

**Safety Data Sheet**

according to OSHA HCS (29CFR 1910.1200) and WHMIS 2015 Regulations

Revision: May 13, 2020


**1 Identification**

- **Product identifier**
- **Trade name: Fumaric Acid**
- **Product code:** No other identifiers
- **CAS Number:**  
110-17-8
- **Recommended use and restriction on use**
- **Recommended use:** Food Acidulant
- **Restrictions on use:** No relevant information available.
- **Details of the supplier of the Safety Data Sheet**
- **Manufacturer/Supplier:**  
Bartek  
421 Seaman St.  
Stoney Creek, ON L8E3J4  
Canada  
tel 905-662-3292
- **Emergency telephone number:**  
ChemTel  
(800)255-3924 (North America)  
+1 (813)248-0585 (International)

**2 Hazard(s) identification**

- **Classification of the substance or mixture**  
Eye Irrit. 2A      H319 Causes serious eye irritation.  
Combustible Dust      May form combustible dust concentrations in air.

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- **Label elements**
- **GHS label elements**  
The product is classified and labeled according to the Globally Harmonized System (GHS).
- **Hazard pictograms:**  
  
GHS07
- **Signal word:** Warning
- **Hazard statements:**  
H319 Causes serious eye irritation.  
May form combustible dust concentrations in air.
- **Precautionary statements:**  
P264      Wash thoroughly after handling.  
P280      Wear eye protection.  
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P337+P313      If eye irritation persists: Get medical advice/attention.

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- **Other hazards** There are no other hazards not otherwise classified that have been identified.

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## 3 Composition/information on ingredients

- **Chemical characterization: Substances**
- **CAS No. Description**  
110-17-8 Fumaric acid

## 4 First-aid measures

- **Description of first aid measures**
- **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- **After skin contact:**  
Immediately rinse with water.  
If skin irritation is experienced, consult a doctor.
- **After eye contact:**  
Remove contact lenses if worn.  
Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
- **After swallowing:**  
Rinse out mouth and then drink plenty of water.  
Do not induce vomiting; immediately call for medical help.
- **Most important symptoms and effects, both acute and delayed:** Causes serious eye irritation.
- **Danger:** Causes serious eye irritation.
- **Indication of any immediate medical attention and special treatment needed:**  
If medical advice is needed, have product container or label at hand.

## 5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:**  
Alcohol resistant foam  
Water fog / haze  
Carbon dioxide  
Gaseous extinguishing agents  
Fire-extinguishing powder
- **For safety reasons unsuitable extinguishing agents:** No relevant information available.
- **Special hazards arising from the substance or mixture**  
May form combustible dust concentrations in air.  
Hazardous combustion products -- carbon monoxide, carbon dioxide.
- **Advice for firefighters**
- **Protective equipment:**  
Wear self-contained respiratory protective device.  
Wear fully protective suit.

## 6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**  
Wear protective equipment. Keep unprotected persons away.  
Ensure adequate ventilation.

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For large spills, use respiratory protective device against the effects of fumes/dust/aerosol.

Remove ignition sources.

- **Environmental precautions**

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

- **Methods and material for containment and cleaning up**

Pick up mechanically.

Sweep up and place into an appropriate container.

Send for recovery or disposal in suitable receptacles.

- **Reference to other sections**

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

## 7 Handling and storage

- **Handling**

- **Precautions for safe handling:**

Use only in well ventilated areas.

Prevent formation of dust.

- **Information about protection against explosions and fires:**

May form combustible dust concentrations in air.

- **Conditions for safe storage, including any incompatibilities**

- **Requirements to be met by storerooms and receptacles:**

Store in cool, dry conditions in well sealed receptacles.

Keep cool.

- **Information about storage in one common storage facility:**

Store away from oxidizing agents.

Store away from reducing agents.

Do not store together with strong acids.

Do not store together with alkalis (caustic solutions).

Store away from foodstuffs.

- **Further information about storage conditions:** Keep containers tightly sealed.

- **Specific end use(s)** No relevant information available.

## 8 Exposure controls/personal protection

- **Control parameters**

- **Components with limit values that require monitoring at the workplace:**

The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

- **Exposure controls**

- **General protective and hygienic measures:**

The usual precautionary measures for handling chemicals should be followed.

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing.

Wash hands before breaks and at the end of work.

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- **Engineering controls:** Provide adequate ventilation.
- **Breathing equipment:** In case of inadequate ventilation wear respiratory protection.
- **Protection of hands:** Gloves are advised for repeated or prolonged contact.
- **Material of gloves**
  - Nitrile rubber, NBR
  - Butyl rubber, BR
  - Neoprene gloves
  - Natural rubber, NR
- Sensibilization by the components in the glove materials is possible.
- **Eye protection:**



Safety glasses

Follow relevant national guidelines concerning the use of protective eyewear.

- **Body protection:** Protective work clothing
- **Limitation and supervision of exposure into the environment**  
No relevant information available.
- **Risk management measures** No relevant information available.

## 9 Physical and chemical properties

### · Information on basic physical and chemical properties

#### · Appearance:

**Form:** Granular or powdered solid.

**Color:** White

· **Odor:** Odorless

· **Odor threshold:** Not determined.

· **pH-value:** 2.1

· **Melting point/Melting range:** 286 °C (546.8 °F)

· **Boiling point/Boiling range:** Not determined.

· **Flash point:** Not applicable.

· **Flammability (solid, gaseous):** Product is not flammable.

· **Auto-ignition temperature:** Not determined.

· **Decomposition temperature:** Not determined.

· **Danger of explosion:** May form combustible dust concentrations in air.

#### · Explosion limits

**Lower:** Not determined.

**Upper:** Not determined.

· **Oxidizing properties:** Non-oxidizing.

· **Vapor pressure:** Not determined.

· **Density:** 1.65 g/cm<sup>3</sup> (13.77 lbs/gal)

· **Relative density:** Not determined.

· **Vapor density:** Not applicable.

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- |   |                                    |
|---|------------------------------------|
| · <b>Evaporation rate:</b>                        | Not applicable.                    |
| · <b>Solubility in / Miscibility with Water:</b>  | Slightly soluble.                  |
| · <b>Partition coefficient (n-octanol/water):</b> | Not determined.                    |
| · <b>Viscosity</b>                                |                                    |
| <b>Dynamic:</b>                                   | Not applicable.                    |
| <b>Kinematic:</b>                                 | Not applicable.                    |
| · <b>Other information</b>                        | No relevant information available. |

## 10 Stability and reactivity

- **Reactivity:** No relevant information available.
- **Chemical stability:** Stable under normal temperatures and pressures.
- **Thermal decomposition / conditions to be avoided:**  
No decomposition if used and stored according to specifications.
- **Possibility of hazardous reactions**  
May form combustible dust concentrations in air.  
Reacts with oxidizing agents.
- **Conditions to avoid**  
Excessive heat.  
Keep ignition sources away - Do not smoke.
- **Incompatible materials**  
Oxidizing agents.  
Reducing agents.  
Acids.  
Alkalis.
- **Hazardous decomposition products**  
Under fire conditions only:  
Carbon monoxide and carbon dioxide

## 11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:** Based on available data, the classification criteria are not met.

### LD/LC50 values that are relevant for classification:

#### 110-17-8 Fumaric acid

Oral	LD50	9300 mg/kg (rat)
Dermal	LD50	20000 mg/kg (rabbit)

- **Primary irritant effect:**
- **On the skin:** Based on available data, the classification criteria are not met.
- **On the eye:** Causes serious eye irritation.
- **Sensitization:** Based on available data, the classification criteria are not met.

### IARC (International Agency for Research on Cancer):

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Substance is not listed.

· **NTP (National Toxicology Program):**

Substance is not listed.

· **OSHA-Ca (Occupational Safety & Health Administration):**

Substance is not listed.

· **Probable route(s) of exposure:**

Ingestion.

Inhalation.

Eye contact.

Skin contact.

- **Acute effects (acute toxicity, irritation and corrosivity):** Causes serious eye irritation.
- **Germ cell mutagenicity:** Based on available data, the classification criteria are not met.
- **Carcinogenicity:** Based on available data, the classification criteria are not met.
- **Reproductive toxicity:** Based on available data, the classification criteria are not met.
- **STOT-single exposure:** Based on available data, the classification criteria are not met.
- **STOT-repeated exposure:** Based on available data, the classification criteria are not met.
- **Aspiration hazard:** Based on available data, the classification criteria are not met.

## 12 Ecological information

· **Toxicity**

· **Aquatic toxicity** No relevant information available.

· **Persistence and degradability** No relevant information available.

· **Bioaccumulative potential:** No relevant information available.

· **Mobility in soil:** No relevant information available.

· **Additional ecological information**

· **General notes:**

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

· **Other adverse effects** No relevant information available.

## 13 Disposal considerations

· **Waste treatment methods**

· **Recommendation:**

The user of this material has the responsibility to dispose of unused material, residues and containers in compliance with all relevant local, state and federal laws and regulations regarding treatment, storage and disposal for hazardous and nonhazardous wastes.

· **Uncleaned packagings**

· **Recommendation:** Disposal must be made according to official regulations.

## 14 Transport information

· **UN-Number**

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· DOT, ADR/RID/ADN, IMDG, IATA	Not regulated.
· UN proper shipping name · DOT, ADR/RID/ADN, IMDG, IATA	Not regulated.
· Transport hazard class(es) · DOT, ADR/RID/ADN, IMDG, IATA · Class	Not regulated.
· Packing group · DOT, ADR/RID/ADN, IMDG, IATA	Not regulated.
· Environmental hazards	Not applicable.
· Special precautions for user	Not applicable.
· Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable.

## 15 Regulatory information

- Safety, health and environmental regulations/legislation specific for the substance or mixture
- United States (USA)
- SARA

### · Section 302 (extremely hazardous substances):

Substance is not listed.

### · Section 313 (Specific toxic chemical listings):

Substance is not listed.

### · TSCA (Toxic Substances Control Act)

All ingredients are listed or exempt.

### · Proposition 65 (California)

#### · Chemicals known to cause cancer:

Substance is not listed.

#### · Chemicals known to cause developmental toxicity for females:

Substance is not listed.

#### · Chemicals known to cause developmental toxicity for males:

Substance is not listed.

#### · Chemicals known to cause developmental toxicity:

Substance is not listed.

### · EPA (Environmental Protection Agency):

Substance is not listed.

### · IARC (International Agency for Research on Cancer):

Substance is not listed.

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**· Canadian Domestic Substances List (DSL):**

All ingredients listed on DSL or NDSL.

**16 Other information**

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

**· Abbreviations and acronyms:**

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

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

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

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

OSHA: Occupational Safety &amp; Health Administration

Eye Irrit. 2A: Serious eye damage/eye irritation – Category 2A

**· Sources**Website, European Chemicals Agency ([echa.europa.eu](http://echa.europa.eu))Website, US EPA Substance Registry Services ([ofmpub.epa.gov/sorinternet/registry/substreg/home/overview/home.do](http://ofmpub.epa.gov/sorinternet/registry/substreg/home/overview/home.do))Website, Chemical Abstracts Registry, American Chemical Society ([www.cas.org](http://www.cas.org))

Patty's Industrial Hygiene, 6th ed., Rose, Vernon, ed. ISBN: 978-0-470-07488-6

Casarett and Doull's Toxicology: The Basic Science of Poisons, 8th Ed., Klaasen, Curtis D., ed., ISBN: 978-0-07-176923-5.

Safety Data Sheets, Individual Manufacturers