



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

Synonym(s): Phosphorous acid. Dihydrogen hydridotrioxophosphate(2-). P³-acid

CAS Registry Number: 13598-36-2

Related CAS Registry Numbers(s): 15460-71-6 15477-76-6

Extra CAS Registry Numbers(s): 10294-56-1

HP(O)(OH)₂<<>>P(OH)₃

Molecular Formula: H₃O₃P

Molecular Weight: 81.996

Accurate Mass: 81.981982

Percentage Composition: H 3.69%; O 58.54%; P 37.77%

pm, P=O 145 pm, OPO 101-117°

Source/Synthesis: Synth. from P + H₂O/HI

Physical Description: White v. hygroscopic cryst. mass (EtOH aq.)

Melting Point: Mp 73.8°

Solubility: V. sol. H₂O (425 g per 100 cm³ at 20°)

pKa Value: pK_{a1} 1.43; pK_{a2} 6.67 (25°) pK_{a1} 2; pK_{a2} 6.59 (18°)

Other Data: Dec. >180° to give H₃PO₄ + PH₃

Aldrich: 21511-2

Fluka: 79540

Sigma: P7396

>>Derivative: Mono-Na salt

Synonym(s): Sodium phosphonate. Sodium phosphite

CAS Registry Number: 15475-67-9

Molecular Formula: H₂NaO₃P

Molecular Weight: 103.978

Accurate Mass: 103.963924

Percentage Composition: H 1.94%; Na 22.11%; O 46.16%; P 29.79%

Source/Synthesis: Synth. from NaOH + H₃PO₃

Use/Importance: Component of detergents

>>Derivative: Di-Na salt

References:

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