



Food Grade Malic Acid – MSDS

1. Product Identification

Product Name: Food Grade Malic Acid

Chemical Name: 2-Hydroxybutanedioic Acid

Common Name: Malic Acid

Food Additive Number: E296 / INS 296

Chemical Formula: C₄H₆O₅

Molecular Weight: 134.09 g/mol

CAS Number: 6915-15-7

Recommended Use: Food acidulant, acidity regulator, flavor enhancer, beverage and confectionery ingredient.

2. Hazard Identification

Food Grade Malic Acid is generally stable under normal storage and handling conditions.

Potential Hazards:

- May cause eye irritation.
- Dust may irritate the respiratory tract.
- Prolonged contact may cause mild skin irritation.
- Ingestion in normal food-use quantities is not considered hazardous when used according to applicable food regulations.

Precautionary Measures:

Avoid breathing excessive dust. Avoid direct contact with eyes. Wash hands after industrial handling.

3. Composition / Information on Ingredients

Component CAS Number Typical Concentration

Malic Acid	6915-15-7	≥99.0%
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4. First Aid Measures

Eye Contact:

Rinse immediately with clean water for at least 15 minutes. Remove contact lenses if easy to do. Seek medical attention if irritation continues.

**Skin Contact:**

Wash affected skin thoroughly with soap and water.

Inhalation:

Move the affected person to fresh air. Seek medical attention if respiratory irritation persists.

Ingestion:

Rinse mouth with water. Drink water if the person is conscious. Seek medical advice if a large quantity has been swallowed or discomfort develops.

5. Fire-Fighting Measures

Malic Acid is not normally considered highly flammable.

Suitable Extinguishing Media:

- Water spray
- Dry chemical powder
- Carbon dioxide
- Foam

Use extinguishing media suitable for the surrounding fire.

Firefighters should use appropriate protective equipment when necessary.

6. Accidental Release Measures

Avoid generating excessive dust.

Sweep or vacuum spilled material carefully and place it in a suitable container.

Prevent contamination of food-processing areas.

Wash the affected surface with water after collecting the material.

7. Handling and Storage

Handling

- Avoid unnecessary dust generation.
- Prevent direct contact with eyes.



- Use good industrial hygiene practices.
- Keep processing equipment and handling areas clean.

Storage

Store in a cool, dry, clean, and well-ventilated area.

Keep bags or containers tightly closed.

Protect the product from moisture, contamination, and incompatible materials.

8. Exposure Controls / Personal Protection

Eye Protection: Safety glasses or goggles are recommended during bulk handling.

Hand Protection: Protective gloves may be used for prolonged industrial contact.

Respiratory Protection: Use suitable dust protection when airborne dust concentrations are high.

General Hygiene: Wash hands after handling and before eating or drinking.

9. Physical and Chemical Properties

Property	Typical Information
Appearance	White crystalline powder or granules
Odor	Practically odorless
Taste	Sour
Molecular Formula	C ₄ H ₆ O ₅
Molecular Weight	134.09 g/mol
Solubility	Highly soluble in water
Melting Range	Approx. 127–132°C for DL-Malic Acid
Physical State	Solid
Food Additive Number	E296 / INS 296

10. Stability and Reactivity

Stability: Stable under recommended storage conditions.

Conditions to Avoid: Excessive heat, moisture, and contamination.



Incompatible Materials: Strong oxidizing agents and strongly reactive chemicals.

Hazardous Decomposition: Thermal decomposition may produce carbon oxides.

11. Toxicological Information

Malic Acid has a long history of use as a food acidulant.

Industrial exposure to concentrated powder may cause:

- Eye irritation
- Mild skin irritation
- Respiratory irritation from dust

Normal food use should follow applicable regulatory limits and formulation requirements.

12. Ecological Information

Malic Acid is an organic compound and is expected to be biodegradable under appropriate environmental conditions.

Avoid uncontrolled release of large quantities into waterways or drainage systems.

13. Disposal Considerations

Dispose of unused or contaminated material according to local regulations.

Small uncontaminated quantities may be handled according to applicable waste-management procedures.

Do not discharge large quantities directly into the environment.

14. Transport Information

Food Grade Malic Acid is generally not classified as a dangerous good for standard transportation.

UN Number: Not normally applicable

Transport Hazard Class: Not normally classified

Packing Group: Not normally applicable



Always verify current transport requirements for the destination country.

15. Regulatory Information

Food Grade Malic Acid is commonly identified as **E296 / INS 296** for permitted food applications.

Users must ensure that the product and its dosage comply with applicable food regulations in the destination market.

16. Other Information

This MSDS provides general safety information for Food Grade Malic Acid.

Actual specifications, regulatory classifications, and handling requirements may vary by manufacturer and jurisdiction. Users should refer to the supplier's current Certificate of Analysis, Technical Data Sheet, and official Safety Data Sheet before commercial use.