



>>Entry Name: **Aluminium phosphate (1:1)**, 9CI, 8CI, USAN
Synonym(s): Aluminium orthophosphate. Phosphaljel

CAS Registry Number: 7784-30-7
Extra CAS Registry Numbers(s): 13765-93-0 98499-64-0

AlPO_4

Molecular Formula: AlO_4P
Molecular Weight: 121.953
Accurate Mass: 121.934961
Percentage Composition: Al 22.12%; O 52.48%; P 25.40%

intercalation compds. with e.g. org. bases

Use/Importance: Forms basis of numerous microporous compositions with zeolitic character. A wide range of other elements may be incorporated. Employed as refractory material e.g. in binders and in bricks. With other metal oxides forms highly coloured materials useful as pigments. Employed in some dental and pharmaceutical preps. Antacid. Commercially available

Aldrich: 34145-2

Fluka: 6414

Sigma: A1702

>>Derivative: Sesquihydrate

CAS Registry Number: 99835-04-8

Physical Description: Square prismatic needles

Other Data: Orthorhombic lattice with linked AlO_4 and PO_4 tetrahedra and $\text{AlO}_4(\text{H}_2\text{O})_2$ octahedra and encapsulated H_2O

>>Derivative: Dihydrate

CAS Registry Number: 13477-75-3

Source/Synthesis: Synth. from NaH_2PO_4 , AlCl_3 , aq. NaOH, pH 3.8 at 60-90° → Variscite. $\text{Al}_2(\text{SO}_4)_3$ + aq. Na_3PO_4 at <135° → Metavariscite

Physical Description: Normally minute hexagonal plates

>>Derivative: Trihydrate

CAS Registry Number: 22784-12-9

Physical Description: Colourless, elongated hexagonal plates

Other Data: Dehydrates at <400° → cristobalite form