

## SAFETY DATA SHEET

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

#### 1.1 Product identifiers

Product name	Fumaric Acid
CAS number	110-17-8
Synonyms	Lichenic acid, trans-Butenedioic acid, boletic acid

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

Identified uses	Laboratory chemicals
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#### 1.3 Details of the supplier of the safety data sheet

Company	Lab Alley, LLC 12501 Pauls Valley Road Austin, Texas 78737 U.S.A.
Telephone	512-668-9918
Fax	512-886-4008

#### 1.4 Emergency telephone

Emergency Phone #	US & Canada: 1-800-535-5053	INFOTRAC
	International 1-352-323-3500	INFOTRAC


### SECTION 2: Hazards identification

#### 2.1 Classification of the substance or mixture

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

Serious eye damage/eye irritation (Category 2)  
Combustible dust

#### 2.2 GHS Label elements, including precautionary statements

Pictogram	
Signal Word	Warning
Hazard statements	May form combustible dust concentrations in air Causes serious eye irritation
Precautionary Statements	Wash face, hands and any exposed skin thoroughly after handling Wear eye/face protection IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention. Store in a well-ventilated place. Keep container tightly closed.

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

None identified.

## SECTION 3: Composition/information on ingredients

### 3.1 Components

Chemical name	Common name and synonyms	CAS number	Concentration
Fumaric acid	Lichenic acid, trans-Butenedioic acid, boletic acid	110-17-8	> 95%

## SECTION 4: First aid measures

### 4.1 Description of first-aid measures

#### General advice

<b>If inhaled</b>	Remove from exposure, lie down. Remove to fresh air. If not breathing, give artificial respiration. Get medical attention.
<b>In case of skin contact</b>	Wash off immediately with plenty of water for at least 15 minutes. Get medical attention.
<b>In case of eye contact</b>	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention.
<b>If swallowed</b>	Do NOT induce vomiting. Clean mouth with water. Get medical attention.

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

No information available.

### 4.3 Indication of any immediate medical attention and special treatment needed

Note to physician: Treat symptomatically.

## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

**Suitable extinguishing media** Water spray, Carbon dioxide (CO<sub>2</sub>), Dry chemical, Chemical foam.

**Unsuitable extinguishing media** No information available.

### 5.2 Specific hazards arising from the substance or mixture

Fine dust dispersed in air may ignite.

### 5.3 Special protective equipment and precautions for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

### 5.4 Further information

**Flash Point** 230 °C / 446 °F

**Autoignition Temperature** 375 °C / 707 °F

#### Explosion limits

**Upper** No information available.

**Lower** No information available.

**Sensitivity to Mechanical Impact** No information available.

**Sensitivity to Static Discharge** No information available.

#### NFPA

Health	Flammability	Instability	Physical hazards
2	1	0	N/A

## SECTION 6: Accidental release measures

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

Ensure adequate ventilation. Use personal protective equipment as required.

### 6.2 Environmental precautions

See Section 12 for additional Ecological Information. Do not flush into surface water or sanitary sewer system.

### **6.3 Methods and materials for containment and cleaning up**

Sweep up and shovel into suitable containers for disposal. Do not let this chemical enter the environment. Avoid dust formation.

### **6.4 Reference to other sections**

See section 2 for full list of hazard and precaution statements.

## **SECTION 7: Handling and storage**

### **7.1 Precautions for safe handling**

#### **Precautions on safe handling**

Avoid contact with skin and eyes. Avoid breathing dust or spray mist. Do not ingest. If swallowed then seek immediate medical assistance. Minimize dust generation and accumulation. Wash hands before breaks and immediately after handling the product.

#### **Hygiene measures**

Handle in accordance with good industrial hygiene and safety practice.

### **7.2 Conditions for safe storage, including any incompatibilities**

#### **Storage conditions**

Keep in a dry, cool and well-ventilated place. Keep container tightly closed.

#### **Incompatibilities**

Strong oxidizing agents.

## **SECTION 8: Exposure controls/personal protection**

### **8.1 Occupational exposure limits**

This product does not contain any hazardous materials with occupational exposure limit established by the region specific regulatory bodies.

### **8.2 Exposure controls**

#### **Appropriate engineering controls**

Ensure adequate ventilation, especially in confined areas. Ensure that eyewash stations and safety showers are close to the workstation location.

#### **Personal protective equipment**

##### **Eye/face protection**

Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

**Skin protection**

Wear appropriate protective gloves.

**Body Protection**

Wear appropriate clothing to prevent skin exposure.

**Respiratory protection**

No protective equipment is needed under normal use conditions.

**Control of environmental exposure**

No information available.

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

Physical State	Solid
Appearance	White
Odor	Odorless
Odor Threshold	No information available.
pH	No information available.
Melting Point/Range	295 - 300 °C / 563 - 572 °F
Boiling Point/Range	No information available.
Evaporation Rate	Not applicable.
Flammability (solid)	No information available.
Flammability or explosive limit	
Upper	No information available.
Lower	No information available.
Vapor Pressure	No information available.
Vapor Density	Not applicable.
Density	No information available.
Solubility	No information available.
Partition coefficient; n-octanol/water	No information available.
Autoignition Temp	375 °C / 707 °F
Decomposition Temp	No information available.
Viscosity	Not applicable.
Molecular Formula	C4H4O4
Molecular Weight	116.07
VOC Content(%)	No information available.
Oxidizing properties	None.

**9.2 Other safety information**

No information available.

**SECTION 10: Stability and reactivity**

### 10.1 Reactivity

None known, based on information.

### 10.2 Chemical stability

Stable under normal conditions.

### 10.3 Possibility of hazardous reactions

None under normal processing.

### 10.4 Conditions to avoid

Incompatible products.

### 10.5 Incompatible materials

Strong oxidizing agents.

### 10.6 Hazardous decomposition products

Carbon monoxide (CO), Carbon dioxide (CO<sub>2</sub>)

## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

#### Product Information, Component Information

#### Acute toxicity

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Fumaric acid	9300 mg/kg (rat)	> 20000 mg/kg (rabbit)	> 1.306 mg/L (rat)

#### Skin corrosion/irritation

No information available.

#### Serious eye damage/eye irritation

Irritating to eyes.

#### Respiratory or skin sensitization

No information available.

#### Germ cell mutagenicity

No information available.

#### Carcinogenicity

Component	CAS	IARC	NTP	ACGIH	OSHA	Mexico
Fumaric acid	110-17-8	Not listed	Not listed	Not listed	Not listed	Not listed

#### Specific target organ toxicity - single exposure

None known.

**Specific target organ toxicity - repeated exposure**

None known.

**Reproductive toxicity**

No information available.

**Chronic effects**

No information available.

**11.2 Additional Information**

The toxicological properties have not been fully investigated.

**SECTION 12: Ecological information**

**12.1 Toxicity**

Product		Species	Test Results	
Fumaric acid	EC50	Desmodesmus subspicatus	41 mg/L	72 h
	LC50	Danio rerio	> 100 mg/L	96 h
	EC50	Daphnia magna	204-220 mg/L	48 h

**12.2 Persistence and degradability**

Persistence is unlikely.

**12.3 Bio accumulative potential**

No information available.

**12.4 Mobility in soil**

Will likely be mobile in the environment due to its water solubility.

**12.5 Results of PBT and vPvB assessment**

No information available.

**12.6 Endocrine disrupting properties**

No information available.

**12.7 Other adverse effects**

Discharge into the environment must be avoided.

**SECTION 13: Disposal considerations**

**13.1 Waste Disposal Methods**

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.

## SECTION 14: Transport information

### **DOT (US)**

Not regulated.

### **IMDG**

Not regulated.

### **IATA**

Not regulated.

## SECTION 15: Regulatory information

**US federal regulations** This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

### **TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)**

Not listed.

### **CERCLA Hazardous Substance List (40 CFR 302.4)**

Listed. RQ: 5000 lb

### **SARA 304 Emergency release notification**

Not regulated

### **OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)**

Not regulated.

### **Superfund Amendments and Reauthorization Act of 1986 (SARA)**

#### **SARA 302 Extremely hazardous substance**

Not listed.

#### **SARA 311/312 Hazardous**

See section 2 for more information.

#### **SARA 313 (TRI reporting)**

Not regulated

### **Other federal regulations**

#### **Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List**

Not regulated

#### **Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)**

Not regulated.



**Safe Drinking Water Act**

Not regulated

**FEMA Priority Substances Respiratory Health and Safety in the Flavor Manufacturing Workplace**

Not listed

**US state regulations**

**US. Massachusetts RTK - Substance List**

Listed.

**US. New Jersey Worker and Community Right-to-Know Act**

Listed.

**US. Pennsylvania Worker and Community Right-to-Know Law**

Listed.

**California Proposition 65**

Not listed.

**SECTION 16: Other information**

Issue date: 09/09/24

**SECTION 17: Disclaimer**

The information provided on this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.