3,000 mg/kg (low toxicity).
- **Chronic Exposure:** No adverse effects are expected under normal use. Consuming excessive amounts may disrupt electrolyte balance.
- **Symptoms of Overexposure:** May cause mild irritation to the skin, eyes, or respiratory tract if inhaled as a dust.
- **Carcinogenicity:** Not classified as carcinogenic by OSHA, IARC, or NTP.
- **Reproductive Effects:** No known adverse effects for normal use.

Section 10: Disposal Considerations

- **Waste Disposal:**
 - Dispose of in accordance with local, regional, and national regulations.
 - Non-hazardous solid waste can typically be disposed of in general waste streams.
- **Container Disposal:**
 - Ensure containers are emptied completely before disposal. Follow appropriate recycling and waste regulations.