

Safety Data Sheet

#48772307 · Full 16-section SDS

According to Regulation (EC) No 1907/2006

According to Regulation (EC) No 2020/878

PRODUCT	CAS NUMBER	FORMULA	VERSION	REVISION DATE
D-(+)-Malic acid	636-61-3	C4H6O5	10	27 Aug 2026

SECTION 1

Identification

Product name	D-(+)-Malic acid
CAS number	636-61-3
Chemical formula	C4H6O5
Molecular weight	134.09
SMILES	<chem>C([C@H](C(=O)O)O)C(=O)O</chem>
EC / EINECS number	211-262-2
Recommended use & restrictions	For research and development. Laboratory chemicals. Manufacture of substances. Not suitable for human or veterinary purposes.
Emergency telephone	0344 892 0111 — National Poisons Information Service (NPIS) (United Kingdom — for healthcare professionals (via TOXBASE))

SECTION 2

Hazard identification

**DANGER**

CODE	HAZARD STATEMENT
H315	Causes skin irritation
H318	Causes serious eye damage
H335	May cause respiratory irritation
CODE	PRECAUTIONARY STATEMENT
P261	Avoid breathing dust/fume/gas/mist/vapours/spray
P280	Wear protective gloves/protective clothing/eye protection/face protection
P305+351+338	IF IN EYES: Rinse with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing
Other hazards (e.g. PBT / vPvB, not classified)	This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

SECTION 3

Composition / information on ingredients

Purity / concentration	<= 100 %
Impurities / stabilising additives	<i>Not applicable</i>

SECTION 4

First-aid measures

Inhalation	Remove person to fresh air and keep comfortable for breathing. In case of persistent throat irritation or coughing: seek medical attention.
Skin contact	Take off immediately all contaminated clothing. Rinse skin with water/shower.
Eye contact	Rinse out with plenty of water. Immediately call in ophthalmologist. Remove contact lenses.
Ingestion	Immediately make victim drink water (two glasses at most). Consult a physician.
Symptoms / effects & medical attention	Cough, Shortness of breath, Headache, Nausea, Vomiting.

SECTION 5

Fire-fighting measures

Suitable extinguishing media	Water, Foam, Carbon dioxide (CO ₂), Dry powder
Unsuitable extinguishing media	For this substance/mixture no limitations of extinguishing agents are given.
Special hazards	Combustible. Carbon Monoxide (CO) Carbon dioxide (CO ₂) Development of hazardous combustion gases or vapours possible in the event of fire.
Advice for firefighters	Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.

SECTION 6

Accidental release measures

Personal precautions & PPE	Avoid inhalation of dusts. Avoid substance contact. Ensure adequate ventilation. Evacuate the danger area, observe emergency procedures, consult an expert.
Environmental precautions	Do not let product enter drains.
Containment & clean-up methods	Cover drains. Collect, bind, and pump off spills. Take up dry. Dispose of properly. Clean up affected area. Avoid generation of dusts.

For specific precautions, see Section 8 and Section 13.

SECTION 7

Handling & storage

Storage temperature	Ambient
Precautions for safe handling	For precautions see section 2.2. Observe good chemical hygiene practices. Keep away from food, drink and animal feeding stuffs. Wash contaminated skin thoroughly after handling. Do not eat, drink or smoke when using this product. Remove contaminated clothing and launder thoroughly before re-use.
Conditions for safe storage (incompatibilities)	Tightly closed. Dry.

SECTION 8

Exposure controls / personal protection

Occupational exposure limits (OEL / WEL) *Not applicable*

DNEC/PNEC data *Not applicable*

Eye / face protection Chemical splash goggles
Wear eye/face protection as recommended. All eye/face protection should comply with EN ISO 16321-1:2022.

Skin / hand protection Nitrile gloves Thickness: 0.11mm. Breakthrough time: 480mins.

Respiratory protection Half-mask with filter
Keep self-contained breathing apparatus readily available for emergency use. Provide adequate ventilation. If ventilation is insufficient, suitable respiratory protection must be provided. Respiratory equipment: Reusable Air-Purifying Respirator (APR). Filter type: ABEK. Standard: EN 14387.

SECTION 9

Physical & chemical properties

Density (g/mL) 0.6 g/mL
DERIVED FROM: LITERATURE

Flash point *Not applicable*

Acidity Acid
DERIVED FROM: LITERATURE

Appearance / physical state Solid
DERIVED FROM: LITERATURE

Colour White
DERIVED FROM: LITERATURE

Odour Not known
DERIVED FROM: LITERATURE

Melting / freezing point 98 - 102 °C
DERIVED FROM: LITERATURE

Boiling point *No data available*

Solubility (water) *No data available*

pH *No data available*

Vapour pressure *No data available*

Partition coefficient (log Pow) *No data available*

Auto-ignition / decomposition temp *No data available*

SECTION 10

Stability & reactivity

Chemical stability / reactivity The following applies in general to flammable organic substances and mixtures: in correspondingly fine distribution, when whirled up a dust explosion potential may generally be assumed. Stable under the prescribed storage conditions

Conditions to avoid Heat

Incompatible materials Bases, Oxidizing agents, Reducing agents, Alkali metals.

Hazardous decomposition products In the event of fire: see section 5.

SECTION 11

Toxicological information

Acute toxicity (LD50 / LC50) LDLO Oral - Rat - 5,500 mg/kg

Skin corrosion / irritation Causes skin irritation

Eye corrosion / irritation Causes serious eye damage

Respiratory / skin sensitisation *No data available*

Carcinogenicity *No data available*

Mutagenicity *No data available*

Reproductive toxicity *No data available*

STOT (single / repeated exposure) Inhalation - May cause respiratory irritation.

Aspiration hazard *No data available*

Endocrine disruptors Substance not considered to be an endocrine disruptor.

SECTION 12

Ecological information

Aquatic toxicity *No data available*

Persistence & degradability *No data available*

Bioaccumulative potential *No data available*

Mobility in soil *No data available*

PBT / vPvB assessment This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

SECTION 13

Disposal considerations

Waste treatment / disposal methods

Dispose of in accordance with local/national regulations

SECTION 14

Transport information

UN number *Not applicable*

Proper shipping name *Not applicable*

Class *Not applicable*

Packing group *Not applicable*

Transport category *Not applicable*

Tunnel code *Not applicable*

Packing instruction (ADR) *Not applicable*

Packing instruction (IMDG) *Not applicable*

Environmental hazards *Not applicable*

Special precautions for user *Not applicable*

SECTION 15

Regulatory information

REACH code Y110

UFI code *Not applicable*

ECHA notification *Not applicable*

Chemical safety assessment carried out? No

SECTION 16

Other information

Revision notes / other information

This is the first version of this SDS.

This Safety Data Sheet was generated automatically from the data Molekula holds against this product, in the 16-section GHS/CLP format. Fields shown as “No data available” carry no recorded value; fields shown as “Not applicable” were assessed as not relevant to this substance. For queries, contact Molekula at info@molekula.com.