



>>Entry Name: Methylphosphonic acid, 9CI

Synonym(s): Methanephosphonic acid

CAS Registry Number: 993-13-5

MeP(O)(OH)₂

Molecular Formula: CH₅O₃P

Molecular Weight: 96.022

Accurate Mass: 95.997632

Percentage Composition: C 12.51%; H 5.25%; O 49.99%; P 32.26%

Physical Description: Hygroscopic cryst.

Melting Point: Mp 105°

Solubility: Sol. H₂O, EtOH, Et₂O

pKa Value: pK_{a1} 2.41; pK_{a2} 7.35 (25°) pK_{a1} 2.38; pK_{a2} 7.74 (25°,H₂O)

Hazard & Toxicity: Highly irritant. Corrosive

Aldrich: 28986-8

Fluka: 64259

>>Derivative: Anilinium salt

Physical Description: Cryst. (propanol)

Melting Point: Mp 149-150°

>>Derivative: Mono-Me ester

>>Derivative: Di-Me ester

>>Derivative: Mono-Et ester

>>Derivative: Di-Et ester

>>Derivative: Monopropyl ester

Synonym(s): Propyl hydrogen methylphosphonate

CAS Registry Number: 4546-11-6

Molecular Formula: C₄H₁₁O₃P

Molecular Weight: 138.103

Accurate Mass: 138.044582

Percentage Composition: C 34.79%; H 8.03%; O 34.76%; P 22.43%

Physical Description: Liq.

Boiling Point: Bp_{0.05} 106°

Refractive Index: n_D²⁵ 1.4259

>>Derivative: Dipropyl ester

Synonym(s): Dipropyl methylphosphonate

CAS Registry Number: 6410-56-6

Molecular Formula: C₇H₁₇O₃P

Molecular Weight: 180.183

Accurate Mass: 180.091532

Percentage Composition: C 46.66%; H 9.51%; O 26.64%; P 17.19%

Physical Description: Liq.

Boiling Point: Bp₉ 93-96°. Bp_{0.25} 115.5°

Density: d₄²⁰ 1.01

Refractive Index: n_D²⁰ 1.4210