>>**Entry Name: Phosphorus pentoxide**
Synonym(s): Phosphorus oxide (P_2O_5), 9CI, 8CI

CAS Registry Number: 1314-56-3
Extra CAS Registry Numbers(s): 12640-86-7
P_2O_5

Molecular Formula: O_5P_2
Molecular Weight: 141.944
Accurate Mass: 141.922099
Percentage Composition: O 56.36%; P 43.64%

Aldrich: 21470-1
Fluka: 79612
Sigma: P0679

>>**Derivative:** `Dimer'

>>**Derivative:** Bis-Py complex

CAS Registry Number: 81483-65-0
Molecular Formula: $C_{10}H_{10}N_2O_5P_2$
Molecular Weight: 300.147
Accurate Mass: 300.006497
Percentage Composition: C 40.02%; H 3.36%; N 9.33%; O 26.65%; P 20.64%
Physical Description: White cryst. solid

>>**Variant:** O-form
Synonym(s): Orthorhombic-form

Molecular Formula: O_5P_2
Molecular Weight: 141.944
Accurate Mass: 141.922099
Percentage Composition: O 56.36%; P 43.64%

Source/Synthesis: Synth. from H-form by heating at 400° in closed system
Other Data: Reacts rel. slowly with water even at 100°. Melts to visc. liq.

>>**Variant:** O'-form
Synonym(s): Orthorhombic-form. Phyllododecagonal phosphorus(*V*) oxide

Molecular Formula: O_5P_2
Molecular Weight: 141.944
Accurate Mass: 141.922099
Percentage Composition: O 56.36%; P 43.64%

No discrete molecules
Source/Synthesis: Synth. from H-form at 450° in closed system
Melting Point: Mp 580°
Other Data: Melts v. slowly to v. visc. liq. With H_2O, reacts to give a gel

References:

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