

SAFETY DATA SHEET

Version: v1
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SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifiers

Product name : Maleic acid
Product Number : M108864
Brand : aladdin
CAS-No. : 110-16-7

1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses : Laboratory chemicals, Manufacture of substances.

1.3 Company

Company : ALADDIN SCIENTIFIC CORPORATION
Address : 14078 Meridian Parkway,
Riverside, CA. 92518
Telephone : +1 (833) 552-7181
Fax : no data available

1.4 Emergency telephone number

CHEMTREC®, Inside the USA : 1-800-424-9300
CHEMTREC®, Outside the USA :

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

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

Acute oral toxicity category 4

Acute percutaneous toxicity category 4

Skin corrosion/irritation category 1B

Serious eye injury/eye irritation category 1

Skin sensitization category 1

Specific target organ toxicity - (Single exposure category 3)

2.2 GHS Label elements, including precautionary statements

Pictogram



Signal word

Warning

Hazard statement(s)

H302

Harmful if swallowed

H315

Causes skin irritation

H317

May cause an allergic skin reaction

H319

Causes serious eye irritation

H335

May cause respiratory irritation

Precautionary statement(s)

P261

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

P264

Wash hands [and ...] thoroughly after handling.

P270

Do not eat, drink or smoke when using this product.

P271

Use only outdoors or in a well-ventilated area.

P272

Contaminated work clothing should not be allowed out of the workplace.

P280

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

P321

Specific treatment (see ... on this label).

P330

Rinse mouth.

P302+P352

IF ON SKIN: wash with plenty of water.

P304+P340

IF INHALED: Remove person to fresh air and keep 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.

P333+P313

IF SKIN irritation or rash occurs: Get medical advice/attention.

P362+P364

Take off contaminated clothing and wash it before reuse.

P405

Store locked up.

P403+P233

Store in a well-ventilated place. Keep container tightly closed.

P501

Dispose of contents/container to an approved waste disposal plant.

P264+P265

Wash hands [and ...] thoroughly after handling. Do not touch eyes.

P301+P317

IF SWALLOWED: Get medical help.

P337+P317

If eye irritation persists: Get medical help.

P332+P317

If skin irritation occurs: Get medical help.

P319

Get medical help if you feel unwell.

2.3 Hazards not otherwise classified (HNOC) or not covered by GHS

SECTION 3: Composition/information on ingredients

3.1 Substances

Synonyms	: cis-Butenedioic acid;cis-2-Butenedioic Acid Toxilic acid
Formula	: C ₄ H ₄ O ₄
Molecular weight	: 116.07
CAS No.	: 110-16-7
EC-NO.	: 203-742-5

Component	Classification	Concentration
Maleic acid		
	no data available	≥99%(HPLC)

SECTION 4: First aid measures

4.1 Description of first aid measures

General advice

Show this material safety data sheet to the doctor in attendance.

If inhaled

Move the victim into fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration and consult a doctor immediately. Do not use mouth to mouth resuscitation if the victim ingested or inhaled the chemical.

In case of skin contact

Take off contaminated clothing immediately. Wash off with soap and plenty of water. Consult a doctor.

In case of eye contact

Rinse with pure water for at least 15 minutes. Consult a doctor.

If swallowed

Rinse mouth with water. Do not induce vomiting. Never give anything by mouth to an unconscious person. Call a doctor or Poison Control Center immediately.

4.2 Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

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

Misty water, carbon dioxide (CO₂), dry powder, chemical foam Carbon dioxide (CO₂), dry powder, dry sand, insoluble foam

Unsuitable extinguishing media

no data available

5.2 Special hazards arising from the substance or mixture

This product may cause burns to eyes, skin and mucous membranes

5.3 Advice for firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

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

Avoid dust formation. Avoid breathing mist, gas or vapours. Avoid contacting with skin and eye. Use personal protective equipment. Wear chemical impermeable gloves. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.

6.2 Environmental precautions

Prevent further spillage or leakage if it is safe to do so. Do not let the chemical enter drains. Discharge into the environment must be avoided.

6.3 Methods and materials for containment and cleaning up

Collect and arrange disposal. Keep the chemical in suitable and closed containers for disposal. Remove all sources of ignition. Use spark-proof tools and explosion-proof equipment. Adhered or collected material should be promptly disposed of, in accordance with appropriate laws and regulations.

6.4 Reference to other sections

For disposal see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Operators should be specially trained and strictly abide by the operating procedures. Operation and disposal should be carried out in a place with local ventilation or general ventilation facilities. Avoid eye and skin contact and avoid breathing vapor. See Section 8 for personal protective measures. Keep away from fire and heat sources, and smoking is strictly prohibited in the workplace. Use explosion-proof ventilation systems and equipment. If canning is required, the flow rate should be controlled, and there should be a grounding device to prevent the accumulation of static electricity. Avoid contact with incompatible substances such as oxidizing agents (see section 10 for incompatible substances). When handling, it should be lightly loaded and unloaded to prevent damage to packaging and containers. Empty containers may be harmful residues. Wash hands after use and prohibit eating or drinking in the workplace. Equipped with the corresponding variety and quantity of fire fighting equipment and leakage emer

7.2 Conditions for safe storage, including any incompatibilities

Sensitive to light, stored in a dry, cool, and well ventilated area

7.3 Specific end use(s)

no data available

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

8.2 Exposure controls

Appropriate engineering controls

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

Personal protective equipment

Eye/face protection

Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN166(EU).

Skin protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands. The selected protective gloves have to satisfy the specifications of Regulation (EU)2016/425 and the standard EN 374 derived from it.

Body Protection

Complete suit protecting against chemicals, Flame retardant antistatic protective clothing., The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a fullface particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN(EU).

Control of environmental exposure

If safety requires, prevent further leakage or spillage. Do not let the product enter the sewer.

SECTION 9: Physical and chemical properties**9.1 Information on basic physical and chemical properties**

a) Appearance	form: powder or solid color: white
b) Odour	no data available
c) Odour Threshold	no data available
d) pH	no data available
e) Melting point/freezing point	138-139°C
f) Initial boiling point and boiling range	no data available
g) Flash point	100°C
h) Evaporation rate	no data available
i) Flammability (solid, gas)	no data available
j) Upper/lower flammability or explosive limits	no data available
k) Vapour pressure	no data available
l) Vapour density	no data available
m) Relative density	1.59
n) Water solubility	no data available
o) Partition coefficient: n-octanol/water	no data available
p) Auto-ignition temperature	no data available
q) Decomposition temperature	no data available
r) Viscosity	no data available
s) Explosive properties N	no data available
t) Oxidizing properties N	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

Moist air or water

10.5 Incompatible materials

Alkali, strong oxidant and reductant

10.6 Hazardous decomposition products

Carbon monoxide (CO). Carbon dioxide (CO₂)

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

LD₅₀, oral LD₅₀=708 mg/kg (Rat)

LD₅₀, skin LD₅₀=1560 mg/kg (Rabbit)

Median lethal concentration of respiration LC₅₀>720 mg/m³ (Rat) 1h

Skin corrosion/irritation

Skin contact may cause allergy

Serious eye damage/eye irritation

no data available

Respiratory or skin sensitisation

no data available

Germ cell mutagenicity

no data available

Carcinogenicity

no data available

Reproductive toxicity

no data available

Specific target organ toxicity - single exposure

no data available

Specific target organ toxicity - repeated exposure

no data available

Aspiration hazard

no data available

Additional Information

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

SECTION 12: Ecological information

12.1 Toxicity

Freshwater fish LC50:=5 mg/L, 96h static (Pimephales promelas)Daphnia magna EC50: 250 - 400 mg/L, 48h

12.2 Persistence and degradability

Easily biodegradable

12.3 Bioaccumulative potential

no data available

12.4 Mobility in soil

The product is soluble in water and may spread in the water system. Because of its water solubility, it may migrate in the environment. The mobility in the soil is high

12.5 Results of PBT and vPvB assessment

PBT/vPvB assessment is not available because chemical safety assessment is not required/carried out

12.6 Other adverse effects

no data available

SECTION 13:

13.1 Disposal considerations

Product

Recycle to process, if possible. Consult your local regional authorities and an expert of disposal. You may be able to dissolve or mix material with a combustible solvent and little by little burn in a chemical incinerator equipped with an afterburner and scrubber system. If a large amount of the substance is burned at a time, an explosion may occur.

Observe all federal, state and local regulations when disposing of the substance.

Contaminated packaging
Dispose of as unused product.

SECTION 14: Transport information

DOT (US)

UN number: UN3261	Packing group: II	Class: 8
Proper shipping name: Organic acid corrosive solid, not otherwise specified	Reportable Quantity(RQ):no data available	Poison Inhalation Hazard:no data available
Maleic acid		
Environmental Hazards: no		

IMDG

UN number: UN3261	Packing group: II	EMS-No:no data available
Proper shipping name: Organic acid corrosive solid, not otherwise specified Maleic acid		

IATA

UN number: UN3261	Packing group: II	Class: 8
Proper shipping name: Organic acid corrosive solid, not otherwise specified Maleic acid		

SECTION 15: Regulatory information

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

SECTION 16: Other information

Prepared By	Regulatory Affairs ALADDIN SCIENTIFIC CORPORATION Email: QualityAssurance@aladdinsci.com
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