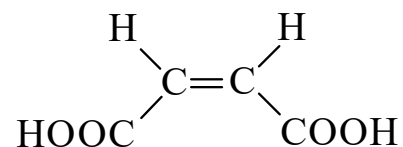




>>Entry Name: Maleic acid, 8CI

ENTRY UNDER REVIEW

Synonym(s): (Z)-2-Butenedioic acid, 9CI. *cis*-Ethylene-1,2-dicarboxylic acid



CAS Registry Number: 110-16-7

Related CAS Registry Numbers(s): 142-44-9 371-47-1 1330-76-3 6915-18-0 18016-19-8

Molecular Formula: C₄H₄O₄

Molecular Weight: 116.073

Accurate Mass: 116.01096

Percentage Composition: C 41.39%; H 3.47%; O 55.14%

Source/Synthesis: Manuf. by hydration of maleic anhydride

Use/Importance: Used in the manuf. of unsatd. polyester resins, alkyd resins, surface coatings and adhesives

Physical Description: Prisms (H₂O) with repulsive astringent taste

Melting Point: Mp 138-139°

Solubility: Sol. H₂O, EtOH, Et₂O, Me₂CO

pKa Value: pK_{a1} 1.65; pK_{a2} 5.61 (25°,H₂O)

Other Data: On heating above the Mp is converted partly to Fumaric acid [CVQ85-P](#) and partly to the anhydride

Hazard & Toxicity: Skin, mucous membrane, and severe eye irritant. LD₅₀ (rat, orl) 708 mg/kg. LD₅₀ (rbt, skn) 1560 mg/kg

Aldrich: M15-3

Fluka: 63190

Sigma: M0375

Supelco: 4-6939

>>Derivative: Mono-Me ester

Synonym(s): Methyl maleate

CAS Registry Number: 3052-50-4

Molecular Formula: C₅H₆O₄

Molecular Weight: 130.1

Accurate Mass: 130.02661

Percentage Composition: C 46.16%; H 4.65%; O 49.19%

Boiling Point: Bp_{0.01} 97-99°

Density: d₄²⁵ 1.25

Refractive Index: n_D²⁵ 1.4643

>>Derivative: Di-Me ester

Synonym(s): Dimethyl maleate

CAS Registry Number: 624-48-6

Molecular Formula: C₆H₈O₄

Molecular Weight: 144.127

Accurate Mass: 144.04226

Percentage Composition: C 50.00%; H 5.59%; O 44.40%

Melting Point: Mp -19°

Boiling Point: Bp 205°. Bp_{9.7} 86.4°

Solubility: Insol. H₂O; sol. Et₂O, CCl₄

Density: d₄¹⁴ 1.15

Refractive Index: n_D²⁰ 1.4423

Other Data: Heating with I₂ gives dimethyl fumarate

Hazard & Toxicity: Eye irritant. LD₅₀ (rbt, skn) 530 mg/kg

Aldrich: 23819-8

Fluka: 63250

>>Derivative: Mono-Et ester

Synonym(s): Ethyl maleate