

# Calcium Formate MSDS

## 1. Product Name and Identification

**Product Name:** [Calcium Formate](#)

**Synonyms:** Calcium diformate, Formic acid calcium salt

**Chemical Formula:** Ca(HCOO)<sub>2</sub>

**Molecular Weight:** 130.11 g/mol

**CAS Number:** 544-17-2

**Intended Use:** Additive in construction, animal feed preservative, de-icing agent

## 2. Composition/Ingredients

Substance	CAS Number	Proportion (%)
Calcium Formate	544-17-2	≥98%
Impurities (trace levels) ---	---	≤2%

## 3. Hazards Identification

### Classification:

- Not classified as hazardous under GHS guidelines.
- May cause irritation to skin, eyes, and respiratory system through prolonged exposure.

### Potential Hazards:

- **Health Hazards:** Mild irritant to eyes and skin. May cause respiratory discomfort if inhaled in significant quantities.
- **Environmental Hazards:** Low risk to the environment but may affect aquatic ecosystems in large amounts.

### GHS Label Elements:

- **Pictogram:** Not required.
- **Signal Word:** Warning
- **Hazard Statements:**
  - H315 - Causes mild skin irritation.
  - H320 - Causes mild eye irritation.
  - H335 - May cause respiratory irritation.
- **Precautionary Statements:**
  - Avoid contact with eyes, skin, and clothing.
  - Avoid creating or inhaling dust.

## 4. First Aid Measures

### **Skin Contact:**

Wash skin thoroughly with soap and water. Remove contaminated clothing. If irritation occurs, consult a doctor.

### **Eye Contact:**

Flush eyes with water for at least 15 minutes, lifting eyelids occasionally. Seek medical attention if irritation persists.

### **Inhalation:**

Remove the person to fresh air. Monitor breathing and seek medical attention if symptoms persist.

### **Ingestion:**

Rinse mouth with water. Do not induce vomiting. Call a medical professional if you feel unwell.

## 5. Handling and Storage

### **Handling:**

- Use in a well-ventilated area to minimize dust exposure.
- Avoid prolonged skin and eye contact.
- Wear proper personal protective equipment (PPE).

### **Storage:**

- Store in a cool, dry, and ventilated place.
- Keep the container tightly sealed when not in use.
- Avoid moisture and incompatibles such as strong acids or oxidizers.

## 6. Exposure Controls/Personal Protection

### **Engineering Controls:**

Ensure adequate ventilation and, where necessary, use local exhaust systems to reduce dust accumulation.

### **Personal Protection Equipment (PPE):**

- **Eye Protection:** Use goggles or safety glasses.
- **Skin Protection:** Wear chemical-resistant gloves and protective clothing.
- **Respiratory Protection:** Use a dust mask or respirator if handling in a poorly ventilated area.

**Exposure Limits:**

No established occupational exposure standards.

## 7. Physical and Chemical Properties

Property	Value
Form	Crystalline powder
Color	White or slightly off-white
Odor	Odorless
pH (10% solution)	6-8
Boiling Point	Not applicable
Melting Point	>300°C (decomposes)
Solubility (Water)	Soluble
Specific Gravity	2.0-2.2
Flash Point	Non-combustible

## 8. Stability and Reactivity

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

**Conditions to Avoid:**

- Exposure to high temperatures
- Contact with moisture or strong acids

**Materials to Avoid:** Strong oxidizers, strong acids, or alkalis.

**Decomposition Products:**

On decomposition, may release carbon monoxide, carbon dioxide, and formic acid.

## 9. Toxicological Information

**Route of Exposure:** Skin contact, eye contact, inhalation, ingestion.

**Toxic Effects:**

- Acute exposure may cause mild irritation to the eyes, skin, and respiratory tract.
- Oral toxicity is considered very low.

**Chronic Effects:**

- Prolonged or repeated exposure may result in irritation to skin or respiratory passages.

**LD50 Data:**

- Oral (rat): >2,000 mg/kg

## **10. Disposal Considerations**

Dispose of in accordance with all local, regional, and national regulations. For small quantities, dissolve in water and neutralize before disposal. Avoid disposal in drainage systems or water bodies.

For larger quantities, consult a licensed waste disposal facility. Ensure disposal complies with environmental protection and management standards.

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