

## 1 Identification of the substance/mixture and of the company/undertaking

- **Product identifier**
- **Trade name:** L-Malic Acid Free Acid
- **Article number:** 102237
- **CAS Number:**  
97-67-6
- **EC number:**  
202-601-5
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**  
MP Biomedicals, LLC  
29525 Fountain Parkway  
Solon, OH 44139  
United States  
www.mpbio.com
- **Information department:** Product safety department
- **Emergency telephone number:** CHEMTREC: 1-800-424-9300 (1-703-527-3887)

## 2 Hazards identification

- **Classification of the substance or mixture**



Skin Irrit. 2 H315 Causes skin irritation.  
Eye Irrit. 2A H319 Causes serious eye irritation.  
STOT SE 3 H335 May cause respiratory irritation.

- **Classification according to Directive 67/548/EEC or Directive 1999/45/EC** Not applicable.
- **Information concerning particular hazards for human and environment:** Not applicable.

- **Label elements**

- **GHS label elements**

The substance is classified and labelled according to the Globally Harmonized System (GHS).

- **Hazard pictograms**



- **Signal word** Warning

- **Hazard statements**

Causes skin irritation.  
Causes serious eye irritation.  
May cause respiratory irritation.

- **Precautionary statements**

If medical advice is needed, have product container or label at hand.  
Keep out of reach of children.  
Read label before use.  
Avoid breathing dust/fume/gas/mist/vapours/spray.  
Wear protective gloves/protective clothing/eye protection/face protection.

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**IF IN EYES:** Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.

Continue rinsing.

Specific treatment (see on this label).

Store locked up.

Dispose of contents/container in accordance with local/regional/national/international regulations.

· **Classification system:**

· **NFPA ratings (scale 0 - 4)**



Health = 0

Fire = 1

Reactivity = 0

· **HMIS-ratings (scale 0 - 4)**



Health = 0

Fire = 1

Reactivity = 0

· **Other hazards**

· **Results of PBT and vPvB assessment**

· **PBT:** Not applicable.

· **vPvB:** Not applicable.

## 3 Composition/information on ingredients

· **Chemical characterization: Substances**

· **CAS No. Description**

97-67-6 L-malic acid

· **Identification number(s)**

· **EC number:** 202-601-5

## 4 First aid measures

· **Description of first aid measures**

· **After inhalation:** Supply fresh air; consult doctor in case of complaints.

· **After skin contact:** Generally the product does not irritate the skin.

· **After eye contact:** Rinse opened eye for several minutes under running water.

· **After swallowing:** If symptoms persist consult doctor.

· **Information for doctor:**

· **Most important symptoms and effects, both acute and delayed** No further relevant information available.

· **Indication of any immediate medical attention and special treatment needed**

No further relevant information available.

## 5 Firefighting measures

· **Extinguishing media**

· **Suitable extinguishing agents:** Use fire fighting measures that suit the environment.

· **Special hazards arising from the substance or mixture** No further relevant information available.

· **Advice for firefighters**

· **Protective equipment:** No special measures required.

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## 6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures** Not required.
- **Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:** Pick up mechanically.
- **Reference to other sections**  
See Section 7 for information on safe handling.  
See Section 8 for information on personal protection equipment.  
See Section 13 for disposal information.

## 7 Handling and storage

- **Handling:**
- **Precautions for safe handling** Prevent formation of dust.
- **Information about protection against explosions and fires:** No special measures required.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:** 15-30 °C
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** None.
- **Specific end use(s)** No further relevant information available.

## 8 Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see item 7.
- **Control parameters**
- **Components with limit values that require monitoring at the workplace:** Not required.
- **Additional information:** The lists that were valid during the creation were used as basis.
- **Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:** Wash hands before breaks and at the end of work.
- **Breathing equipment:**  
In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.
- **Protection of hands:**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.  
Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

- **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

- **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

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· *Eye protection:* Not required.

## 9 Physical and chemical properties

· *Information on basic physical and chemical properties*· *General Information*· *Appearance:*

· <i>Form:</i>	<i>Solid</i>
· <i>Color:</i>	<i>Not determined.</i>
· <i>Odor:</i>	<i>Characteristic</i>
· <i>Odour threshold:</i>	<i>Not determined.</i>

· *pH-value:* *Not applicable.*· *Change in condition*

· <i>Melting point/Melting range:</i>	<i>100 °C (212 °F)</i>
· <i>Boiling point/Boiling range:</i>	<i>Undetermined.</i>

· *Flash point:* *220 °C (428 °F)*· *Flammability (solid, gaseous):* *Product is not flammable.*· *Ignition temperature:*· *Decomposition temperature:* *Not determined.*· *Auto igniting:* *Not determined.*· *Danger of explosion:* *Product does not present an explosion hazard.*· *Explosion limits:*

· <i>Lower:</i>	<i>Not determined.</i>
· <i>Upper:</i>	<i>Not determined.</i>

· *Vapor pressure:* *Not applicable.*· *Density at 20 °C (68 °F):* *1.6 g/cm<sup>3</sup> (13.352 lbs/gal)*· *Relative density* *Not determined.*· *Vapour density* *Not applicable.*· *Evaporation rate* *Not applicable.*· *Solubility in / Miscibility with*· *Water at 20 °C (68 °F):* *363 g/l*· *Partition coefficient (n-octanol/water):* *Not determined.*· *Viscosity:*

· <i>Dynamic:</i>	<i>Not applicable.</i>
· <i>Kinematic:</i>	<i>Not applicable.</i>
· <i>Organic solvents:</i>	<i>0.0 %</i>

· *Solids content:* *100.0 %*· *Molecular weight* *134.09 g/mol*· *Other information* *No further relevant information available.*

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## 10 Stability and reactivity

- **Reactivity**
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

## 11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**
- **Primary irritant effect:**
- **on the skin:** No irritant effect.
- **on the eye:** No irritating effect.
- **Sensitization:** No sensitizing effects known.
- **Additional toxicological information:**
- **Carcinogenic categories**

· <b>IARC (International Agency for Research on Cancer)</b>
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Substance is not listed.
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· <b>NTP (National Toxicology Program)</b>
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Substance is not listed.
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## 12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Behavior in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:**  
Water hazard class 1 (Self-assessment): slightly hazardous for water  
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

## 13 Disposal considerations

- **Waste treatment methods**
- **Recommendation:**  
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

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- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.
- **Recommended cleansing agent:** Water, if necessary with cleansing agents.

### 14 Transport information

· <b>UN-Number</b>	
· <b>DOT, ADR, IMDG, IATA</b>	Void
· <b>UN proper shipping name</b>	
· <b>DOT, ADR, IMDG, IATA</b>	Void
· <b>Transport hazard class(es)</b>	
· <b>DOT, ADR, IMDG, IATA</b>	
· <b>Class</b>	Void
· <b>Packing group</b>	
· <b>DOT, ADR, IMDG, IATA</b>	Void
· <b>Environmental hazards:</b>	
· <b>Marine pollutant:</b>	No
· <b>Special precautions for user</b>	Not applicable.
· <b>Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</b>	Not applicable.
· <b>UN "Model Regulation":</b>	-

### 15 Regulatory information

· <b>Safety, health and environmental regulations/legislation specific for the substance or mixture</b>
· <b>Sara</b>
· <b>Section 355 (extremely hazardous substances):</b>
Substance is not listed.
· <b>Section 313 (Specific toxic chemical listings):</b>
Substance is not listed.
· <b>TSCA (Toxic Substances Control Act):</b>
Substance is listed.
· <b>Proposition 65</b>
· <b>Chemicals known to cause cancer:</b>
Substance is not listed.
· <b>Chemicals known to cause reproductive toxicity for females:</b>
Substance is not listed.
· <b>Chemicals known to cause reproductive toxicity for males:</b>
Substance is not listed.
· <b>Chemicals known to cause developmental toxicity:</b>
Substance is not listed.

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**· Carcinogenic categories**
**· EPA (Environmental Protection Agency)**

Substance is not listed.

**· TLV (Threshold Limit Value established by ACGIH)**

Substance is not listed.

**· NIOSH-Ca (National Institute for Occupational Safety and Health)**

Substance is not listed.

**· OSHA-Ca (Occupational Safety & Health Administration)**

Substance is not listed.

**· GHS label elements**

The substance is classified and labelled according to the Globally Harmonized System (GHS).

**· Hazard pictograms**


GHS07

**· Signal word** Warning

**· Hazard statements**

Causes skin irritation.

Causes serious eye irritation.

May cause respiratory irritation.

**· Precautionary statements**

If medical advice is needed, have product container or label at hand.

Keep out of reach of children.

Read label before use.

Avoid breathing dust/fume/gas/mist/vapours/spray.

Wear protective gloves/protective clothing/eye protection/face protection.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.

Continue rinsing.

Specific treatment (see on this label).

Store locked up.

Dispose of contents/container in accordance with local/regional/national/international regulations.

**· Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

## 16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

**· Department issuing MSDS:** Product safety department

**· Abbreviations and acronyms:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

ACGIH: American Conference of Governmental Industrial Hygienists

EINECS: European Inventory of Existing Commercial Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)