

Formic Acid MSDS

1. Product Name and Identification

- **Product Name:** [Formic Acid](#)
 - **Chemical Formula:** CH₂O₂
 - **CAS Number:** 64-18-6
 - **Synonyms:** Methanoic Acid, Hydrogen Carboxylic Acid
 - **Recommended Use:** Preservative, industrial chemical, leather tanning, and cleaning agent.
 - **Manufacturer/Supplier:** [Insert Manufacturer Name and Contact Information]
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2. Composition/Ingredients

- **Chemical Name:** Formic Acid
 - **CAS Number:** 64-18-6
 - **Concentration:** 85-99% (depending on grade)
 - **Impurities:** None known
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3. Hazards Identification

- **Classification:**
 - Acute Toxicity (Oral): Category 4
 - Skin Corrosion: Category 1A
 - Eye Damage: Category 1
 - Specific Target Organ Toxicity (Single Exposure): Category 3 (Respiratory Irritation)
- **Label Elements:**
 - **Signal Word:** Danger
 - **Hazard Statements:**
 - Harmful if swallowed.
 - Causes severe skin burns and eye damage.
 - May cause respiratory irritation.
 - **Precautionary Statements:**
 - Avoid breathing vapors or mists.
 - Wear protective gloves, clothing, and eye protection.
 - Wash hands thoroughly after handling.
 - Use only in a well-ventilated area.
- **Other Hazards:**
 - May cause environmental harm if released in large quantities.

4. First Aid Measures

- **Inhalation:** Move the person to fresh air. If breathing is difficult, provide oxygen and seek immediate medical attention.
 - **Skin Contact:** Immediately flush affected area with plenty of water for at least 15 minutes. Remove contaminated clothing. Seek medical attention.
 - **Eye Contact:** Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing. Seek immediate medical attention.
 - **Ingestion:** Rinse mouth with water. Do not induce vomiting. Seek immediate medical attention.
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5. Handling and Storage

- **Handling:**
 - Use in a well-ventilated area.
 - Avoid contact with skin, eyes, and clothing.
 - Keep away from heat, sparks, and open flames.
 - Wear appropriate personal protective equipment (PPE).
 - **Storage:**
 - Store in a cool, dry, and well-ventilated area.
 - Keep container tightly closed.
 - Protect from moisture and incompatible materials (e.g., strong bases, oxidizing agents).
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6. Exposure Controls/Personal Protection

- **Exposure Limits:**
 - OSHA PEL: 5 ppm (9 mg/m³)
 - ACGIH TLV: 5 ppm (9.4 mg/m³)
 - **Engineering Controls:** Ensure adequate ventilation or use local exhaust systems.
 - **Personal Protective Equipment (PPE):**
 - **Eye Protection:** Safety goggles or face shield.
 - **Skin Protection:** Chemical-resistant gloves and protective clothing.
 - **Respiratory Protection:** Use a respirator if exposure limits are exceeded or if ventilation is inadequate.
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7. Physical and Chemical Properties

- **Appearance:** Clear, colorless liquid
 - **Odor:** Pungent, penetrating odor
 - **pH:** ~2.2 (1% solution)
 - **Melting Point:** 8.4°C
 - **Boiling Point:** 100.8°C
 - **Flash Point:** 69°C (closed cup)
 - **Solubility:** Miscible with water, alcohol, and ether
 - **Density:** ~1.22 g/cm³
 - **Molecular Weight:** 46.03 g/mol
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8. Stability and Reactivity

- **Stability:** Stable under normal conditions of use and storage.
 - **Conditions to Avoid:** Excessive heat, open flames, and incompatible materials.
 - **Incompatible Materials:** Strong bases, oxidizing agents, and reducing agents.
 - **Hazardous Decomposition Products:** Carbon monoxide, carbon dioxide, and toxic fumes.
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9. Toxicological Information

- **Acute Toxicity:**
 - Oral LD50 (Rat): ~1100 mg/kg
 - **Skin Corrosion:** Causes severe burns.
 - **Eye Damage:** Causes severe damage and potential blindness.
 - **Respiratory Irritation:** May cause coughing, shortness of breath, and irritation of the respiratory tract.
 - **Chronic Effects:** Prolonged exposure may cause damage to the respiratory system.
 - **Carcinogenicity:** Not classified as a carcinogen by IARC, NTP, or OSHA.
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10. Disposal Considerations

- **Waste Disposal Methods:** Dispose of in accordance with local, regional, and national regulations.
- **Packaging Disposal:** Ensure containers are empty before disposal. Rinse thoroughly and recycle if possible.
- **Environmental Precautions:** Avoid release into waterways or soil.
