



>>Entry Name: Hexafluorophosphoric acid

Synonym(s): Hydrogen hexafluorophosphate(1-), 9Cl, 8Cl

CAS Registry Number: 16940-81-1

Related CAS Registry Numbers(s): 35184-94-2 73481-44-4 96917-71-4
HPF₆

Molecular Formula: F₆HP

Molecular Weight: 145.972

Accurate Mass: 145.972005

Percentage Composition: F 78.09%; H 0.69%; P 21.22%

Source/Synthesis: Synth. from P₂O₅ + HF, or PF₅/HF + SO₂

Physical Description: Oil. Strong aq. solns. fume in air, and gradually dec.

Other Data: Attacks Ni, Cu, Pb, Ag and stainless steels. Most metals are inert to dil. solns. (except Al). Forms insol. salts with many organic bases

Aldrich: 45493-1

Fluka: 52515

>>Derivative: Hexahydrate

CAS Registry Number: 35184-94-2

Physical Description: Cryst.

Melting Point: Mp 31.5°

Other Data: Should probably be formulated as H₃O⁽⁺⁾PF₆⁽⁻⁾·HF·4H₂O

>>Derivative: 7.67 Hydrate

CAS Registry Number: 54474-23-6

Other Data: Polyhedral clathrate hydrate

>>Derivative: MeNH₂ salt (1:1)

CAS Registry Number: 28302-50-3

Molecular Formula: CH₆F₆NP

Molecular Weight: 177.029

Percentage Composition: C 6.78%; H 3.42%; F 64.39%; N 7.91%; P 17.50%

Physical Description: Solid

Melting Point: Mp 175-176°

>>Derivative: Me₂NH salt (1:1)

CAS Registry Number: 96917-69-0

Molecular Formula: C₂H₈F₆NP

Molecular Weight: 191.056

Percentage Composition: C 12.57%; H 4.22%; F 59.66%; N 7.33%; P 16.21%

Physical Description: Solid

Melting Point: Mp 114-118°

>>Derivative: Me₃N salt (1:1)

CAS Registry Number: 12116-03-9

Molecular Formula: C₃H₁₀F₆NP

Molecular Weight: 205.083

Percentage Composition: C 17.57%; H 4.91%; F 55.58%; N 6.83%; P 15.10%

Physical Description: Solid or cryst. (MeOH)

Melting Point: Mp 250°

>>Derivative: EtNH₂ salt (1:1)

CAS Registry Number: 19121-70-1

Molecular Formula: C₂H₈F₆NP

Molecular Weight: 191.056

Percentage Composition: C 12.57%; H 4.22%; F 59.66%; N 7.33%; P 16.21%

Physical Description: Solid

Melting Point: Mp 123-125°