

# Safety Data Sheet

## Malic Acid

### Section 1 - Chemical Product and Company Identification

**MSDS Name:** L-Malic Acid

**Catalog Numbers:** SC-50-1, SC-50-2, SC-50-2-1, SC-50-5

**Synonyms:** L-Hydroxybutanedioic acid

(S)-(-)-2-Hydroxysuccinic acid

**Company Identification:**

Sportsman Consulting DBA Vinmetrica 6084 Corte del Cedro, Carlsbad CA

**For information, call:** 760-494-0597 Or 498-887-9230

### Section 2 - Composition, Information on Ingredients

<b>CAS#</b>	<b>Chemical Name</b>	<b>Percent</b>
7732-18-5	Water	86.6 to 99.99
97-67-6	L-Malic Acid	13.4 to 0.01
1310-58-3	Potassium Hydroxide	0.9 to 0.1

### Section 3 - Hazards Identification

#### **EMERGENCY OVERVIEW**

Appearance: clear, colorless liquid.

#### **Potential Acute Health Effects:**

Hazardous in case of skin contact (irritant), of eye contact (irritant), of ingestion, of inhalation

**Potential Chronic Health Effects:** CARCINOGENIC EFFECTS: Not available.

MUTAGENIC EFFECTS: Not available. TERATOGENIC EFFECTS: Not available.

DEVELOPMENTAL TOXICITY: Not available. Repeated or prolonged exposure is not known to aggravate medical condition.

### Section 4 - First Aid Measures

#### **Eye Contact:**

Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Cold water may be used. Get medical attention immediately.

#### **Skin Contact:**

In case of contact, immediately flush skin with plenty of water. Cover the irritated skin with an emollient. Remove contaminated clothing and shoes. Cold water may be used. Wash clothing before reuse. Thoroughly clean shoes before reuse.

#### **Serious Skin Contact:**

Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream. Seek immediate medical attention

#### **Inhalation:**

If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately.

**Serious Inhalation:** Not available.

#### **Ingestion:**

If swallowed, wash out mouth with water provided the person is conscious. Get medical attention immediately.

**Serious Ingestion:** Not available.

## Section 5 - Fire Fighting Measures

**Flammability of the Product:** Non-flammable.

**Auto-Ignition Temperature:** Not applicable.

**Flash Points:** Not applicable.

**Flammable Limits:** Not applicable.

**Products of Combustion:** Not available.

**Fire Hazards in Presence of Various Substances:** Not applicable.

**Explosion Hazards in Presence of Various Substances:** Non-explosive in presence of open flames and sparks, of shocks.

**Fire Fighting Media and Instructions:** firefighters should wear proper protective equipment and self-contained breathing apparatus.

**Special Remarks on Fire Hazards:** Not available.

**Special Remarks on Explosion Hazards:** Not available.

## Section 6 - Accidental Release Measures

### **Small Spill:**

Dilute with water and mop up, or absorb with an inert dry material and place in an appropriate waste disposal container. If necessary: Neutralize the residue with a dilute solution of sodium carbonate.

### **Large Spill:**

Use appropriate tools to put the spilled solid in a convenient waste disposal container. Finish cleaning by spreading water on the contaminated surface and dispose of according to local and regional authority requirements. If necessary: Neutralize the residue with a dilute solution of sodium carbonate.

## Section 7 - Handling and Storage

### **Precautions:**

Initiate normal safety procedures. Avoid all direct contact with Equipment this material. Launder contaminated clothing before reuse. Use good personal hygiene and good housekeeping.

**Storage:** Do not store with oxidants, strong bases, amines, carbonate, and Alkali metals. Store in a cool dry place. Keep containers sealed to Avoid contamination and spillage.

## Section 8 - Exposure Controls, Personal Protection

### **Engineering Controls:**

Provide corrosion resistant storage tanks and transfer lines. Provide adequate ventilation. A local and/or general exhaust is recommended.

### **Personal Protection:**

Safety glasses with side shields, chemical goggles if contact likely. Protective gloves recommended.

**Personal Protection in Case of a Large Spill:** Not applicable

**Exposure Limits:** Not applicable

## Section 9 - Physical and Chemical Properties

**Physical state and appearance:** Liquid.

**Odor:** Mild

**Taste:** Not available.

**Molecular Weight:** Not applicable.  
**Color:** Colorless. Clear  
**pH (1% soln/water):** 5.5  
**Boiling Point:** 101 °C  
**Melting Point:** Not available.  
**Critical Temperature:** Not available.  
**Specific Gravity:** 1.23 (Water = 1)  
**Vapor Pressure:** not applicable  
**Vapor Density:** Not applicable  
**Volatility:** Not available.  
**Odor Threshold:** Not available.  
**Water/Oil Dist. Coeff.:** Not available.  
**Ionicity (in Water):** Not available.  
**Dispersion Properties:** See solubility in water.  
**Solubility:** Easily soluble in cold water, hot water.

## Section 10 - Stability and Reactivity

**Stability:** The product is stable at normal temperatures.  
**Instability Temperature:** Not available.  
**Conditions of Instability:** Excessive heat.  
**Incompatibility with various substances:**  
Strong oxidants, strong bases, alkali metals, amines, and carbonates.  
**Corrosivity:** Non-corrosive in presence of glass.  
**Special Remarks on Reactivity:** Not applicable.  
**Special Remarks on Corrosivity:** Not applicable  
**Polymerization:** Will not occur.

## Section 11 - Toxicological Information

**Routes of Entry:** Inhalation. Ingestion.  
**Toxicity to Animals:** Acute oral toxicity (LD50): 1600 mg/kg [Rat].  
**Chronic Effects on Humans:** Not applicable  
**Other Toxic Effects on Humans:**  
Hazardous in case of skin contact (irritant), of ingestion, of inhalation.  
**Special Remarks on Toxicity to Animals:** Not available.  
**Special Remarks on Chronic Effects on Humans:** Not applicable  
**Special Remarks on other Toxic Effects on Humans:**  
Acute Potential Health Effects: Skin: Causes skin irritation. Inhalation: Causes respiratory tract irritation. Ingestion: Moderately toxic by ingestion. May be harmful if swallowed. May cause nausea, vomiting, diarrhea. May affect behavior and respiration causing weakness, and respiratory distress and cyanosis. Chronic Potential Health Effects: Skin: Prolonged or repeated skin contact may cause dermatitis. Eyes: Prolonged or repeated eye contact may cause conjunctivitis.

## Section 12 - Ecological Information

**Ecotoxicity:** Not available.  
**BOD5 and COD:** Not available.  
**Products of Biodegradation:**  
Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.

**Toxicity of the Products of Biodegradation:** The products of degradation are less toxic than the product itself.

**Special Remarks on the Products of Biodegradation:** Not available.

## Section 13 - Disposal Considerations

### **Waste Disposal:**

Waste must be disposed of in accordance with federal, state and local environmental control regulations

## Section 14 - Transport Information

**DOT Classification:** Not a DOT controlled material (United States).

**Identification:** : Not applicable.

**Special Provisions for Transport:** Not available.

## Section 15 - Regulatory Information

### **Federal and State Regulations:**

TSCA 8(b) inventory: L-Malic acid

**Other Regulations:** EINECS: This product is on the European Inventory of Existing Commercial Chemical Substances.

### **Other Classifications:**

#### **WHMIS (Canada):**

CLASS D-2B: Material causing other toxic effects (TOXIC).

#### **DSCL (EEC):**

R22- Harmful if swallowed. R36/38- Irritating to eyes and skin. S2- Keep out of the reach of children. S46- If swallowed, seek medical advice immediately and show this container or label.

#### **HMIS (U.S.A.):**

**Health Hazard:** 2

**Fire Hazard:** 0

**Reactivity:** 0

**Personal Protection:** E

#### **National Fire Protection Association (U.S.A.):**

**Health:** 2

**Flammability:** 0

**Reactivity:** 0

#### **Specific hazard:**

#### **Protective Equipment:**

Gloves. Lab coat. Dust respirator. Be sure to use an approved/certified respirator or equivalent. Wear appropriate respirator when ventilation is inadequate. Splash goggles.

## Section 16 - Additional Information

**MSDS Creation Date:** 11-21-14

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