



>>Entry Name: Phosphinic acid, 9Cl, 8Cl

Synonym(s): Hypophosphorous acid. Dihydridodioxophosphoric(I) acid. P¹-acid. Hydrogen dihydridodioxophosphate(1-)

CAS Registry Number: 6303-21-5

Related CAS Registry Numbers(s): 14332-09-3 15460-68-1

H₂P(O)OH<< >>HP(OH)₂

Molecular Formula: H₃O₂P

Molecular Weight: 65.996

Accurate Mass: 65.987067

Percentage Composition: H 4.58%; O 48.49%; P 46.93%

Source/Synthesis: Synth from Ca(Ba)(OH)₂ + white P, and salt treated with H₂SO₄ or oxalic acid: free acid also from PH₃/I₂ aq.

Physical Description: Colourless deliquescent cryst.

Melting Point: Mp 26.5° (23.5°)

pKa Value: pK_a 1.4 (1.1)

Other Data: Powerful reducing agent eg. SO₂→S; Cu(II)→Cu(I). Condenses with aldehydes and ketones. Dec. >130°. Also adds across C=C bonds. Dehalogenating agent for activated halogen sites

Aldrich: 21490-6

Fluka: 94210

>>Derivative: Aniline salt

Molecular Formula: C₆H₁₀NO₂P

Molecular Weight: 159.124

Accurate Mass: 159.044916

Percentage Composition: C 45.29%; H 6.33%; N 8.80%; O 20.11%; P 19.47%

Melting Point: Mp 115°

Solubility: Readily sol. H₂O

References:

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