



>>Entry Name: Phosphorus bromide (PBr₅), 8Cl

Synonym(s): Pentabromophosphorane, 9Cl. Phosphorus pentabromide. Pentabromophosphorus(V). Tetrabromophosponium bromide

CAS Registry Number: 7789-69-7

[PBr₄⁽⁺⁾][Br⁽⁻⁾]

Molecular Formula: Br₅P

Molecular Weight: 430.494

Accurate Mass: 425.665442

Percentage Composition: Br 92.81%; P 7.19%

Source/Synthesis: Synth. by reaction of P or PBr₃ + Br₂

Use/Importance: Commercially available brominating agent

Physical Description: Reddish yellow rhombohedral cryst. (PhNO₂) at r.t. Dec. at b.p. with dissoc. of vapour into PBr₃ + Br₂

Boiling Point: Bp 106° dec.

Other Data: $\Delta H_f -46 \text{ kJ mol}^{-1}$

Hazard & Toxicity: Corrosive, poison

Aldrich: 22673-4

>>Derivative: Br₂ adduct (1:1)

References:

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