



>>Entry Name: Arsenic oxide (As₂O₅), 9Cl, 8Cl

Synonym(s): Diarsenic(*I*) pentoxide. Arsenic pentoxide (incorr.)

CAS Registry Number: 1303-28-2

Related CAS Registry Numbers(s): 12044-50-7

As₂O₅

Molecular Formula: As₂O₅

Molecular Weight: 229.84

Accurate Mass: 229.817763

Percentage Composition: As 65.19%; O 34.81%

General Statement: Struct. formed by corner sharing of AsO₆ octahedra and AsO₄ tetrahedra with As-O 181.8 and 167.6 pm resp.

Source/Synthesis: Synth. from As₂O₃ + c. HNO₃, 3:5 hydrate heated at > 170°

Use/Importance: Oxidation catalyst (e.g. in heterocyclic synth.). Wood preservative. Commercially available

Physical Description: Deliquescent solid

Solubility: V. sol. H₂O (230 g per 100 cm³ at 20°)

Other Data: Shows phase change at 225° to high temp. tetragonal form

Hazard & Toxicity: Poison

>>Derivative: Hydrate (3:5)

see Triarsenic acid, [JQP74-W](#)

>>Derivative: Tetrahydrate

see Arsenic acid, [HTG94-I](#)

>>Derivative: Heptahydrate

see Arsenic acid, [HTG94-I](#)

References:

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Barton, H., J. Appl. Chem., 1981, **14**, 68, (synth, cryst struct)

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