



>>Entry Name: Dimethyl phosphate, 9Cl, 8Cl

Synonym(s): Dimethyl hydrogen phosphate. Dimethyl phosphoric acid

CAS Registry Number: 813-78-5

Type of Compound Code(s): AC4000

(MeO)₂P(O)OH

Molecular Formula: C₂H₇O₄P

Molecular Weight: 126.049

Accurate Mass: 126.008197

Percentage Composition: C 19.06%; H 5.60%; O 50.77%; P 24.57%

Source/Synthesis: Final prod. of hydrolysis or metab. of many insecticides, and of *O,O*-Dimethyl phosphorodithioate [GGM75-J](#) by *Thiobacillus thioflavus*

Use/Importance: Fireproofing agent, cross-linking agent in polymerisation

Physical Description: Syrup

Boiling Point: Bp_{0.0001} 78-80°

Density: d²⁰ 1.35

pKa Value: pK_a 1.29 (25°) pK_{a1} 1.25 (20°,H₂O) pK_{a1} 3.01 (80% EtOH aq.) pK_{a1} 4.58 (95% EtOH aq.) pK_{a1} 6.37 (EtOH) pK_{a1} 9.5 (MeNO₂)

Refractive Index: n_D²⁰ 1.4080

Aldrich: 44516-9

>>Derivative: Me₄N salt

Physical Description: Solid

Melting Point: Mp 215°

>>Derivative: Fluoride

see Dimethyl phosphorofluoridate, [DRL02-Y](#)

>>Derivative: Chloride

see Dimethyl phosphorochloridate, [GGX48-G](#)

>>Derivative: Bromide

see Dimethyl phosphorobromidate, [DRK91-T](#)

>>Derivative: Cyanide

see Dimethyl phosphorocyanidate, [DKL37-P](#)

>>Derivative: Amide

see *O,O*-Dimethyl phosphoramidate, [DLB67-H](#)

>>Derivative: Anilide

see Dimethyl phenylphosphoramidate, [DKS28-W](#)

>>Derivative: Azide

see Dimethyl phosphorazidate, [DQZ17-R](#)

>>Derivative: Hydrazide

see Dimethyl phosphorohydrazidate, [DQZ06-N](#)

>>Derivative: Anhydride

see Tetramethyl pyrophosphate, [GGK75-Z](#)

References: