

AERCHEM INC.
320 North Walnut
Bloomington, IN 47404

Telephone: 812.334.9996

Fax: 812.334.1960

Emergency: 800.424.9300

SECTION 1: IDENTIFICATION

Effective Date: 7/10/96

Product Name: Butenedioic Acid; 1,2-ethenedicarboxylic acid

Common Name: Fumaric Acid

Chemical Formula: C₄H₄O₄

CAS No.: 110-17-8

SECTION 2: HAZARDOUS INGREDIENTS:

Dust may be irritating to skin, is a severe eye irritant, and may cause coughing, sneezing, and labored breathing in cases of excessive inhalation. Ingestion of large amount may cause nausea, vomiting, cramps, and diarrhea and may produce irritation of mouth and throat. Local irritation may result from contact with powder or concentrated aqueous solutions.

SECTION 3: PHYSICAL DATA

Physical Data:

Appearance and Odor:	colorless, odorless powder
pH (10% solution)	2.6
Specific Gravity (Water = 1):	1.635 g/ml
Solubility in water:(by weight)	soluble
Melting Point:	287 °C
Volatility:	
Bulk Density:	1.264 kg/L

SECTION 4: FIRE AND EXPLOSION DATA

Fire and Explosion Information:

Fire Fighting Procedures:
breathing
contamination

Wear protective clothing and use self-contained apparatus. Dike area to prevent runoff and of water sources.

Unusual Fire and Explosion Hazards: none known

SECTION 5: REACTIVITY DATA

Reactivity Data:

Stable X Unstable

Conditions to Avoid:

n/a; stable under proper handling, but vapor or dust may form explosive mixtures with air.

Incompatibilities:

strong oxidizers, avoid excessive moisture; nitric acid

Hazardous Decomposition or byproducts:

none

Hazardous Polymerization:

will not occur

SECTION 6: HEALTH HAZARD DATA

Threshold Limit Value (TLV): irrelevant

Permissible Exposure Limit: 100% w/w

Toxicity:

Oral LD50 (rat): 10700 mg/kg

NTP:

IARC Monographs:

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SECTION 7: SPILLAGE AND DISPOSAL PROCEDURES

First Aid:

Eyes: Hold eyelids open and flush with steady, gentle stream of water for at least 15 minutes. Get medical attention if irritation persists.
Skin: Wash skin with plenty of soap and water. Wash clothing separately before reuse.
Inhalation: Remove victim to fresh air if not breathing, administer CPR or artificial respiration. If breathing difficult, administer oxygen. Get medical attention.
Ingestion: If victim is conscious and alert, give 2-3 glasses of water or milk to drink. Give one tablespoon of Ipecac to induce vomiting - repeat once more if vomiting has not occurred in 20 minutes. Vomiting can also be induced by touching back of throat with finger.

Do

Spillage: To extent possible, clean up using shovels. Scoop up loose material and place in appropriate containers so as to avoid dust generation. Do not flush material to public sewer systems or any waterways. Wear appropriate protective clothing and equipment during cleanup activities. Ensure decontamination of tools and equipment following cleanup.

Disposal: Dispose of in accordance with local, state and federal regulations.

SECTION 8: PRECAUTION TO BE TAKEN IN HANDLING AND STORING

Ambient temperatures for storage and transport. Can be stored in plastic materials of any kind, stainless steel, nickel resistant steel, monel, epoxy phonolics, viton, polypropylene, fluorinated silicone, nylon 66, Fluon, CAF jointings, natural & butyl rubbers, nitrile rubbers, E/P copolymers, polyethylene. Do not store in carbon & mild steels, aluminum, zinc coated steels. Material may form an explosive mixture with air. Store in cool, place away from open flames and powerful oxidizing agents.

SECTION 9: SPECIAL PROTECTION INFORMATION

Ventilation: Local exhaust ventilation should be used to control the emission of air contaminants. General dilution ventilation may assist with the reduction of air contaminant concentrations.
Eye Protection: Wear chemical safety glasses. A face shield should be used when appropriate.
Protective Gloves: rubber, neoprene or vinyl gloves
Respiratory Protection: NIOSH/MSHA approved respirator
Other Protective Gear: protective clothing

SECTION 10: TRANSPORT INFORMATION

DOT classification: not a DOT regulated material

DOT pictograms: