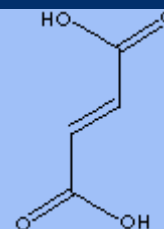


# FUMARIC ACID

## PRODUCT IDENTIFICATION

CAS NO.	110-17-8
EINECS NO.	203-743-0
FORMULA	HOOCCH=CHCOOH
MOL WT.	116.07
H.S. CODE	2917.19
TOXICITY	Oral rat LD50: 9300 mg/kg
SYNONYMS	2-Butenedioic acid; 1,2-Ethylenedicarboxylic Acid; Allomaleic Acid; trans-Butanedioic Acid; (E)-2-Butenedioic acid; trans-1,2-Ethylenedicarboxylic acid; Allomaleic acid; Boletic acid;



## DERIVATION

## CLASSIFICATION

## GENERAL DESCRIPTION

Derived from maleic anhydride. Fumaric acid's growth will remain below GDP growth. Its major applications in paper sizing and foods are stagnant. Demand will continue in applications that require fumaric acid's specialized properties, but competition from lower-priced maleic anhydride, fumaric acid's precursor, will continue to limit growth in new applications.

## PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE	Clear Crystalline Powder
MELTING POINT	287 - 302 C (Sublime)
BOILING POINT	
SPECIFIC GRAVITY	1.635
SOLUBILITY IN WATER	Slightly soluble (0.63 g/100ml at 20 C)
pH	
VAPOR DENSITY	
AUTOIGNITION	740 C
NFPA RATINGS	Health: 2; Flammability: 1; Reactivity: 0
REFRACTIVE INDEX	
FLASH POINT	
STABILITY	Stable under ordinary conditions.

## APPLICATIONS

Paper Size Resins, Food Acidulant, Unsaturated Polyester Resins, Alkyd Resins, Plasticizers, Lubricating Oils, Carboxylating Agent For Styrene-butadiene Rubber,

## SALES SPECIFICATION

### TECH GRADE

APPEARANCE	white crystalline powder
PURITY	99.5% min
ASH	0.05% max
MELTING POINT	287 - 302 C

### FOOD GRADE

APPEARANCE	white crystalline powder
PURITY	99.5% min
ASH	0.05% max
MELTING POINT	287 - 302 C
COLOR	Clear transparent ((5wt% in Sodium Hydroxide)
SULFATE	100ppm max
HEAVY METALS	10ppm max

ARSENIC ACID	3ppm max
MALIC ACID	0.1% max
WATER	0.5% max
TRANSPORTATION	
PACKING	25kgs in bag
HAZARD CLASS	
UN NO.	
OTHER INFORMATION	
Hazard Symbols: XI, Risk Phrases: 36, Safety Phrases: 26	