



>>Entry Name: Phosphoryl bromide, 9Cl, 8Cl

Synonym(s): Tribromophosphine oxide. Tribromooxophosphorus(V). Phosphorus tribromide oxide. Phosphorus(V) bromide oxide (PBr<sub>3</sub>O)

CAS Registry Number: 7789-59-5

P(O)Br<sub>3</sub>

Molecular Formula: Br<sub>3</sub>OP

Molecular Weight: 286.685

Accurate Mass: 283.783685

Percentage Composition: Br 83.62%; O 5.58%; P 10.80%

Source/Synthesis: Synth. from PBr<sub>5</sub> + P<sub>4</sub>O<sub>10</sub> at 150°

Use/Importance: Brominating agent and phosphorylating agent

Physical Description: Large flaky cryst. Yellows and dec. at high temps. Slowly dec. by H<sub>2</sub>O → H<sub>3</sub>PO<sub>3</sub> + HBr

Melting Point: Mp 55°

Boiling Point: Bp 193°. Bp<sub>20</sub> 125°

Solubility: Sol. org. solvs.

Other Data:  $\Delta H_f$  -386 kJ mol<sup>-1</sup>

Hazard & Toxicity: Poison, corrosive, irritant

Aldrich: 37694-9

#### References:

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