



>>Entry Name: Sodium phosphinate, 9Cl, 8Cl

ENTRY UNDER REVIEW

Synonym(s): Sodium hypophosphite

CAS Registry Number: 7681-53-0

NaOP(O)H₂

Molecular Formula: H₂NaO₂P

Molecular Weight: 87.978

Accurate Mass: 87.969009

Percentage Composition: H 2.29%; Na 26.13%; O 36.37%; P 35.21%

Source/Synthesis: Synth. from red or yellow P + aq. NaOH or aq. Na₂CO₃. Formed alongside Na₂HPO₃

Use/Importance: Used in electroplating and formn. of other metal coatings. Mild reducing agent for alkenes, alkynes, nitroaromatics, benzoquinones, and other ketonic compds., azides, epoxides. Debenzylating agent. Commercially available as hydrate

Solubility: V. sol. H₂O (52 g per 100 cm³)

>>Derivative: Monohydrate

CAS Registry Number: 10039-56-2

Molecular Formula: H₄NaO₃P

Molecular Weight: 105.993

Accurate Mass: 105.979574

Percentage Composition: H 3.80%; Na 21.69%; O 45.28%; P 29.22%

Physical Description: V. hygroscopic colourless cryst.

Solubility: V. sol. H₂O (100 g per 100 cm³ at 25°, 667 g per 100 cm³ at 100°), EtOH

Other Data: Begins to dec. at 310° → PH₃ + H₂O + Sodium phosphonate (Na₂(HPO₃)) [HTW20-L](#), Sodium metaphosphate (NaPO₃) [HTM48-B](#), and Sodium diphosphate (Na₄(P₂O₇)) [HTW34-S](#)

Hazard & Toxicity: Violent dec. on heating

Fluka: 71795

Sigma: S5012

References:

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