

Safety Data Sheet

HEALTH	2
FLAMMABILITY	0
REACTIVITY	0

Section 1: PRODUCT AND COMPANY IDENTIFICATION

1.1 Product identifiers

Product Name	L (-)-Malic Acid, Natural
Product Number	0265500
CAS-No.	97-67-6

1.2 Product Recommended Use

Flavorings

1.3 Preparation Information

Company	Aurochemicals 7 Nicoll Street Washingtonville, NY 10992
Telephone	845-496-6065
Fax	845-496-6248

1.4 Emergency Telephone Number

1-800-535-5053
International - 1-352-323-3500 collect

Section 2: HAZARD(s) IDENTIFICATION

2.1 Classification of substance or mixture

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

Skin irritation (Category 2)

Eye irritation (Category 2A)

Specific target organ toxicity - single exposure (Category 3) Respiratory

2.2 GHS Label Elements, Including precautionary statements

Pictogram



Signal Statement

Warning

Hazard Statement(s)

H315 Causes skin irritation.
H319 Causes serious eye irritation.
H335 May cause respiratory irritation.

Precautionary
Statement(s)

P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.
P264 Wash skin thoroughly after handling
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

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- P302+P352 IF ON SKIN: Gently wash with plenty of soap and water.
 P304+P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
 P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 P332+P313 If skin irritation occurs: Get medical advice/ attention.
 P337+P313 If eye irritation persists: Get medical advice/ attention.
 P362 Take off contaminated clothing and wash before reuse.
 P403 +P233 Store in a well-ventilated place. Keep container tightly closed.
 P501 Dispose of contents/container to an approved waste disposal plant.

2.3 HNOC (Hazards not otherwise classified or not covered by GHS –None)

Section 3: COMPOSITION / INFORMATION ON INGREDIENTS

3.1 Substances

Synonyms	L-Hydroxybutanedioic acid
Formula	C ₄ H ₆ O ₅
Molecular Weight	134.09 g/mol
CAS-No	97-67-6
EC-No.	202-601-5

Hazardous Components

Component	Classification	Concentration
Malic acid	Eye irritation (Category 2A), H319	<= 100%

Section 4: FIRST AID MEASURES

4.1 Description of first aid measures

General advice	Consult physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.
Inhalation	Provide fresh air; keep at rest and at a comfortable position to breathe. Consult a physician.
Contact with skin:	Remove contaminated clothing. Rinse skin with cool water then wash with mild soap and warm water and contact a physician.
Contact with eyes:	Rinse thoroughly with plenty of water for at least 15 as a precaution and consult a physician.
Ingestion	DO NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.
Clothing contamination:	Remove contaminated clothing and wash before reuse.

4.2 Most important symptoms and effects both acute and delayed

See section 2.2 and or section 11

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- 4.3 Indication of any immediate medical attention and special treatment needed. No data available

Section 5: FIREFIGHTING MEASURES

- 5.1 **Extinguishing Media**
Suitable Extinguishing Media Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide
- 5.2 **Special hazards arising from the substance or mixture** Carbon oxides
- 5.3 **Advice for fire fighters** Wear self contained breathing apparatus for firefighting if necessary. Emits toxic fumes under fire conditions
- 5.4 **Further information** Use water spray to cool unopened containers.

Section 6: ACCIDENTAL RELEASE MEASURES

- 6.1 **Personal precautions, protective equipment and emergency procedures** Use personal protective equipment. Avoid dust formation. Avoid breathing dust. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe area.
- 6.2 **Environment precautions** Prevent further leakage or spillage if safe to do so. Do not allow to enter drains or sewage system.
- 6.3 **Methods and materials for containment and clean up** Contain spillage. Soak up with absorbent material. Sweep up with broom and shovel. Place in a suitable, closed container for disposal.
- 6.4 **Specific end use(s)** Apart from the uses mentioned in section 1.2, no other specific uses are stipulated.

Section 7: HANDLING AND STORAGE

- 7.1 **Precautions for safe handling** Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Further processing of solid materials may result in the formation of combustible dusts. The potential for combustible dust formation should be taken into consideration before additional processing occurs. Provide adequate exhaust ventilation at places where dust is formed.
- 7.2 **Conditions for Safe storage** Keep container tightly closed in keep in a dry and well-ventilated place.
- 7.3 **Specific End use(s)** Flavorings

Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Components with workplace control parameters

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Contains no substances with occupational exposure limit values

8.2 Exposure Controls

Appropriate Engineering Controls Avoid contact with skin, eyes and clothing.
Handle in accordance with good industrial hygiene and safety practices.
Wash hands immediately after handling the product; before breaks and at the end of the day.

Personal protective equipment

These recommendations are advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. They should not be construed as offering an approval for any specific use scenario.

Eye/face protection Wear appropriate safety glasses with side shields. Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166 (EU).

Skin protection Wear chemically resistant, Nitrile rubber gloves, 0.11mm when handling this product. Use proper glove removal techniques (without touching gloves outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use. Wash and dry hands.

Body protection Impervious clothing protecting against chemicals, should be selected specifically for the work place, depending on concentration and quantity of the hazardous substances handled. The resistance of the protective clothing to chemicals should be ascertained with the respective supplier.

Respiratory protection For nuisance exposures, use type P95 (US) or type P1 (EU EN 143) particle respirator. For higher levels of protection, use type OV/AG/P99 (US) or type ABEK-P2 (EU EN 143) respirator cartridges. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Control of environmental exposure Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

Section 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

a	Appearance	Solid Powder White
b	Odor	Slight coconut
c	Odor Threshold	No data available
d	pH	No data available
e	Melting Point /Freezing Point	101-103°C
f	Boiling Point	140°C

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g	Flash Point	No data available
h	Evaporation Rate	No data available
i	Flammability (Solid, Gas)	No data available
j	Upper/lower Flammability Limit	No data available
k	Vapor pressure	No data available
l	Vapor density	No data available
m	Relative density at 25°C	No data available
n	Solubility	Soluble in water
o	Partition coefficient: n-octanol/water	No data available
p	Auto-ignition Temp.	No data available
q	Decomposition Temp,	No data available
r	Viscosity	No data available
s	Explosive properties	No data available
t	Oxidizing properties	No data available

9.2 Other Safety Information No data available

Section 10: STABILITY AND REACTIVITY

10.1	Reactivity	No data available
10.2	Chemical Stability	Stable under recommended storage conditions
10.3	Possibility of Hazardous reactions	No data available
10.4	Conditions to avoid	Heat
10.5	Incompatible materials	No data available
10.6	Hazardous decomposition products	Carbon oxides
10.7	Further Information	No data available

Section 11: TOXICOLOGICAL INFORMATION

11.1	Information on toxicological effects	
	Acute Toxicity	
	LD50-Oral -Rat	No data available
	LC50-Inhalation	No data available
	LD50-Dermal	Skin corrosion/irritation
	Skin corrosion/irritation	No data available.
	Serious eye damage/eye irritation	No data available
	Respiratory or skin sensitization	No data available

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Germ Cell mutagenicity	No data available
Carcinogenicity	No data available
	IARC No component of this product, present levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
	ACGIH No component of this product, present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.
	NTP No component of this product, present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
	OSHA No component of this product, present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.
Reproductive toxicity	No data available
Specific target organ toxicity-single exposure (GHS)	No data available
Specific target organ toxicity-repeated exposures (GHS)	No data available
Aspiration Hazards	No data available
Signs and Symptoms of Exposure	To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated
Synergistic effect	No data available
RTECS:	No data available

Section 12: ECOLOGICAL INFORMATION

12.1 Toxicity	No data available
12.2 Persistence and degradability	Biochemical Oxygen Demand (BOD) 468 mg/g
12.3 Bioaccumulative potential	No data available
12.4 Mobility in soil	No data available
12.5 Results of PBT and vPvB assessment	PBT/vPvB assessment not available as chemical safety assessment not required / not conducted
12.6 Other adverse effects	No data available

Section 13: DISPOSAL CONSIDERATIONS

13.1 Disposal methods	
Product:	According to local regulations
Packaging	According to local regulations

Section 14: TRANSPORT INFORMATION

DOT (US)	Not dangerous goods
IMDG	Not dangerous goods
IATA	Not dangerous goods

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Section 15: REGULATORY INFORMATION

Reach No.	A registration number is not available for this substance as its uses are exempted from registration, the annual tonnage not require a registration or the registration is envisaged for a later registration deadline.		
SARA 302 Components	No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302		
SARA 313 Components	This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.		
SARA 311/312 Hazards	Acute health hazard		
Massachusetts Right to Know components	No components are subject to the Massachusetts Right to Know Act		
Pennsylvania Right to Know components	Malic Acid	CAS# 97-67-6	Rev. Date:
New Jersey Right to Know components	Malic Acid	CAS# 97-67-6	Rev. Date:
California Prop. 65 components	This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.		

Section 16: OTHER INFORMATION

HMIS Rating

Health hazard	2
Chronic Health Hazard	
Flammability	0
Physical Hazard	0

Further Information

Aurochemicals provides the information contained herein in good faith but makes no representation as to its comprehensiveness or accuracy. This document is intended only as a guide to the appropriate precautionary handling of the material by a properly trained person using this product. Individuals receiving the information must exercise their independent judgment in determining its appropriateness for a particular purpose. Aurochemicals makes no representations or warranties, either expressed or implied, including without limitation any warranties of merchantability, fitness for a particular purpose with respect to the information set forth herein or the product to which the information refers. Accordingly, Aurochemicals will not be responsible, nor held liable, for damages resulting from use of or reliance upon this information.

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