

Safety Data Sheet

D,L Malic Acid

Safety Data Sheet dated: 7/27/2021 - version 1

1. IDENTIFICATION

Product identifier

Identification of the substance:

Trade name: D,L Malic Acid
Chemical name: D,L Malic Acid
CAS number: 617-48-1
EC number: 210-514-9

Other means of identification:

Recommended use of the chemical and restrictions on use

Recommended use: FOR PROFESSIONAL USE

Restrictions on use: N.A.

Name, address, and telephone number of the chemical manufacturer, importer, or other responsible party

Company:

Enartis USA Inc.
7795 Bell Road
Windsor
CA 95492
Competent person responsible for the safety data sheet:
compliance@enartis.com

Emergency telephone number

Phone: +1 (707) 838 6312
Fax: +1 (707) 838 1765

2. HAZARD(S) IDENTIFICATION



Classification of the chemical

Eye Irrit. 2A Causes serious eye irritation.

Label elements

Pictograms and Signal Words



Warning

Hazard statements

H319 Causes serious eye irritation.

Precautionary statements

P264 Wash hands thoroughly after handling.
P280 Wear eye/face protection: wear eye glasses with side protection.
P337+P313 If eye irritation persists: Get medical advice/attention.
P403+P233 Store in a well-ventilated place. Keep container tightly closed.
P405 Store locked up.
P501 Dispose of contents/container in accordance with applicable regulations.

Hazards not otherwise classified identified during the classification process:

None

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substances

Substance Identifications:	D,L- Malic Acid Powder, Food Grade
CAS number:	617-48-1
EC number:	210-514-9
Registration Number	01-2119552463-40-XXXX

Mixtures

N.A.

4. FIRST AID MEASURES

Description of first aid measures

In case of skin contact:

- Immediately take off all contaminated clothing.
- Remove contaminated clothing immediately and dispose off safely.
- After contact with skin, wash immediately with soap and plenty of water.
- Wash thoroughly the body (shower or bath).
- Seek medical attention if skin irritation, swelling or redness develops and persists.

In case of eyes contact:

- After contact with the eyes, rinse with water with the eyelids open for a sufficient length of time, then consult an ophthalmologist immediately.
- Protect uninjured eye.

In case of Ingestion:

- Induce vomiting. SEEK A MEDICAL EXAMINATION IMMEDIATELY and present the safety-data sheet.

In case of Inhalation:

- Remove casualty to fresh air and keep warm and at rest.

Most important symptoms/effects, acute and delayed

Eye irritation

Eye damages

Indication of any immediate medical attention and special treatment needed

In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).

5. FIRE-FIGHTING MEASURES

Extinguishing media

Suitable extinguishing media:

- Use dry chemical, CO₂, water spray, (fog) or foam

Unsuitable extinguishing media:

- None in particular.

Specific hazards arising from the chemical

- Do not inhale explosion and combustion gases.
- Hazardous combustion products: N.A.
- Explosive properties: Not explosive
- Oxidizing properties: Not oxidising

Special protective equipment and precautions for fire-fighters

- Use suitable breathing apparatus .
- Collect contaminated fire extinguishing water separately. This must not be discharged into drains.
- Move undamaged containers from immediate hazard area if it can be done safely.
- Wear suitable protective clothing (helmet, protective clothings, goggles, fire resistant gloves, boots) and protect respiratory organs (self contained breathing apparatus).
- Fire residues and contaminated firefighting water must be disposed of in accordance within the local regulations.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Wear personal protection equipment.
Remove persons to safety.
See protective measures under point 7 and 8.

Methods and material for containment and cleaning up

Wash with plenty of water.
Suitable material for taking up: absorbing material, organic, sand
Dispose of the collected material in accordance with the current regulations.

7. HANDLING AND STORAGE

Precautions for safe handling

Don't use empty container before they have been cleaned.
Before making transfer operations, assure that there aren't any incompatible material residuals in the containers.
Contaminated clothing should be changed before entering eating areas.
Do not eat or drink while working.
See also section 8 for recommended protective equipment.

Conditions for safe storage, including any incompatibilities

Keep away from open flames, sparks and heat sources.
Always keep in a well ventilated place.

Incompatible materials:

None in particular.

Instructions as regards storage premises:

Cool and adequately ventilated.

Storage temperature: N.A.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

No data available

Appropriate engineering controls: N.A.

Individual protection measures

Please see both sections 5 and 6 for information about personal protective equipment to be worn in an emergency (e.g.: fire or unintentional release of the substance).

Personal protective equipment (PPE) should meet recommended national standards. Check with PPE suppliers.

The final choice of protective equipment will depend upon a risk assessment.

Personal protective equipment selections vary based on potential exposure conditions and working conditions.

Eye protection:

Chemical risk goggles (with side protection).; Technical reference standard: UNI EN 166

Protection for skin:

Wear chemical resistant clothing.; Technical reference standard: UNI EN 13034; Wear chemical resistant safety shoes.; Technical reference standard: UNI EN 20345

Protection for hands:

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.

Glove suitability and breakthrough time will differ depending on the specific use conditions.

Contact the glove manufacturer for specific advice on glove selection and breakthrough times for your use conditions.

Use protective gloves that provides comprehensive protection.; UNI EN 420/UNI EN 374; NBR (nitrile rubber) (Recommended thickness of the material: 0.4 mm; Permeation time: > 480 min)

Respiratory protection:

Half-face mask with combined filter; Combined filter: E-P2 (yellow-white colour); Filter mask FFP2/FFP3 for solid particles; Technical reference standard: UNI EN 149

Depending on the potential for exposure, select respiratory protective equipment suitable for the specific conditions of use and in compliance with current legislation.

N.A.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical State Solid
Appearance and colour: Solid
Odour: None
Odour threshold: N.A.
pH: 1.95 (50g/L)
Melting point / freezing point: 131 °C @ 1013 hPa
Initial boiling point and boiling range: N.A.
Flash point: N.A.
Evaporation rate: N.A.
Upper/lower flammability or explosive limits: N.A.
Vapour density: N.A.
Vapour pressure: N.A.
Relative density: 1.615 g/cm³ @ 20°C
Solubility in water: Soluble
Solubility in oil: N.A.
Partition coefficient (n-octanol/water): -1.26
Auto-ignition temperature: 340°C
Decomposition temperature: N.A.
Viscosity: N.A.
Explosive properties: Not explosive
Oxidizing properties: Not oxidising
Solid/gas flammability: N.A.

Other information

Substance Groups relevant properties N.A.
Miscibility: N.A.
Fat Solubility: N.A.
Conductivity: N.A.

10. STABILITY AND REACTIVITY

Reactivity

Data not available.

Chemical stability

Stable under normal conditions.

Possibility of hazardous reactions

None in particular.

Conditions to avoid

Heat and open flames.

Incompatible materials

Oxidizers; Alkali

Hazardous decomposition products

None

11. TOXICOLOGICAL INFORMATION

Information on toxicological effects

Toxicological Information of the Substance

- | | |
|--------------------------------------|--|
| a) acute toxicity | Not classified
Based on available data, the classification criteria are not met
LD50 Oral Rat > 3200 mg/kg |
| b) skin corrosion/irritation | Not classified
Based on available data, the classification criteria are not met |
| c) serious eye damage/irritation | The product is classified: Eye Irrit. 2A(H319)
Eye Irritant Positive |
| d) respiratory or skin sensitisation | Not classified
Based on available data, the classification criteria are not met |
| e) germ cell mutagenicity | Not classified |

f) carcinogenicity	Based on available data, the classification criteria are not met Not classified
g) reproductive toxicity	Based on available data, the classification criteria are not met Not classified
h) STOT-single exposure	Based on available data, the classification criteria are not met Not classified
i) STOT-repeated exposure	Based on available data, the classification criteria are not met Not classified
j) aspiration hazard	Based on available data, the classification criteria are not met Not classified

Substance(s) listed on the IARC Monographs:

None

Substance(s) listed as OSHA Carcinogen(s):

None

Substance(s) listed as NIOSH Carcinogen(s):

None

Substance(s) listed on the NTP report on Carcinogens:

None

12. ECOLOGICAL INFORMATION

Toxicity

Adopt good working practices, so that the product is not released into the environment.

Eco-Toxicological Information:

List of Eco-Toxicological properties of the product

Not classified for environmental hazards.

Based on available data, the classification criteria are not met

a) Aquatic acute toxicity : LC50 Fish = 295 mg/L

Persistence and degradability

N.A.

Bioaccumulative potential

N.A.

Mobility in soil

N.A.

None

Other adverse effects

N.A.

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Recover if possible. In so doing, comply with the local and national regulations currently in force.

14. TRANSPORT INFORMATION

Not classified as dangerous in the meaning of transport regulations.

UN number

ADR-UN number: N.A.

DOT-UN Number: N.A.

IATA-Un number: N.A.

IMDG-Un number: N.A.

UN proper shipping name

ADR-Shipping Name: N.A.

DOT Proper Shipping Name: N.A.

IATA-Technical name: N.A.

IMDG-Technical name: N.A.

Transport hazard class(es)

ADR-Class: N.A.

DOT Hazard Class: N.A.

IATA-Class: N.A.

IMDG-Class: N.A.

Packing group

ADR-Packing Group: N.A.

ADR exempt: N.A.

IATA-Packing group: N.A.

IMDG-Packing group: N.A.

Environmental hazards

Marine pollutant: No

Environmental Pollutant: N.A.

Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

N.A.

Special precautions

Department of Transportation (DOT):

N.A.

Road and Rail (ADR-RID) :

N.A.

Air (IATA) :

N.A.

Sea (IMDG) :

N.A.

15. REGULATORY INFORMATION

Listed on Canadian DSL, Australian AICS, Phillipines PICCS, Chinese IECSC, Japanese MITI, Korean KECL, and EU EINECS.

USA - Federal regulations

TSCA - Toxic Substances Control Act

TSCA inventory:

All the components are listed on the TSCA inventory

TSCA listed substances:

No substances listed

SARA - Superfund Amendments and Reauthorization Act

Section 302 - Extremely Hazardous Substances:

No substances listed

Section 304 - Hazardous substances:

No substances listed

Section 313 - Toxic chemical list:

No substances listed

CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act

Substance(s) listed under CERCLA:

No substances listed

CAA - Clean Air Act

CAA listed substances:

No substances listed

CWA - Clean Water Act

CWA listed substances:

No substances listed

USA - State specific regulations

California Proposition 65

Substance(s) listed under California Proposition 65:

No substances listed

Massachusetts Right to know

Substance(s) listed under Massachusetts Right to know:

No substances listed

Pennsylvania Right to know

Substance(s) listed under Pennsylvania Right to know:

No substances listed

New Jersey Right to know

Substance(s) listed under New Jersey Right to know:

No substances listed

16. OTHER INFORMATION

Code	Description
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H319	Causes serious eye irritation.
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The information contained herein is based on our state of knowledge at the above-specified date. It refers solely to the product indicated and constitutes no guarantee of particular quality. The information relates only to the specific material and may not be valid for such material used in combination with any other material or in any process.

This document was prepared by a competent person who has received appropriate training.

It is the duty of the user to ensure that this information is appropriate and complete with respect to the specific use intended.

This MSDS cancels and replaces any preceding release.

Legend to abbreviations and acronyms used in the safety data sheet:

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road.

RID: Regulation Concerning the International Transport of Dangerous Goods by Rail.

IMDG: International Maritime Code for Dangerous Goods.

IATA: International Air Transport Association.

IATA-DGR: Dangerous Goods Regulation by the "International Air Transport Association" (IATA).

ICAO: International Civil Aviation Organization.

ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO).

GHS: Globally Harmonized System of Classification and Labeling of Chemicals.

CLP: Classification, Labeling, Packaging.

EINECS: European Inventory of Existing Commercial Chemical Substances.

INCI: International Nomenclature of Cosmetic Ingredients.

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

GefStoffVO: Ordinance on Hazardous Substances, Germany.

LC50: Lethal concentration, for 50 percent of test population.

LD50: Lethal dose, for 50 percent of test population.

DNEL: Derived No Effect Level.

PNEC: Predicted No Effect Concentration.

TLV: Threshold Limiting Value.

TWATLV: Threshold Limit Value for the Time Weighted Average 8 hour day. (ACGIH Standard).

STEL: Short Term Exposure limit.

STOT: Specific Target Organ Toxicity.

WGK: German Water Hazard Class.

KSt: Explosion coefficient.

Not Available

The information in this SDS is provided all the relevant data fully and truly. However, the information is provided without any warranty on their absolute extensiveness and accuracy. This SDS was prepared to provide safety preventive measures for the users

who have got professional training. The personal user who obtained this SDS should make independent judgment for the applicability of this SDS under special conditions. In these special cases, we do not assume responsibility for the damage.