Succinic Acid MSDS

1. Product Name and Identification

Product Name: Succinic Acid
Synonyms: Butanedioic Acid, Amber Acid
Chemical Formula: C4H6O4
CAS Number: 110-15-6
Recommended Use: Intermediate for industrial processes, food additive, manufacturing of polymers and resins
Manufacturer/Supplier Contact Information:

- Address: [Insert specific address]
- Emergency Phone Number: [Insert appropriate phone number]

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2. Composition/Ingredients

Chemical Composition:

- **Substance Name:** Succinic Acid
- **Concentration:** ≥99%
- **CAS Number:** 110-15-6
- **Additional Information:** No additives or impurities classified as hazardous by regulatory guidelines.

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3. Hazards Identification

Hazard Classification:

- Serious eye irritation (Category 2A)
- Skin irritation (Category 2)

GHS Label Elements:

- **Pictograms:**
  ![Exclamation Mark]
- **Signal Word:** Warning
- **Hazard Statements:**
  - H319 Causes serious eye irritation.
  - H315 Causes skin irritation.

- **Precautionary Statements:**
  - Wash hands and exposed areas thoroughly after handling.
  - Wear protective gloves and eye/face protection.
  - If skin or eye irritation occurs, seek medical advice.

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4. First Aid Measures

General Advice: Provide medical personnel with this SDS if exposure has occurred.

Eye Contact: Flush eyes with water for at least 15 minutes. Remove contact lenses if present and easy to do. Seek medical attention if irritation persists.

Skin Contact: Wash exposed skin with soap and water. Remove contaminated clothing. If irritation persists, consult a physician.

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

Ingestion: Rinse mouth thoroughly with water. If the individual feels unwell, seek medical attention.

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5. Handling and Storage

Handling:

- Avoid direct contact with the skin, eyes, and clothing.
- Minimize dust generation. Use in well-ventilated areas.
- Wash hands thoroughly after handling.

Storage:

- Store in a cool, dry, and well-ventilated area.
- Keep containers tightly closed when not in use.
- Avoid exposure to moisture and incompatible substances such as strong oxidizers.

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6. Exposure Controls/Personal Protection

Exposure Limits: No specific occupational exposure limits established.

Engineering Controls:

- Use local exhaust or ventilation systems to minimize dust accumulation in the air.

Personal Protective Equipment (PPE):

- **Eye Protection:** Safety goggles or face shield to avoid contact with the eyes.
- **Skin Protection:** Chemical-resistant gloves (e.g., nitrile). Long-sleeved clothing is recommended.
- **Respiratory Protection:** NIOSH-approved respirator for dust exposure.
- **Hygiene Measures:** Practice good hygiene by thoroughly washing exposed areas after handling the material.

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7. Physical and Chemical Properties

- **Appearance:** White crystalline solid
- **Odor:** Odorless
- **Odor Threshold:** Not applicable
- **pH:** 2.7 (0.1 M solution at 25°C)
- **Melting Point/Freezing Point:** 185–187°C (365–369°F)
- **Boiling Point:** Decomposes before boiling
- **Flash Point:** Not flammable
- **Flammability:** Not applicable
- **Vapor Pressure:** Negligible
- **Vapor Density:** Not applicable
- **Relative Density:** 1.57 g/cm³ at 25°C
- **Solubility in Water:** 5.8 g/100 mL at 25°C
- **Partition Coefficient (n-octanol/water):** -0.59
- **Auto-Ignition Temperature:** Not applicable
- **Decomposition Temperature:** >185°C
- **Viscosity:** Not applicable

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8. Stability and Reactivity

Stability: Stable under normal conditions of use and storage.

Hazardous Reactions: May react with strong oxidizing agents, causing decomposition or combustion.

Conditions to Avoid: Excessive heat, open flames, and moisture.

Materials to Avoid: Strong bases, oxidizing agents, and strong acids.

Hazardous Decomposition Products: Thermal decomposition may produce carbon dioxide (CO2) and carbon monoxide (CO).

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9. Toxicological Information

Acute Toxicity:

- **Oral LD50 (Rat):** 2,070 mg/kg (moderate toxicity)

Skin Corrosion/Irritation: Can cause irritation to prolonged or repeated exposure.

Eye Irritation: Causes serious eye irritation.

Respiratory Sensitization: Dust may irritate the respiratory tract upon inhalation.

Carcinogenicity: Not classified as carcinogenic per IARC, NTP, or OSHA.

Other Information: Prolonged exposure to high concentrations of dust may irritate the mucous membranes.

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10. Disposal Considerations

Waste Management: Dispose of unused material in accordance with local, state, and federal regulations.

Recommendation: Do not discharge into drains, sewers, or waterways. Contact a licensed waste contractor for disposal.

Packaging: Do not reuse containers. Dispose of empty containers adhering to applicable regulations.
