

# Safety Data Sheet

According to OSHA Hazard Communication Standard, 29 CFR 1910.1200

Initial preparation date: 10.24.2016

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## Maleic Acid

### SECTION 1: Identification

#### Product identifier

**Product name:** Maleic Acid

**Product code:** S25415

#### Recommended use of the product and restriction on use

**Relevant identified uses:** Laboratory

**Uses advised against:** Not determined or not applicable.

**Reasons why uses advised against:** Not determined or not applicable.

#### Manufacturer or supplier details

**Manufacturer:**

**United States**

AquaPhoenix Scientific

860 Gitts Run Road

Hanover

PA 17331

(717) 632-1291

**Supplier:**

**United States**

Fisher Science Education

6771 Silver Crest Road

Nazareth

PA 18064

800 955-1177

#### Emergency telephone number:

**United States**

Emergency Telephone No.: 800-255-3924

### SECTION 2: Hazard(s) identification

#### GHS classification:

Skin sensitization, category 1

Skin irritation, category 2

Eye irritation, category 2A

Acute toxicity (oral), category 4

Acute toxicity (dermal), category 4

Specific target organ toxicity - single exposure, category 3, respiratory irritation

#### Label elements

##### Hazard pictograms:



**Signal word:** Warning

#### Hazard statements:

H317 May cause an allergic skin reaction.

H315 Causes skin irritation.

H319 Causes serious eye irritation.

H312 Harmful in contact with skin.

H335 May cause respiratory irritation.

#### Precautionary statements:

P261 Avoid breathing dust/fume/gas/mist/vapors/spray.

P272 Contaminated work clothing should not be allowed out of the workplace.

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P280 Wear protective gloves/protective clothing/eye protection/face protection.  
P264 Wash skin thoroughly after handling.  
P270 Do not eat, drink or smoke when using this product.  
P271 Use only outdoors or in a well-ventilated area.  
P321 Specific treatment (see supplemental first aid instructions on this label).  
P333+P313 If skin irritation or a rash occurs: Get medical advice/attention.  
P362 Take off contaminated clothing and wash before reuse.  
P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.  
P301+P330+P312 IF SWALLOWED: Rinse mouth. Call a POISON CENTER or doctor/physician if you feel unwell.  
P302+P352+P312 If on skin: Wash with soap and water. Call a poison center or doctor/physician if you feel unwell.  
P304+P340+P312 If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a poison center or doctor/physician if you feel unwell.  
P405 Store locked up.  
P403+P233 Store in a well ventilated place. Keep container tightly closed.  
P501 Dispose of contents and container as instructed in Section 13.

**Hazards not otherwise classified:** None

## SECTION 3: Composition/information on ingredients

Identification	Name	Weight %
CAS number: 110-16-7	Maleic Acid	100

**Additional Information:** None

## SECTION 4: First aid measures

### Description of first aid measures

#### General notes:

Not determined or not applicable.

#### After inhalation:

Move exposed individual to fresh air

Call a POISON CONTROL CENTER or seek medical attention if you feel unwell

#### After skin contact:

Wash affected area with soap and water

Seek medical attention if symptoms develop or persist

#### After eye contact:

Rinse/flush exposed eye(s) gently using water for 15-20 minutes

Remove contact lens(es) if able to do so during rinsing

Seek medical attention if irritation persists or if concerned

#### After swallowing:

Call a POISON CONTROL CENTER or seek medical attention if you feel unwell

Do not induce vomiting

Rinse mouth and then drink plenty of water

### Most important symptoms and effects, both acute and delayed

#### Acute symptoms and effects:

Not determined or not applicable.

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### Delayed symptoms and effects:

Not determined or not applicable.

### Immediate medical attention and special treatment

#### Specific treatment:

Not determined or not applicable.

#### Notes for the doctor:

Not determined or not applicable.

## SECTION 5: Firefighting measures

### Extinguishing media

#### Suitable extinguishing media:

Use appropriate fire suppression agents for adjacent combustible materials or sources of ignition

#### Unsuitable extinguishing media:

Not determined or not applicable.

### Specific hazards during fire-fighting:

Thermal decomposition can lead to release of irritating gases and vapors

### Special protective equipment for firefighters:

Wear protective eye wear, gloves and clothing

Refer to Section 8

### Special precautions:

Avoid inhaling gases, fumes, dust, mist, vapor and aerosols

Avoid contact with skin, eyes and clothing

## SECTION 6: Accidental release measures

### Personal precautions, protective equipment and emergency procedures:

Ensure adequate ventilation

Ensure air handling systems are operational

Wear protective eye wear, gloves and clothing

### Environmental precautions:

Should not be released into the environment

Prevent from reaching drains, sewer or waterway

### Methods and material for containment and cleaning up:

Wear protective eye wear, gloves and clothing

### Reference to other sections:

Not determined or not applicable.

## SECTION 7: Handling and storage

### Precautions for safe handling:

Do not eat, drink, smoke or use personal products when handling chemical substances.

Avoid breathing mist or vapor.

### Conditions for safe storage, including any incompatibilities:

Store in a cool, well-ventilated area.

## SECTION 8: Exposure controls/personal protection

Only those substances with limit values have been included below.

### Occupational Exposure limit values:

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No occupational exposure limits noted for the ingredient(s).

### Biological limit values:

No biological exposure limits noted for the ingredient(s).

### Information on monitoring procedures:

Not determined or not applicable.

### Appropriate engineering controls:

Emergency eye wash fountains and safety showers should be available in the immediate vicinity of use or handling.

### Personal protection equipment

#### Eye and face protection:

Safety goggles or glasses, or appropriate eye protection.

#### Skin and body protection:

Select glove material impermeable and resistant to the substance.

#### Respiratory protection:

When necessary, use NIOSH-approved breathing equipment.

### General hygienic measures:

Wash hands before breaks and at the end of work.

Avoid contact with skin, eyes and clothing.

## SECTION 9: Physical and chemical properties

### Information on basic physical and chemical properties

<b>Appearance</b>	White Solid
<b>Odor</b>	Faint tea odor
<b>Odor threshold</b>	Not available
<b>pH</b>	1.3 (10% aqueous solution)
<b>Melting point/freezing point</b>	138.5°C
<b>Initial boiling point/range</b>	135 °C
<b>Flash point (closed cup)</b>	Not available
<b>Evaporation rate</b>	Not available
<b>Flammability (solid, gas)</b>	Not available
<b>Upper flammability/explosive limit</b>	Not available
<b>Lower flammability/explosive limit</b>	Not available
<b>Vapor pressure</b>	Not available
<b>Vapor density</b>	4 (Air = 1)
<b>Density</b>	Not available
<b>Relative density</b>	1.59 (Water = 1)
<b>Solubilities</b>	Not determined or not available.
<b>Partition coefficient (n-octanol/water)</b>	Not available
<b>Auto/Self-ignition temperature</b>	Not available
<b>Decomposition temperature</b>	>135 °C
<b>Dynamic viscosity</b>	Not available
<b>Kinematic viscosity</b>	Not available
<b>Explosive properties</b>	Not determined or not available.
<b>Oxidizing properties</b>	Not determined or not available.

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### Other information

### SECTION 10: Stability and reactivity

#### Reactivity:

Does not react under normal conditions of use and storage.

#### Chemical stability:

Stable under normal conditions of use and storage.

#### Possibility of hazardous reactions:

None under normal conditions of use and storage.

#### Conditions to avoid:

None known.

#### Incompatible materials:

None known.

#### Hazardous decomposition products:

None known.

### SECTION 11: Toxicological information

#### Acute toxicity

**Assessment:** Harmful if swallowed Harmful in contact with skin

**Product data:** No data available.

#### Substance data:

Name	Route	Result
Maleic Acid	oral	LD50 - Rat: 708 mg/Kg
	dermal	LD50 - Rabbit: 1560 mg/kg

#### Skin corrosion/irritation

**Assessment:** Causes skin irritation

**Product data:** No data available.

#### Substance data:

Name	Result
Maleic Acid	Causes skin irritation.

#### Serious eye damage/irritation

**Assessment:** Causes serious eye irritation

**Product data:** No data available.

#### Substance data:

Name	Result
Maleic Acid	Causes serious eye irritation.

#### Respiratory or skin sensitization

**Assessment:** May cause an allergic skin reaction

**Product data:** No data available.

#### Substance data:

Name	Result
Maleic Acid	May cause an allergic skin reaction.

#### Carcinogenicity

**Assessment:** Based on available data, the classification criteria are not met.

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**Product data:** No data available.

**Substance data:** No data available.

**International Agency for Research on Cancer (IARC):** None of the ingredients are listed.

**National Toxicology Program (NTP):** None of the ingredients are listed.

### Germ cell mutagenicity

**Assessment:** Based on available data, the classification criteria are not met.

**Product data:** No data available.

**Substance data:** No data available.

### Reproductive toxicity

**Assessment:** Based on available data, the classification criteria are not met.

**Product data:** No data available.

**Substance data:** No data available.

### Specific target organ toxicity (single exposure)

**Assessment:** May cause respiratory irritation

**Product data:** No data available.

**Substance data:**

Name	Result
Maleic Acid	May cause respiratory irritation.

### Specific target organ toxicity (repeated exposure)

**Assessment:** Based on available data, the classification criteria are not met.

**Product data:** No data available.

**Substance data:** No data available.

### Aspiration toxicity

**Assessment:** Based on available data, the classification criteria are not met.

**Product data:** No data available.

**Substance data:** No data available.

**Information on likely routes of exposure:** No data available.

**Symptoms related to the physical, chemical and toxicological characteristics:** No data available.

**Other information:** No data available.

## SECTION 12: Ecological information

### Acute (short-term) toxicity

**Assessment:** Based on available data, the classification criteria are not met.

**Product data:** No data available.

**Substance data:** No data available.

### Chronic (long-term) toxicity

**Product data:** No data available.

**Substance data:** No data available.

### Persistence and degradability

**Product data:** No data available.

**Substance data:** No data available.

### Bioaccumulative potential

**Product data:** No data available.

**Substance data:** No data available.

### Mobility in soil

**Product data:** No data available.

**Substance data:** No data available.

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**Other adverse effects:** No data available.


### SECTION 13: Disposal considerations

**Disposal methods:**


It is the responsibility of the waste generator to properly characterize all waste materials according to applicable regulatory entities (US 40CFR262.11)

### SECTION 14: Transport information


#### United States Transportation of dangerous goods (49 CFR DOT)

<b>UN number</b>	UN 3261
<b>UN proper shipping name</b>	Corrosive Solid, Acidic, Organic, N.O.S. (Maleic Acid)
<b>UN transport hazard class(es)</b>	8 
<b>Packing group</b>	III
<b>Environmental hazards</b>	None
<b>Special precautions for user</b>	None

#### International Maritime Dangerous Goods (IMDG)

<b>UN number</b>	UN 3261
<b>UN proper shipping name</b>	Corrosive Solid, Acidic, Organic, N.O.S. (Maleic Acid)
<b>UN transport hazard class(es)</b>	8 
<b>Packing group</b>	III
<b>Environmental hazards</b>	None
<b>Special precautions for user</b>	None

#### International Air Transport Association Dangerous Goods Regulations (IATA-DGR)

<b>UN number</b>	UN 3261
<b>UN proper shipping name</b>	Corrosive Solid, Acidic, Organic, N.O.S. (Maleic Acid)
<b>UN transport hazard class(es)</b>	8 
<b>Packing group</b>	III
<b>Environmental hazards</b>	None
<b>Special precautions for user</b>	None

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

<b>Bulk Name</b>	None
<b>Ship type</b>	None
<b>Pollution category</b>	None

### SECTION 15: Regulatory information

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### United States regulations

#### Inventory listing (TSCA):

110-16-7	Maleic Acid	Listed
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**Significant New Use Rule (TSCA Section 5):** Not determined.

**Export notification under TSCA Section 12(b):** Not determined.

#### SARA Section 311/312 hazards:

Acute	Chronic	Fire	Pressure	Reactive
No	No	No	No	No

**SARA Section 302 extremely hazardous substances:** Not determined.

**SARA Section 313 toxic chemicals:** Not determined.

#### CERCLA:

110-16-7	Maleic Acid	Listed	5000
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**RCRA:** Not determined.

**Section 112(r) of the Clean Air Act (CAA):** Not determined.

#### Massachusetts Right to Know:

110-16-7	Maleic Acid	Listed
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#### New Jersey Right to Know:

110-16-7	Maleic Acid	Not Listed
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#### New York Right to Know:

110-16-7	Maleic Acid	Listed
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#### Pennsylvania Right to Know:

110-16-7	Maleic Acid	Listed
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**California Proposition 65:** Not determined.

## SECTION 16: Other information

**Abbreviations and Acronyms:** None

#### Disclaimer:

This product has been classified in accordance with hazard criteria of the Controlled Products Regulations and the SDS contains all the information required by the Controlled Products Regulations. The user should consider the health hazards and safety information contained herein as a guide and should take those precautions required in an individual operation to instruct employees and develop work practice procedures for a safe work environment. The information contained herein is, to the best of our knowledge and belief, accurate. However, since the conditions of handling and use are beyond our control, we make no guarantee of results, and assume no liability for damages incurred by the use of this material. It is the responsibility of the user to comply with all applicable laws and regulations applicable to this material.

**NFPA:** 2-0-0

**HMIS:** 2-0-0

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**End of Safety Data Sheet**